



Australian Government

AHC Agriculture, Horticulture and Conservation and Land Management Training Package

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AHC Agriculture, Horticulture and Conservation and Land Management Training Package

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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC10120 Certificate I in Conservation and Ecosystem Management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification provides foundation level skills and knowledge required for initial work, community involvement, or as an introduction to further learning in conservation and ecosystem management.

Individuals with this qualification will have basic foundational, technical and communications skills required to undertake defined routine tasks in conservation work in a highly structured work environment.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 6 units of competency:
 - 3 core units plus
 - 3 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome.

The electives are to be chosen as follows:

- up to 3 from the electives listed below, or from any currently endorsed Training Package or accredited course.

Core Units

AHCECR101	Support ecological restoration
AHCWHS101	Work safely
AHCWRK101	Maintain the workplace

Elective Units

AHCCHM101	Follow basic chemical safety rules
AHCECR102	Support native seed collection
AHCMOM101	Assist with routine maintenance of machinery and equipment
AHCNSY102	Support nursery work
AHCWRK204	Work effectively in the industry

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
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Code and title current version	Code and title previous version	Comments	Equivalence status
AHC10120 Certificate I in Conservation and Ecosystem Management	AHC10116 Certificate I in Conservation and Land Management	Changes to title, description and packaging rules Core units increased to 3	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC10216 Certificate I in AgriFood Operations

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification is an entry-level qualification aimed at individuals entering the agriculture, horticulture and conservation and land management industries. It allows individuals to develop basic skills and knowledge to prepare for work. They may undertake a range of simple tasks under close supervision. The range of technical skills and knowledge is limited.

The qualification is suited to VET in Schools programs or learners with no previous connection to the agriculture, horticulture or conservation and land management industries or relevant employment history.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 6 units of competency:
 - 2 core units plus
 - 4 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select at least 2 units from the elective list
- 2 units may be selected from the elective list, or this or any other endorsed Training Package or Accredited Course. The 2 units selected can be at AQF level 1 or AQF level 2
- Selected units must be relevant to job outcomes in AgriFood industries and must be chosen to ensure the integrity of the qualification outcome at AQF level 1.

Core Units

Work

AHCWRK101	Maintain the workplace
-----------	------------------------

Work health and safety

AHCWHS101	Work safely
-----------	-------------

Elective Units

Broadacre cropping

AHCBAC102	Support agricultural crop work
-----------	--------------------------------

Chemicals

AHCCHM101	Follow basic chemical safety rules
-----------	------------------------------------

Irrigation

AHCIRG102	Support irrigation work
-----------	-------------------------

Landscape

AHCLSC102	Support landscape work
-----------	------------------------

Livestock

AHCLSK101	Support extensive livestock work
AHCLSK102	Support intensive livestock work

Machinery operation and maintenances

AHCMOM101	Assist with routine maintenance of machinery and equipment
-----------	--

Nursery

AHCNSY102	Support nursery work
-----------	----------------------

Organic production

AHCORG101	Support organic production
-----------	----------------------------

Parks and gardens

AHCPGD102	Support gardening work
-----------	------------------------

Production horticulture

AHCPHT102	Support horticultural production
-----------	----------------------------------

Tools and equipment

MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations

Turf

AHCTRF102	Support turf work
-----------	-------------------

Wool

AHCWOL101	Support woolshed activities
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Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC10216 Certificate I in AgriFood Operations Release 3	AHC10216 Certificate I in AgriFood Operations Release 2	Updated elective unit codes	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC10316 Certificate I in Horticulture

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification is an entry-level qualification aimed at individuals entering the horticulture industry. It allows individuals to develop basic skills and knowledge to prepare for work. They may undertake a range of simple tasks under close supervision. The range of technical skills and knowledge is limited.

The qualification is suited to VET in Schools programs or learners with no previous connection to the horticulture industry or relevant employment history.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 6 units of competency:
 - 1 core units plus
 - 5 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 3 units from list below
- 2 units may be selected from units aligned to Certificates I or II in the AHC Training Package or from any other currently endorsed training package or accredited course.

Selected units must be relevant to job outcomes in horticulture.

Core Units

AHCWHS101	Work safely
-----------	-------------

Elective Units

AHCCHM101	Follow basic chemical safety rules
AHCECR101	Support ecological restoration
AHCIRG102	Support irrigation work
AHCLSC101	Support landscape work
AHCMOM101	Assist with routine maintenance of machinery and equipment
AHCNSY102	Support nursery work
AHCPGD101	Support gardening work
AHCPHT102	Support horticultural production
AHCTRF102	Support turf work
AHCWRK101	Maintain the workplace

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC10316 Certificate I in Horticulture Release 2	AHC10316 Certificate I in Horticulture Release 1	Update elective unit code	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC10416 Certificate I in Permaculture

Modification History

Release	Comments
Release 4	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.1.
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification an entry-level qualification aimed at individuals entering the permaculture industry. It allows individuals to develop basic skills and knowledge to prepare for work. They may undertake a range of simple tasks under close supervision. The range of technical skills and knowledge is limited.

The qualification is suited to VET in Schools programs or learners with no previous connection to permaculture or relevant employment history.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 7 units of competency:
 - 4 core units plus
 - 3 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select at least 2 units from the elective list
- 1 unit may be selected from the elective list, or this or any other endorsed Training Package or Accredited Course.

Selected unit must be relevant to job outcomes in Permaculture and must be chosen to ensure the integrity of the qualification outcome at AQF level 1.

Core Units

AHCPER101	Observe permaculture principles and work practices
AHCPER102	Support resource conservation practices
AHCPER103	Support plant care in a permaculture system
AHCWHS101	Work safely

Elective Units

AHCECR101	Support ecological restoration
AHCPER212	Use and maintain garden hand tools and equipment
AHCORG101	Support organic production
AHCWRK101	Maintain the workplace

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC10416 Certificate I in Permaculture Release 4	AHC10416 Certificate I in Permaculture Release 3	Qualification updated to remove two elective units that have been deleted as part of meeting Skills Ministers' priority of removing training products with low or no enrolments, as agreed by the AISC	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC20116 Certificate II in Agriculture

Modification History

Release	Comments
Release 7	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 6	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1.
Release 5	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.
Release 4	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0.
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification provides a general vocational outcome in agriculture. The qualification enables individuals to select a livestock production, cropping or livestock context as a job focus or, in the case of mixed farming enterprises, both cropping and livestock.

Individuals with this qualification carry out routine tasks under general supervision and exercise limited autonomy with some accountability for their own work. Job roles vary across different industry sectors and may include:

- Assistant animal attendant/stockperson
- Assistant farm or station hand
- Assistant farm or station worker
- Assistant farm or station labourer.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 18 units of competency:
 - 3 core units plus
 - 15 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 7 units from Group A
- 5 units from the remaining units in Group A, or from Group B
- up to 3 may be selected from the remaining units listed in this qualification or from any currently endorsed Training Package or Accredited Course.

Core Units

AHCWHS201	Participate in work health and safety processes
AHCWRK204	Work effectively in the industry
AHCWRK209	Participate in environmentally sustainable work practices

Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

Group A

AHCBAC205	Assist agricultural crop establishment
AHCBAC206	Assist agricultural crop maintenance
AHCBAC207	Assist agricultural crop harvesting
AHCBIO203	Inspect and clean machinery, tools and equipment to preserve biosecurity
AHCBIO204	Follow site biosecurity procedures

AHCCHM201	Apply chemicals under supervision
AHCINF201	Carry out basic electric fencing operations
AHCINF202	Install, maintain and repair farm fencing
AHCINF203	Maintain properties and structures
AHCINF204	Fabricate and repair metal or plastic structures
AHCIRG220	Assist with surface irrigation operations
AHCIRG221	Assist with pressurised irrigation operations
AHCLSK202	Care for health and welfare of livestock
AHCLSK204	Carry out regular livestock observation
AHCLSK205	Handle livestock using basic techniques
AHCLSK206	Identify and mark livestock
AHCLSK207	Load and unload livestock
AHCLSK209	Monitor water supplies
AHCLSK210	Muster and move livestock
AHCLSK211	Provide feed for livestock
AHCLSK219	Carry out birthing duties
AHCLSK220	Monitor livestock to parturition
AHCMOM201	Operate two wheel motorbikes
AHCMOM202	Operate tractors
AHCMOM203	Operate basic machinery and equipment
AHCMOM204	Undertake operational maintenance of machinery
AHCMOM205	Operate vehicles
AHCMOM217	Operate quad bikes
AHCPMG201	Treat weeds
AHCPMG202	Treat plant pests, diseases and disorders

AHCWRK201	Observe and report on weather
AHCWRK205	Participate in workplace communications
AHCWRK206	Observe enterprise quality assurance procedures
AHCWRK207	Collect and record production data
AHCWRK312	Operate in isolated and remote situations
FWPCOT3325	Operate a four wheel drive on unsealed roads
HLTAID010	Provide basic emergency life support
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations
TLID0020	Shift materials safely using manual handling methods

Group B

ACMEQU202*	Handle horses safely
ACMEQU205	Apply knowledge of horse behaviour
ACMEQU206*	Perform horse riding skills at walk, trot and canter
ACMHBR201*	Check and treat horses
ACMHBR203*	Provide daily care for horses
AHCAIS202	Assist with artificial insemination procedures
AHCBAC208	Prepare grain storages
AHCBEK203	Open and reassemble a beehive
AHCBEK205	Prepare and use a bee smoker
AHCBEK206	Assemble and maintain beekeeping components
AHCDRG202	Maintain drainage systems
AHCDRY202	Milk livestock
AHCIRG219	Assist with low volume irrigation operations

AHCLSK201	Assist with feeding in a production system
AHCLSK213	Clean out production sheds
AHCLSK214	Maintain production growing environments
AHCLSK215	Carry out alpaca handling and husbandry operations
AHCLSK218*	Ride educated horses to carry out basic stock work
AHCMOM206	Conduct grader operations
AHCMOM207	Conduct front-end loader operations
AHCMOM208	Conduct excavator operations
AHCMOM209	Conduct dozer operations
AHCMOM210	Conduct scraper operations
AHCMOM214	Operate cane haulage vehicle
AHCPHT214	Support horticultural crop harvesting
AHCPHT215	Plant horticultural crops
AHCPHT216	Carry out canopy maintenance
AHCPHT218	Carry out post-harvest operations
AHCPLY201	Collect store and handle eggs from breeder flocks
AHCPLY202	Maintain health and welfare of poultry
AHCPLY203	Set up shed for placement of day-old chickens
AHCPLY204	Collect and pack eggs for human consumption
AHCPLY205	Grade and pack eggs for human consumption
AHCPMG309	Apply pest animal control techniques
AHCPRK201	Care for health and welfare of pigs
AHCPRK203	Move and handle pigs
AHCPRK204	Care for weaner pigs
AHCPRK305	Care for grower and finisher pigs

AHCSAW203	Conduct erosion and sediment control activities
AHCSDT309	Prepare a working sample
AHCSDT310	Identify seeds
AHCSHG201	Crutch sheep
AHCSHG202	Assist in preparing for shearing and crutching
AHCSHG203	Shear sheep to novice level
AHCSHG204	Shear sheep to improver level
AHCSHG205	Grind combs and cutters for machine shearing
AHCSHG206	Prepare handpiece and downtube for machine shearing
AHCSOL203	Assist with soil or growing media sampling and testing
AHCWAT201	Set up, operate and maintain water delivery systems for compost
AHCWOL201	Pen sheep
AHCWOL202	Perform board duties
AHCWOL203	Carry out wool pressing
RGRHBR303*	Assist with artificial insemination of mares
RGRHBR305*	Handle young horses
RIIWHS202E	Enter and work in confined spaces
RIIWHS204E	Work safely at heights
TLID2022	Conduct weighbridge operations
TLILIC0003	Licence to operate a forklift truck

Prerequisite requirements

Note: Units listed in the *Prerequisite requirement* column that have their own prerequisite requirements are shown with an asterisk (*)

Unit of competency	Prerequisite requirement
--------------------	--------------------------

ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour
ACMEQU206 Perform horse riding skills at walk, trot and canter	ACMEQU202 Handle horses safely*
ACMHBR201 Check and treat horses	ACMEQU202 Handle horses safely*
ACMHBR203 Provide daily care of horses	ACMEQU205 Apply knowledge of horse behaviour
AHCLSK218 Ride educated horses to carry out basic stock work	ACMEQU202 Handle horses safely* ACMEQU206 Perform horse riding skills at walk, trot and canter*
RGRHBR303 Assist with artificial insemination of mares	ACMEQU202 Handle horses safely*
RGRHBR305 Handle young horses	ACMEQU202 Handle horses safely*

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC20116 Certificate II in Agriculture Release 7	AHC20116 Certificate II in Agriculture Release 6	Minor update to qualification to add units to the list of electives	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC20320 Certificate II in Production Horticulture

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification describes the skills and knowledge for supporting job roles in the production horticulture and floriculture industry including field worker, picker, pruner and packer.

Individuals with this qualification carry out routine tasks under supervision where the work is predictable and structured with limited judgement requirements.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 15 units of competency:
 - 4 core units plus
 - 11 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. Electives can be chosen to provide a general qualification or a qualification with a specialisation.

For the award of the *Certificate II in Production Horticulture* choose:

- at least 8 units must be selected from groups A, B or C

- up to 3 units from the remaining electives listed in groups A, B or C or any currently endorsed Training Package or accredited course package at Certificate II or III.

For the award of *Certificate II in Production Horticulture (Horticulture)*, choose:

- at least 3 electives must be selected from Group A
- up to 5 units from the remaining units listed in groups A, B or C
- up to 3 unit from the remaining units listed in groups A, B or C, or any currently endorsed Training Package or accredited course packaged at Certificate II or III.

For the award of *Certificate II in Production Horticulture (Floriculture)*, choose:

- At least 3 electives must be selected from Group B
- up to 5 units from the remaining units listed in groups A, B or C
- up to 3 unit from the remaining units listed in groups A, B or C, or any currently endorsed Training Package or accredited course packaged at Certificate II or III.

Core Units

AHCBIO204	Follow site biosecurity procedures
AHCWHS201	Participate in work health and safety processes
AHCWRK204	Work effectively in the industry
AHCWRK205	Participate in workplace communications

Elective Units

Group A (horticulture)

AHCCHM201	Apply chemicals under supervision
AHCMOM203	Operate basic machinery and equipment
AHCPHT214	Support horticultural crop harvesting
AHCPHT215	Plant horticultural crops
AHCPHT218	Carry out post-harvest operations
AHCSOL203	Assist with soil or growing media sampling and testing
AHCWRK209	Participate in environmentally sustainable work practices
FBPFSY2001	Implement the food safety program and procedures

Group B (floriculture)

AHCNSY205	Pot up plants
AHCNSY206	Care for nursery plants
AHCNSY207	Undertake propagation activities
AHCPCM204	Recognise plants
AHCPHT214	Support horticultural crop harvesting
AHCPHT215	Plant horticultural crops
AHCPHT217	Undertake field budding and grafting
AHCPHT218	Carry out post-harvest operations
AHCSOL203	Assist with soil or growing media sampling and testing
AHCWRK209	Participate in environmentally sustainable work practices

Group C (general electives)

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCBIO203	Inspect and clean machinery for plant, animal and soil material
AHCDRG202	Maintain drainage systems
AHCINF203	Maintain properties and structures
AHCIRG219	Assist with low volume irrigation operations
AHCIRG221	Assist with pressurised irrigation operations
AHCMDC201	Assist with propagation of medicinal cannabis
AHCMDC202	Assist with care and maintenance of medicinal cannabis
AHCMDC203	Assist with harvest and pre-processing of medicinal cannabis
AHCMOM201	Operate two wheel motorbikes

AHCMOM202	Operate tractors
AHCMOM203	Operate basic machinery and equipment
AHCMOM204	Undertake operational maintenance of machinery
AHCMOM205	Operate vehicles
AHCMOM216	Operate side by side utility vehicles
AHCMOM217	Operate quad bikes
AHCNSY208	Maintain indoor plants
AHCPGD203	Prune shrubs and small trees
AHCPHT211	Maintain crop
AHCPHT212	Perform manual pollination of crops
AHCPHT216	Carry out canopy maintenance
AHCPHT219	Handle and move mushroom boxes
AHCPHT220	Perform mushroom substrate process tasks
AHCPHT221	Water mushroom crops
AHCPHT222	Produce trellis dried grapes
AHCPMG201	Treat weeds
AHCPMG202	Treat plant pests, diseases and disorders
AHCWRK201	Observe and report on weather
AHCWRK206	Observe enterprise quality assurance procedures
AHCWRK207	Collect and record production data
AHCWRK208	Provide information on products and services
AHCWRK312	Operate in isolated and remote situations
FBPBP2008	Perform basic packaging tests and inspections

FBPOPR1010	Carry out manual handling tasks
FBPOPR2012	Maintain food safety when loading, unloading and transporting food
FBPOPR2063	Clean equipment in place
FBPOPR2064	Clean and sanitise equipment
FBPOPR2065	Conduct routine maintenance
FBPOPR2066	Apply sampling procedures
FBPOPR2067	Work in a food handling area for non-food handlers
FBPOPR2070	Apply quality systems and procedures
FBPVIT2001	Bench graft vines
FBPVIT2002	Carry out potting operations
FBPVIT2003	Hand prune vines
FBPVIT2005	Maintain callusing environment
FBPVIT2006	Obtain and process rootlings
FBPVIT2007	Tend containerised nursery plants
FBPVIT2008	Train vines
FBPVIT2010	Take and process vine cuttings
FBPVIT2011	Operate vineyard equipment
FBPVIT2016	Carry out hot water treatment
FBPVIT2017	Operate nursery cold storage facilities
FBPVIT2018*	Support mechanical harvesting operations
FBPVIT3005	Install and maintain vine trellis

FBPVIT3006	Field graft vines
FBPVIT3007*	Operate specialised canopy management equipment
FWPCOT3259	Operate a four wheel drive on unsealed roads
HLTAID011	Provide First Aid
MEM11011*	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006*	Organise and communicate information
MEM18001*	Use hand tools
MEM18002*	Use power tools/hand held operations
TLIA2011	Package goods
TLID1001	Shift materials safely using manual handling methods
TLID2022	Conduct weighbridge operations
TLILIC0003	Licence to operate a forklift truck

Prerequisite requirements

Unit of competency	Prerequisite requirement
FBPVIT2018 Support mechanical harvesting operations	AHCMOM202 Operate tractors
FBPVIT3007 Operate specialised canopy management equipment	AHCMOM202 Operate tractors
MEM11011 Undertake manual handling	MEM13015 Work safely and effectively in manufacturing and engineering MEM16006* Organise and communicate information

Unit of competency	Prerequisite requirement
MEM16006 Organise and communicate information	MEM13015 Work safely and effectively in manufacturing and engineering
MEM18001 Use hand tools	MEM11011* Undertake manual handling MEM13015 Work safely and effectively in manufacturing and engineering MEM16006* Organise and communicate information
MEM18002 Use power tools/hand held operations	MEM11011* Undertake manual handling MEM13015 Work safely and effectively in manufacturing and engineering MEM16006* Organise and communicate information

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC20320 Certificate II Production Horticulture	AHC20316 Certificate II in Production Horticulture	Merged Qualifications AHC20316 Certificate II in Production Horticulture and AHC21516 Certificate II in Floriculture Title changed Revised packaging rules to better reflect outcomes Updated to include revised units, new and revised imported units, and all prerequisites as electives	Not equivalent
AHC20320 Certificate II Production Horticulture	AHC21516 Certificate II in Floriculture	Merged Qualifications AHC20316 Certificate II in Production Horticulture and AHC21516 Certificate II in Floriculture Title changed Revised packaging rules	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		to better reflect outcomes Updated to include revised units, new and revised imported units, and all prerequisites as electives	

Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC20416 Certificate II in Horticulture

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification underpins a range of work functions and job roles that can lead to a horticultural trade qualification.

No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 15 units of competency:
 - 5 core units plus
 - 10 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 8 units from the electives listed below
- 2 units may be selected from the remaining electives list below and/or from this or any other currently endorsed Training Package or Accredited Course.

Core Units

AHCPCM201	Recognise plants
AHCPMG201	Treat weeds
AHCPMG202	Treat plant pests, diseases and disorders
AHCSOL202	Assist with soil or growing media sampling and testing
AHCWHS201	Participate in work health and safety processes

Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCARB201	Apply a range of treatments to trees
AHCARB206	Operate and maintain stump grinding machines
AHCARB303*	Perform pruning operations
AHCARB311	Tie, dress, set and finish arborist knots
AHCARB312*	Use standard climbing techniques to access trees
AHCCHM201	Apply chemicals under supervision
AHCINF203	Maintain properties and structures
AHCINF204	Fabricate and repair metal or plastic structures
AHCIRG215	Assist with low volume irrigation operations
AHCIRG217	Assist with pressurised irrigation operations
AHCLSC201	Assist with landscape construction work
AHCLSC202	Construct low-profile timber or modular retaining walls
AHCLSC203	Install aggregate paths
AHCLSC204	Lay paving
AHCLSC205	Install tree protection devices
AHCMOM202	Operate tractors

AHCMOM203	Operate basic machinery and equipment
AHCMOM204	Undertake operational maintenance of machinery
AHCMOM205	Operate vehicles
AHCMOM211	Operate side by side utility vehicles
AHCMOM212	Operate quad bikes
AHCMOM213	Operate and maintain chainsaws
AHCNSY201	Pot up plants
AHCNSY202	Care for nursery plants
AHCNSY203	Undertake propagation activities
AHCNSY204	Maintain indoor plants
AHCPCM202	Collect, prepare and preserve plant specimens
AHCPCM203*	Fell small trees
AHCPGD201	Plant trees and shrubs
AHCPGD202	Prepare and maintain plant displays
AHCPGD203	Prune shrubs and small trees
AHCPGD204	Transplant small trees
AHCPGD205	Prepare a grave site
AHCPGD206	Conduct visual inspection of park facilities
AHCTRF201	Assist with turf construction
AHCTRF202	Prepare turf surfaces for play
AHCTRF203	Renovate grassed areas
AHCTRF204	Support turf establishment
AHCWRK204	Work effectively in the industry
AHCWRK205	Participate in workplace communications
AHCWRK206	Observe enterprise quality assurance procedures

AHCWRK207	Collect and record production data
AHCWRK208	Provide information on products and services
AHCWRK209	Participate in environmentally sustainable work practices
BSBINM201	Process and maintain workplace information
BSBWOR204	Use business technology
FWPCOT2236	Fall trees manually (basic)
FWPCOT2239	Trim and cut felled trees
FWPFGM2207	Undertake brushcutting operations
FWPFGM3212	Fall trees manually (intermediate)
FWPHAR2206	Operate a mobile chipper/mulcher
MEM18001C	Use hand tools
MEM18002B	Use power tools/hand held operations
SIRRINV002	Control stock
SIRRMER001	Produce visual merchandise displays
SIRRRTF001	Balance and secure point-of-sale terminal
SIRXCEG001	Engage the customer
SIRXIND002	Organise and maintain the store environment
SIRXPDK001	Advise on products and services
SIRXSLS001	Sell to the retail customer
SIRXSLS002	Follow point-of-sale handling procedures
TLID1001	Shift materials safely using manual handling methods

Prerequisite requirements

Unit of competency	Prerequisite requirement
AHCARB303 Perform pruning operations	FWPCOT2237 Maintain chainsaws FWPCOT2239 Trim and cut felled trees

	OR FWPCOT3238 Operate a pole saw
AHCARB312 Use standard climbing techniques to access trees	AHCARB311 Tie, dress, set and finish arborist knots
AHCPCM203 Fell small trees	AHCMOM213 Operate and maintain chainsaws

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC20416 Certificate II in Horticulture Release 3	AHC20416 Certificate II in Horticulture Release 2	Updated imported units in elective bank Clarified prerequisite requirements	Equivalent qualification

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC20520 Certificate II in Arboriculture

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0.

Qualification Description

This qualification describes the skills and knowledge for ground-based tree workers in the arboriculture industry.

Individuals with this qualification perform a range of ground-based arboriculture activities under supervision including, pruning of trees, felling of small trees, operation of chainsaws, and the operation of equipment required for processing and removal of tree material. The work may involve high risk operations in support of arborists. Work practices are undertaken within a strict safety regime to protect workers and the public.

This qualification is suitable as a pre-apprenticeship or school based program for introduction to the arboriculture industry.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some States and Territories.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 11 core units of competency

Core Units

AHCARB211	Apply treatments to trees
AHCARB212	Operate and maintain stump grinding machines

AHCARB213	Perform ground-based rigging
AHCARB214	Recognise trees
AHCARB316	Perform pruning operations
FWPCOT2236	Fall trees manually (basic)
FWPCOT2237	Maintain chainsaws
FWPCOT2239	Trim and cut felled trees
FWPCOT3238	Operate a pole saw
FWPHAR2206	Operate a mobile chipper/mulcher
HLTAID011	Provide First Aid

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC20520 Certificate II in Arboriculture Release 2	AHC20520 Certificate II in Arboriculture Release 1	Qualification updated to replace superseded first aid unit, as approved by the AISC in consultation with ASQA	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC20621 Certificate II in Parks and Gardens

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Qualification Description

This qualification describes the skills and knowledge for supporting job roles in the parks and gardens industry including garden labourer.

Individuals with this qualification carry out routine tasks under supervision where the work is predictable and structured with limited judgement requirements.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 15 units of competency:
 - 7 core units plus
 - 8 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 5 must be from the electives listed below
- 3 from the remaining electives listed below, or any other currently endorsed Training Package or accredited course.

Core Units

AHCMOM203	Operate basic machinery and equipment
AHCPCM204	Recognise plants
AHCPGD207	Plant trees and shrubs
AHCPGD208	Prepare and maintain plant displays
AHCPGD209	Prune shrubs and small trees
AHCTRF208	Support turf establishment
AHCWHS201	Participate in work health and safety processes

Elective Units

AHCARB211	Apply treatments to trees
AHCCHM201	Apply chemicals under supervision
AHCIRG221	Assist with pressurised irrigation operations
AHCLSC206	Assist with landscape construction work
AHCMOM204	Undertake operational maintenance of machinery
AHCMOM216	Operate side by side utility vehicles
AHCNSY207	Undertake propagation activities
AHCPGD210	Transplant shrubs and small trees
AHCPGD212	Conduct visual inspection of park facilities
AHCPMG201	Treat weeds
AHCPMG202	Treat plant pests, diseases and disorders
AHCSOL203	Assist with soil or growing media sampling and testing
AHCTRF205	Assist in the preparation of turf surfaces for play
AHCTRF207	Renovate grassed areas
AHCWRK207	Collect and record production data
FWPCOT2254	Maintain chainsaws

FWPCOT2256	Trim and cut felled trees
HLTAID011	Provide First Aid
PUAFER008	Confine small emergencies in a facility
RIIWHS205E	Control traffic with stop-slow bat

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC20621 Certificate II in Parks and Gardens	AHC20616 Certificate II in Parks and Gardens	Amended packaging rules Core units decreased by 1 unit Change to core units list Updated elective units	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC20720 Certificate II in Nursery Operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification describes the skills and knowledge for supporting job roles in the nursery industry including production nursery assistant, production nursery worker, retail nursery sales assistant and retail nursery maintainer.

Individuals with this qualification undertake routine tasks under supervision where the work is predictable and structured with limited judgement requirements.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 16 units of competency:
 - 3 core units plus
 - 13 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. Electives can be chosen to provide a general qualification or a qualification with a specialisation.

For the award of the *Certificate II in Nursery Operations* choose:

- at least 10 electives from groups A, B or C

- up to 3 units from the remaining electives listed in groups A, B or C or any currently endorsed Training Package or accredited course packaged at Certificate II or III.

For the award of the *Certificate II in Nursery Operations (Nursery Production)* choose:

- at least 4 electives from Group A
- up to 6 units from the remaining units listed in groups A, B or C
- up to 3 units from the remaining units listed in groups A, B or C, or any currently endorsed Training Package or accredited course packaged at Certificate II or III.

For the award of the *Certificate II in Nursery Operations (Retail Nursery)* choose:

- at least 4 electives from Group B
- up to 6 units from the remaining units listed in groups A, B or C
- up to 3 units from the remaining units listed in groups A, B or C, or any currently endorsed Training Package or accredited course packaged at Certificate II or III.

Where two specialisations are completed, award of the qualification would read (for example), *Certificate II in Nursery Operations (Nursery Production, Retail Nursery)*.

Core Units

AHCNSY206	Care for nursery plants
AHCPCM204	Recognise plants
AHCWHS201	Participate in work health and safety processes

Elective Units

Group A (nursery production)

AHCCHM201	Apply chemicals under supervision
AHCIRG221	Assist with pressurised irrigation operations
AHCNSY205	Pot up plants
AHCNSY207	Undertake propagation activities
AHCPMG201	Treat weeds
AHCPMG202	Treat plant pests, diseases and disorders

AHCSOL203	Assist with soil or growing media sampling and testing
AHCWRK207	Collect and record production data

Group B (retail nursery)

AHCNSY208	Maintain indoor plants
AHCPGD202	Prepare and maintain plant displays
SIRRINV001	Receive and handle retail stock
SIRXIND002	Organise and maintain the store environment
SIRXSLS001	Sell to the retail customer

Group C (general electives)

AHCBIO203	Inspect and clean machinery, tools and equipment to preserve biosecurity
AHCBIO204	Follow site biosecurity procedures
AHCDRG202	Maintain drainage systems
AHCINF203	Maintain properties and structures
AHCMOM202	Operate tractors
AHCMOM203	Operate basic machinery and equipment
AHCMOM204	Undertake operational maintenance of machinery
AHCMOM216	Operate side by side utility vehicles
AHCPGD203	Prune shrubs and small trees
AHCWRK204	Work effectively in the industry
AHCWRK205	Participate in workplace communications
AHCWRK209	Participate in environmentally sustainable work practices
BSBINS201	Process and maintain workplace information
BSBTEC201	Use business software applications

HLTAID010	Provide basic emergency life support
ICTICT214	Operate application software packages
SIRRINV002	Control stock
SIRXSLS002	Follow point-of-sale procedures
TLID1001	Shift materials safely using manual handling methods
TLID2004	Load and unload goods/cargo

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC20720 Certificate II in Nursery Operations	AHC20716 Certificate II in Production Nursery	Merged qualifications AHC20716 Certificate II in Production Nursery and AHC20816 Certificate II in Retail Nursery Title changed Revised packaging rules to better reflect outcomes Updated to include revised units, new and revised imported units, and all prerequisites as electives	Not equivalent
AHC20720 Certificate II in Nursery Operations	AHC20816 Certificate II in Retail Nursery	Merged qualifications AHC20716 Certificate II in Production Nursery and AHC20816 Certificate II in Retail Nursery Title changed Revised packaging rules to better reflect outcomes Updated to include revised units, new and revised imported units, and all prerequisites as electives	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
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AHC20919 Certificate II in Sports Turf Management

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge for entry level workers and support roles within sports turf management. These workers mainly carry out routine and structured tasks under direct supervision, with limited judgement requirements.

This qualification is suitable as a pre-apprenticeship or school based program for introduction to the sports turf management industry.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 8 units of competency:
 - 5 core units plus
 - 3 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The 3 electives are to be chosen from the elective units listed below.

Core Units

AHCIRG221	Assist with pressurised irrigation operations
AHCMOM203	Operate basic machinery and equipment

AHCTRF205	Assist in the preparation of turf surfaces for play
AHCTRF207	Renovate grassed areas
AHCTRF208	Support turf establishment

Elective Units

AHCCHM201	Apply chemicals under supervision
AHCINF203	Maintain properties and structures
AHCMOM204	Undertake operational maintenance of machinery
AHCPCM204	Recognise plants
AHCPGD201	Plant trees and shrubs
AHCPMG201	Treat weeds
AHCPMG202	Treat plant pests, diseases and disorders
AHCSOL203	Assist with soil or growing media sampling and testing
AHCTRF206	Assist with turf construction
AHCWHS201	Participate in work health and safety processes
AHCWRK209	Participate in environmentally sustainable work practices

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC20919 Certificate II in Sports Turf Management Release 2	AHC20919 Certificate II in Sports Turf Management Release 1	Updated unit codes	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC21020 Certificate II in Conservation and Ecosystem Management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification provides the skills and knowledge required for work in a defined context and/or for further study in conservation and ecosystem management. Work would be carried out under general guidance and supervision.

The qualification enables individuals to select and develop basic factual, technical and procedural knowledge in conservation and ecosystem management for Indigenous land management, lands, parks and wildlife services and the restoration and rehabilitation of ecosystems.

No licensing, legislative or certification requirements apply to this qualification at the time of publication. Users are advised that individual elective units selected may have licensing, legislative or certification requirements and are advised to check the units individually for these requirements.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 15 units of competency:
 - 2 core units plus
 - 13 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome.

The electives are to be chosen as follows:

- at least 4 units must be selected from Group A
- remaining units can be selected from Group A or Group B and up to 3 units from any Training Package or accredited course.

Core Units

AHCWHS201	Participate in work health and safety processes
AHCWRK209	Participate in environmentally sustainable work practices

Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

Group A

AHCBIO203	Inspect and clean machinery, tools and equipment to preserve biosecurity
AHCECR202	Maintain wildlife habitat refuges
AHCECR203	Perform basic ecological restoration works
AHCECR201	Capture digital media for fieldwork
AHCECR305	Collect native seed
AHCFAU202	Recognise fauna
AHCFIR202	Assist with planned burning
AHCILM201	Maintain cultural places
AHCILM202	Observe and report plants or animals
AHCILM203	Record information about Country
AHCLPW201	Operate a handheld GPS device
AHCLPW311	Construct access tracks
AHCPCM202	Collect, prepare and preserve plant specimens
AHCPCM204	Recognise plants
AHCPGD206	Conduct visual inspection of park facilities
AHCPMG201	Treat weeds

AHCPMG202	Treat plant pests, diseases and disorders
AHCPMG304	Use firearms to humanely destroy animals
AHCPMG307	Apply animal trapping techniques
AHCPMG312	Apply poison baits for vertebrate pest control in rural and environmental landscapes
AHCSAW203	Conduct erosion and sediment control activities
AHCSAW202	Recognise landforms and soil types
AHCWRK202	Observe environmental work practices
AHCWRK204	Work effectively in the industry
AHCWRK205	Participate in workplace communications
AHCWRK312	Operate in isolated and remote situations
PUAFIR204*	Respond to wildfire
PUAFIR210	Prevent injury
PUALAW001	Protect and preserve incident scene
SITXCCS002	Provide visitor information

Group B

AHCCHM201	Apply chemicals under supervision
AHCINF201	Carry out basic electric fencing operations
AHCINF202	Install, maintain and repair farm fencing
AHCINF203	Maintain properties and structures
AHCLSC201	Assist with landscape construction work
AHCLSC203	Install aggregate paths
AHCLSC205	Install tree protection devices
AHCMOM201	Operate two wheel motorbikes
AHCMOM202	Operate tractors

AHCMOM203	Operate basic machinery and equipment
AHCMOM204	Undertake operational maintenance of machinery
AHCMOM205	Operate vehicles
AHCMOM206	Conduct grader operations
AHCMOM207	Conduct front-end loader operations
AHCMOM208	Conduct excavator operations
AHCMOM209	Conduct dozer operations
AHCMOM210	Conduct scraper operations
AHCMOM213	Operate and maintain chainsaws
AHCMOM216	Operate side by side utility vehicles
AHCMOM217	Operate quad bikes
AHCNSY206	Care for nursery plants
AHCNSY207	Undertake propagation activities
AHCPCM205*	Fell small trees
AHCPGD201	Plant trees and shrubs
AHCSOL203	Assist with soil or growing media sampling and testing
AHCWRK201	Observe and report on weather
AHCWRK206	Observe enterprise quality assurance procedures
AHCWRK207	Collect and record production data
AHCWRK208	Provide information on products and services
BSBINS201	Process and maintain workplace information
BSBTEC201	Use business software applications
FWPCOT3259	Operate a four wheel drive on unsealed roads
HLTAID009	Provide cardiopulmonary resuscitation

HLTAID010	Provide basic emergency life support
HLTAID011	Provide First Aid
HLTAID013	Provide First Aid in remote or isolated site
PUAFIR210	Prevent injury
TLID1001	Shift materials safely using manual handling methods
TLILIC0003	Licence to operate a forklift truck

Prerequisite requirements

Unit of competency	Prerequisite requirement
AHCPCM205 Fell small trees	AHCMOM213 Operate and maintain chainsaws
PUAFIR204 Respond to wildfire	PUAFIR210 Prevent injury

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC21020 Certificate II in Conservation and Ecosystem Management	AHC21016 Certificate II in Conservation and Land Management	Title changed Unit description updated and packaging rules clarified Unit codes updated Units added to Group A and Group B electives	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC21119 Certificate II in Irrigation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge for entry-level workers in the irrigation industry.

Individuals with this qualification work under routine supervision where the work is predictable and structured with limited judgement requirements.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 16 units of competency:
 - 3 core unit plus
 - 13 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 4 must be from electives Group A
- 7 must be from electives Group A or B
- 2 from the remaining units listed in Groups A or B, or any other currently endorsed Training Package or accredited course packaged at Certificate II.

Core Units

AHCIRG219	Assist with low volume irrigation operations
AHCIRG221	Assist with pressurised irrigation operations
AHCWHS201	Participate in work health and safety processes

Elective Units

Group A

AHCIRG220	Assist with surface irrigation operations
AHCIRG222	Assist with pump and flow control device operations
AHCSOL202	Assist with soil or growing media sampling and testing
AHCWRK209	Participate in environmentally sustainable work practices
NWPIRR002	Operate basic flow control and regulating devices in irrigation systems
NWPIRR012	Construct open earthen channels or drains

Group B

(An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.)

AHCDRG202	Maintain drainage systems
AHCMOM203	Operate basic machinery and equipment
AHCPER209	Recognise characteristics of integrated plant and animal systems
AHCWRK204	Work effectively in the industry
AHCWRK205	Participate in workplace communications
AHCWRK208	Provide information on products and services
CPCPCM2040A	Read plans and calculate plumbing quantities
CPCPCM2043A	Carry out WHS requirements

CPCPCM2047A *	Carry out levelling
NWPIRR013	Construct and install irrigation delivery and stormwater drainage assets
NWPNET002	Prepare and restore work site
TLID1001	Shift materials safely using manual handling methods

Prerequisite requirements

Unit of competency	Prerequisite requirement
CPCPCM2047A Carry out levelling	CPCPCM2043A Carry out WHS requirements

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC21119 Certificate II in Irrigation	AHC21116 Certificate II in Irrigation	Amended packaging rules, core units increased by two units	Equivalent qualification

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC21216 Certificate II in Rural Operations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Qualification Description

This qualification provides an occupational outcome for industries and agencies in rural and regional Australia.

Depending on the units selected individuals can be employed not only in rural industries but also other rural and regional sectors, such as local government, tourism, hospitality, transport, construction, community services, information technology and metals.

Industry expects individuals with this qualification to carry out routine tasks under general supervision and exercise limited autonomy with some accountability for their own work.

This qualification is suitable for an Australian Apprenticeship.

No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

Total number of units = 15

- Core Units = 3
- Elective Units = 12

Core Units

Work

Unit Code	Unit Title
AHCWRK204	Work effectively in the industry

AHCWRK209	Participate in environmentally sustainable work practices
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Work health and safety

Unit Code	Unit Title
AHCWHS201	Participate in work health and safety processes

Elective Units

- Select at least 7 units from Certificate II in this Training Package
- 5 units aligned to AQF levels 1, 2, or 3 may be selected from up to 3 other endorsed Training Packages or Accredited Courses
Selected units must be relevant to job outcomes in AgriFood industries and must be chosen to ensure the integrity of the qualification outcome at AQF level 2

Qualification Mapping Information

This qualification is not equivalent to AHC21210 Certificate II in Rural Operations.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC21316 Certificate II in Shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Qualification Description

This qualification provides an entry level occupational outcome in shearing. It recognises the work of a novice shearer who is able to shear a minimum of 40 adult merino sheep or 50 adult crossbred sheep per day to an acceptable industry standard. The shearing industry expects this qualification to be achieved to meet job outcomes at this level.

This qualification is suitable for an Australian Apprenticeship.

Possible job titles relevant to this qualification include:

- Shearer - novice level

No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

Total number of units = 9

- Core Units = 9
- Elective Units = 0

Core Units

Livestock

AHCLSK217	Apply animal welfare principles to handling and husbandry of livestock
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Shearing

Unit Code	Unit Title
AHCSHG201	Crutch sheep
AHCSHG203	Shear sheep to novice level
AHCSHG205	Grind combs and cutters for machine shearing
AHCSHG206	Prepare handpiece and downtube for machine shearing
AHCSHG210	Undertake basic shearing and crutching

Work

Unit Code	Unit Title
AHCWRK204	Work effectively in the industry
AHCWRK209	Participate in environmentally sustainable work practices

Work health and safety

Unit Code	Unit Title
AHCWHS201	Participate in work health and safety processes

Qualification Mapping Information

This qualification is not equivalent to AHC21310 Certificate II in Shearing.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC21416 Certificate II in Wool Handling

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Qualification Description

This qualification provides an entry level occupational outcome in wool handling. The wool industry expects individuals with this qualification to carry out routine wool handling tasks under general supervision and exercise limited autonomy with some accountability for their own work.

This qualification is suitable for an Australian Apprenticeship.

No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

Total number of units = 8

- Core Units = 8
- Elective Units = 0

Core Units

Livestock

Unit Code	Unit Title
AHCLSK217	Apply animal welfare principles to handling and husbandry of livestock

Shearing

Unit Code	Unit Title
AHCSHG202	Assist in preparing for shearing and crutching

Wool

Unit Code	Unit Title
AHCWOL201	Pen sheep
AHCWOL202	Perform board duties
AHCWOL203	Carry out wool pressing

Work

Unit Code	Unit Title
AHCWRK202	Observe environmental work practices
AHCWRK204	Work effectively in the industry

Work health and safety

Unit Code	Unit Title
AHCWHS201	Participate in work health and safety processes

Qualification Mapping Information

This qualification is not equivalent to AHC21410 Certificate II in Wool Handling.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC21621 Certificate II in Landscaping

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Qualification Description

This qualification describes the skills and knowledge for supporting job roles in the landscape industry including landscape labourer.

Individuals with this qualification carry out routine tasks under supervision where the work is predictable and structured with limited judgement requirements.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 15 units of competency:
 - 8 core units plus
 - 7 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 4 must be from the electives listed below
- 3 from the remaining electives listed below, or any currently endorsed Training Package or accredited course.

Core Units

AHCLSC206	Assist with landscape construction work
AHCLSC207	Construct low-profile timber or modular retaining walls
AHCLSC208	Install aggregate paths
AHCLSC209	Lay paving
AHCMOM203	Operate basic machinery and equipment
AHCPCM204	Recognise plants
AHCPGD207	Plant trees and shrubs
AHCWHS201	Participate in work health and safety processes

Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCARB211	Apply treatments to trees
AHCCHM201	Apply chemicals under supervision
AHCINF203	Maintain properties and structures
AHCINF204	Fabricate and repair metal or plastic structures
AHCIRG219	Assist with low volume irrigation operations
AHCIRG221	Assist with pressurised irrigation operations
AHCLSC210	Install tree protection devices
AHCLSC311	Set out site for construction works
AHCMOM202	Operate tractors
AHCMOM204	Undertake operational maintenance of machinery
AHCMOM205	Operate vehicles
AHCPGD208	Prepare and maintain plant displays
AHCPGD209	Prune shrubs and small trees

AHCPGD210	Transplant shrubs and small trees
AHCPMG201	Treat weeds
AHCPMG202	Treat plant pests, diseases and disorders
AHCSOL203	Assist with soil or growing media sampling and testing
AHCTRF205	Assist in the preparation of turf surfaces for play
AHCTRF206	Assist with turf construction
AHCTRF207	Renovate grassed areas
AHCTRF208	Support turf establishment
AHCWRK204	Work effectively in the industry
AHCWRK205	Participate in workplace communications
AHCWRK206	Observe enterprise quality assurance procedures
AHCWRK208	Provide information on products and services
AHCWRK209	Participate in environmentally sustainable work practices
CPCCB2002*	Use bricklaying and blocklaying tools and equipment
CPCCCA2002*	Use carpentry tools and equipment
CPCCCO2013*	Carry out concreting to simple forms
CPCCOM2001*	Read and interpret plans and specifications
CPC CST2001*	Prepare for stonemasonry construction process
CPCWHS2001	Apply WHS requirements, policies and procedures in the construction industry
MEM11011*	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006*	Organise and communicate information

MEM18001*	Use hand tools
MEM18002*	Use power tools/hand held operations
NWPNET019	Prepare and restore worksite
TLID0020	Shift materials safely using manual handling methods

Prerequisite requirements

Unit of competency	Prerequisite requirement
CPCCBL2002 Use bricklaying and blocklaying tools and equipment	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
CPCCCA2002 Use carpentry tools and equipment	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
CPCCCO2013 Carry out concreting to simple forms	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
CPCCST2001 Prepare for stonemasonry construction process	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
CPCCOM2001 Read and interpret plans and specifications	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
MEM18001 Use hand tools	MEM11011 Undertake manual handling*
MEM18002 Use power tools/hand held operations	MEM11011 Undertake manual handling*
MEM11011 Undertake manual handling*	MEM13015 Work safely and effectively in manufacturing and engineering MEM16006 Organise and communicate information
MEM16006 Organise and communicate information*	MEM13015 Work safely and effectively in manufacturing and engineering

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC21621 Certificate II in Landscaping	AHC21616 Certificate II in Landscaping	Amended packaging rules, Updated core units Added and updated elective units	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC21716 Certificate II in Permaculture

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification provides an occupational outcome in permaculture. Work would be carried out under general guidance and supervision.

The qualification is suited to VET in Schools, labour market and environmental skills programs. It provides a range of technical skills and knowledge in supporting food growing programs and community programs and is suited to learners with an interest in permaculture as a practical solution for sustainable living.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

Total number of units = 15

- Core Units = 6
- Elective Units = 9

Core Units

Unit Code	Unit Title
AHCPER201	Work effectively in permaculture

AHCPER203	Record information about the local bioregion
AHCPER206	Plant and maintain permaculture crops
AHCPER209	Recognise characteristics of plants and animals in a permaculture system
AHCPER212	Use and maintain garden hand tools and equipment
HLTWHS001	Participate in workplace health and safety

Elective Units

- Select 5 units from Group A
- Select 3 units from Group A or B
- 1 unit may be selected from Group B or this or any other endorsed Training Package or Accredited Course
Selected units must be relevant to job outcomes in Permaculture and must be chosen to ensure the integrity of the qualification outcome at AQF level 2

Group A

Unit Code	Unit Title
AHCPER202	Harvest, treat and store seed
AHCPER204	Check and operate permaculture water systems
AHCPER205	Prepare and store permaculture products
AHCPER207	Care for animals in a permaculture system
AHCPER208	Harvest permaculture crops
AHCPER214	Propagate plants for a permaculture garden system
AHCPER215	Assist with garden soil health and plant nutrition

Group B

Unit Code	Unit Title
AHCILM203	Record information about country
AHCINF203	Maintain properties and structures

AHCMOM203	Operate basic machinery and equipment
AHCNAR201	Carry out natural area restoration works
AHCWRK201	Observe and report on weather
AHCWRK203	Operate in isolated and remote situations
AHCWRK209	Participate in environmentally sustainable work practices

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC21716 Certificate II in Permaculture Release 3	AHC21716 Certificate II in Permaculture Release 2	Qualification updated to remove three elective units that have been deleted as part of meeting Skills Ministers' priority of removing training products with low or no enrolments, as agreed by the AISC	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC21819 Certificate II in Protected Horticulture

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.2.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge for individuals who work in support roles in the protected horticulture industry undertaking routine tasks in the areas of picking, packing, crop and nursery work.

Individuals with this qualification work under supervision where the work is predictable and structured with limited judgement requirements.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 6 core units plus
 - 6 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. Any combination of electives that meets the packaging rules can be selected for the award of the *Certificate II in Protected Horticulture*.

Where appropriate, electives may be packaged to provide a qualification with a specialisation area as follows:

- At least 2 electives must be selected from Group A for the award of the *Certificate II in Protected Horticulture (Picking)*
- At least 2 electives must be selected from Group B for the award of the *Certificate II in Protected Horticulture (Packing)*.
- At least 2 electives must be selected from Group C for the award of the *Certificate II in Protected Horticulture (Crop work)*
- At least 2 electives must be selected from Group D for the award of the *Certificate II in Protected Horticulture (Nursery)*
- Plus 4 units from the remaining units listed in groups A, B, C, D or E, or any currently endorsed Training Package or accredited course.

Where a specialisation area is not sought, the electives are to be chosen as follows:

- 2 units must be selected from groups A, B, C, D or E
- the remaining 4 electives may be selected from groups A, B, C, D or E or any currently endorsed Training Package or accredited course.

Core Units

AHCWHS201	Participate in work health and safety processes
AHCWRK204	Work effectively in the industry
AHCWRK209	Participate in environmentally sustainable work practices
FBPFSY2001	Implement the food safety program and procedures
FBPOPR1010	Carry out manual handling tasks
FBPOPR2070	Apply quality systems and procedures

Elective Units

Group A Picking

AHCBIO203	Inspect and clean machinery, tools and equipment to preserve biosecurity
AHCPHT214	Support horticultural crop harvesting

AHCPMG202	Treat plant pests, diseases and disorders
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Group B Packing

AHCWRK207	Collect and record production data
FBPBPG2008	Perform basic packaging tests and inspections
FBPOPR2063	Clean equipment in place
TLIA0020	Package goods

Group C Crop work

AHCBIO203	Inspect and clean machinery, tools and equipment to preserve biosecurity
AHCIRG219	Assist with low volume irrigation operations
AHCPHT210	Assist with protected cropping water sampling and testing
AHCPHT211	Maintain crop
AHCPHT212	Perform manual pollination of crops
AHCPHT215	Plant horticultural crops
AHCPMG201	Treat weeds
AHCPMG202	Treat plant, pests, diseases and disorders
AHCSOL203	Assist with soil or growing media sampling and testing

Group D Nursery

AHCBIO203	Inspect and clean machinery, tools and equipment to preserve biosecurity
AHCNSY206	Care for nursery plants
AHCNSY207	Undertake propagation activities
AHCPHT213	Perform plant blocking on

AHCPHT217	Undertake field budding and grafting
AHCPMG202	Treat plant pests, diseases and disorders
AHCSOL203	Assist with soil or growing media sampling and testing
FBPVIT2001	Bench graft vines
FBPVIT2007	Tend containerised nursery plants

Group E General electives

AHCINF203	Maintain properties and structures
AHCMDC201	Assist with propagation of medicinal cannabis
AHCMDC202	Assist with care and maintenance of medicinal cannabis
AHCMDC203	Assist with harvest and pre-processing of medicinal cannabis
AHCMOM202	Operate tractors
AHCMOM203	Operate basic machinery and equipment
AHCNSY205	Pot up plants
AHCPCM204	Recognise plants
FBPOPR2064	Clean and sanitise equipment
FBPOPR2065	Conduct routine maintenance
FBPOPR2066	Apply sampling procedures
FBPOPR2069	Use numerical applications in the workplace
FBPOPR2071	Provide and apply workplace information
FBPPPL2001	Participate in work teams and groups
HLTAID011	Provide First Aid
TLID2010	Operate a forklift
TLIG2007	Work in a socially diverse environment
TLIK2010	Use infotechnology devices in the workplace

TLILIC0003	Licence to operate a forklift truck
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Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC21819 Certificate II in Protected Horticulture Release 3	AHC21819 Certificate II in Protected Horticulture Release 2	Minor update to unit code AHCBIO203 in Group C and D	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC30116 Certificate III in Agriculture

Modification History

Release	Comments
Release 7	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 6	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1.
Release 5	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.
Release 4	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0.
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification provides a general vocational outcome in agriculture. The qualification enables individuals to select a livestock production, cropping or livestock context as a job focus or, in the case of mixed farming enterprises, both cropping and livestock.

Individuals with this qualification perform tasks in a variety of contexts, which involve some judgement in selecting equipment and services. Job roles vary across different industry sectors and may include:

- Farm or station hand
- Farm or station worker
- Livestock transport driver.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 16 units of competency:
 - 2 core units plus
 - 14 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome.

To provide the *Certificate III in Agriculture*, the electives are to be chosen as follows:

- 5 must be selected from the electives listed in Group A
- 5 must be selected from remaining electives in Group A, or from electives listed in Group B, or from the Prerequisite Requirements list if a unit is a required for packaging the qualification
- 4 may be selected from the remaining electives listed in Groups A or B, or from the Prerequisite Requirements list if a unit is a required for packaging the qualification, or from any currently endorsed Training Package or Accredited Course packaged at Certificate II, III or IV levels.

Where appropriate, electives may be packaged to provide a qualification with a specialisation area as follows:

- 10 electives must be selected from Group A, including at least 5 units beginning with the code AHCLSK and at least 5 units beginning with the code TLI for the award of the *Certificate III in Agriculture (Livestock Transport)*.

Core Units

AHCWHS301	Contribute to work health and safety processes
AHCWRK309	Apply environmentally sustainable work practices

Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

Group A

AHCAGB302	Keep production records for a primary production
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	business
AHCBAC309	Undertake preparation of land for agricultural crop production
AHCBAC310	Maintain pastures and crops for livestock production
AHCBAC311	Conserve forage
AHCBAC312	Test and grade grains and seeds on receipt
AHCBAC313	Establish pastures and crops for livestock production
AHCBAC314	Prepare to receive grains and seeds
AHCBAC315	Establish agricultural crops
AHCBAC316	Maintain agricultural crops
AHCBAC317	Undertake agricultural crop harvesting activities
AHCBER302	Work effectively in a biosecurity emergency response
AHCBER305	Carry out emergency disease or pest control procedures on infected premises
AHCBER306	Carry out movement and security procedures
AHCBIO301	Identify and report signs of unusual disease or pest
AHCBIO303	Apply biosecurity measures
AHCBUS301	Use hand held e-business tools
AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCCHM308	Use application equipment to apply fumigant in confined spaces
AHCCHM309	Fumigate soil
AHCCHM310	Conduct manual fumigation of vertebrate and invertebrate pests
AHCINF301	Implement property improvement, construction and repair

AHCINF302	Plan and construct an electric fence
AHCINF303	Plan and construct conventional fencing
AHCIRG336	Operate and maintain gravity fed irrigation systems
AHCIRG338	Troubleshoot irrigation systems
AHCIRG346	Operate pressurised irrigation systems
AHCLSK301	Administer medication to livestock
AHCLSK305	Maintain livestock water supplies
AHCLSK308	Identify and draft livestock
AHCLSK309	Implement animal health control programs
AHCLSK311	Implement feeding plans for livestock
AHCLSK318	Rear newborn and young livestock
AHCLSK320	Coordinate and monitor livestock transport
AHCLSK323	Maintain and monitor feed stocks
AHCLSK324	Care for and train working dogs
AHCLSK325	Castrate livestock
AHCLSK331	Comply with industry animal welfare requirements
AHCLSK342	Prepare animals for parturition
AHCMER301	Process customer complaints
AHCMOM301	Coordinate machinery and equipment maintenance and repair
AHCMOM302	Perform machinery maintenance
AHCMOM304	Operate machinery and equipment
AHCMOM305	Operate specialised machinery and equipment
AHCMOM306	Ground spread fertiliser and soil ameliorant
AHCMOM308	Operate broadacre and row crop harvest machinery and equipment

AHCMOM309	Operate broadacre sowing machinery and equipment
AHCMOM312	Operate row crop planting and seeding machinery and equipment
AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders
AHCWRK204	Work effectively in the industry
AHCWRK301	Collect samples for a rural production or horticulture monitoring program
AHCWRK302	Monitor weather conditions
AHCWRK303	Respond to emergencies
AHCWRK305	Coordinate work site activities
AHCWRK306	Comply with industry quality assurance requirements
AHCWRK308	Handle bulk materials in storage area
AHCWRK311	Conduct site inspections
BSBFIN302	Maintain financial records
BSBINS201	Process and maintain workplace information
BSBTEC201	Use business software applications
BSBTEC202	Use digital technologies to communicate in a work environment
BSBITEC301	Design and produce business documents
HLTAID011	Provide First Aid
HLTAID013	Provide First Aid in remote or isolated site
TLID0001	Load and unload vehicles carrying special loads
TLID0002	Care for livestock in transit
TLIE0002	Process workplace documentation
TLIE0008	Calculate mass, area and quantify dimensions

TLIE3004	Prepare workplace documents
TLIF2010	Apply fatigue management strategies
TLIH0005	Interpret road maps and navigate pre-determined routes
TLIH0006	Plan and navigate routes

Group B

ACMGEN311	Maintain and monitor animal health and wellbeing
ACMGEN312	Provide nutritional requirements for animals
ACMHBR302*	Carry out basic hoof care procedures
ACMHBR310	Prevent and treat equine injury and disease
AHCAIS304	Artificially inseminate livestock
AHCDRG305	Install drainage systems
AHCHYD301	Implement a maintenance program for hydroponic systems
AHCHYD302	Install hydroponic systems
AHCINF304	Install and terminate extra low voltage wiring systems
AHCLSK303	Carry out feedlot operations
AHCLSK304	Carry out post-mortem examination of livestock
AHCLSK306	Coordinate and monitor production performance
AHCLSK307	Euthanase livestock
AHCLSK310	Implement feeding plans for intensive production
AHCLSK313	Monitor livestock production growing environments
AHCLSK316	Prepare livestock for competition
AHCLSK317	Plan to exhibit livestock
AHCLSK319	Slaughter livestock
AHCLSK321	Service and repair bores and windmills

AHCLSK322	Transport farm produce or bulk materials
AHCLSK326	Mix and mill standard stockfeed
AHCLSK327	Collect, store and administer colostrum
AHCLSK328	Remove and facilitate reuse of effluent and manure from an intensive production system
AHCLSK330	Implement procedures for calving
AHCLSK332	Monitor animals in intensive production systems
AHCLSK333	Monitor pen condition and ration suitability
AHCLSK334	Plan, prepare and conduct mulesing procedures
AHCLSK337*	Train, care for and ride horses for stock work
AHCLSK338	Conduct dropped ovary technique procedures for spaying cattle
AHCLSK340	Mate and monitor reproduction of alpacas
AHCLSK341	Coordinate artificial insemination and fertility management of livestock
AHCLSK343	Prepare for and implement natural mating of livestock
AHCMOM202	Operate tractors
AHCMOM206	Conduct grader operations
AHCMOM207	Conduct front-end loader operations
AHCMOM216	Operate side by side utility vehicles
AHCMOM217	Operate quad bikes
AHCMOM307	Operate a cane harvester
AHCMOM310	Operate land-forming machinery and equipment
AHCMOM311	Operate precision control technology
AHCMOM313	Operate mobile irrigation machinery and equipment
AHCMOM314	Transport machinery

AHCMOM315	Operate chemical application machinery and equipment
AHCPCM303	Identify plant specimens
AHCPCM305	Implement a plant nutrition program
AHCPCM306	Provide information on plants and their culture
AHCPGD404	Plan a plant establishment program
AHCPHT312	Implement a crop regulation program
AHCPHT313	Implement a post-harvest program
AHCPHT314	Harvest horticultural crops mechanically
AHCPHT315	Establish horticultural crops
AHCPHT317	Coordinate horticultural crop harvesting
AHCPMG308	Implement pest management strategies
AHCSDT308	Perform tests for quality on seeds
AHCSDT309	Prepare a working sample
AHCSDT310	Identify seeds
AHCSDT412	Perform advanced tests on seeds
AHCSDT413	Handle and store seed subject to quarantine regulations
AHCSDT414	Maintain a quarantine approved laboratory
AHCSHG301	Prepare livestock for shearing
AHCSHG302	Prepare combs and cutters for machine shearing
AHCSHG306	Carry out post-shearing procedures
AHCSOL406	Sample soils and interpret results
AHCSPO309	Process planting seed
AHCSPO310	Treat planting seed
AHCSPO311	Handle, package and store commercial quantities of seed
AHCSPO312	Sample seed before and after processing

AHCWOL304	Prepare fleece wool for classing
AHCWOL308	Prepare facilities for shearing and crutching
AHCWOL310	Press wool for a clip
AHCWOL311	Perform shed duties
CPPFES2005	Demonstrate first attack firefighting equipment
MEM05004	Perform routine oxy fuel gas welding
MEM05007	Perform manual heating and thermal cutting
MEM05012	Perform routine manual metal arc welding
MEM05015*	Weld using manual metal arc welding process
MEM05017*	Weld using gas metal arc welding process
MEM05019*	Weld using gas tungsten arc welding process
MEM05049	Perform routine gas tungsten arc welding
MEM05050	Perform routine gas metal arc welding
PUAFIR204*	Respond to wildfire
PUAFIR210	Prevent injury
PUATEA001	Work in a team
RGRHBR302*	Carry out natural mare mating procedures
RGRHBR303*	Assist with artificial insemination of mares
RGRHBR304*	Assess suitability of horses for specific uses
RGRHBR307	Carry out procedures for foaling down mares
RGRHBR403*	Handle and care for breeding stallions
RIIMPO318F	Conduct civil construction skid steer loader operations
RIIMPO319E	Conduct backhoe/loader operations
RIIMPO324F	Conduct civil construction grader operations
RIIWHWS202E	Enter and work in confined spaces

RIIWHS204E	Work safely at heights
TLILIC0003	Licence to operate a forklift truck

Prerequisite requirements

Note: Units listed in the *Prerequisite requirement* column that have their own prerequisite requirements are shown with an asterisk (*)

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour
ACMEQU206 Perform horse riding skills at walk, trot and canter	ACMEQU202 Handle horses safely*
ACMHBR302 Carry out basic hoof care procedures	ACMEQU202 Handle horses safely*
AHCLSK218 Ride educated horses to carry out basic stock work	ACMEQU202 Handle horses safely* ACMEQU206 Perform horse riding skills at walk, trot and canter*
AHCLSK337 Train, care for and ride horses for stock work	AHCLSK218 Ride educated horses to carry out basic stock work*
MEM05015 Weld using manual metal arc welding process	MEM05012 Perform routine manual metal arc welding MEM05051 Select welding processes MEM05052 Apply safe welding practices MEM09002 Interpret technical drawing MEM11011 Undertake manual handling MEM12023 Perform engineering measurements MEM12024 Perform computations MEM13015 Work safely and effectively in manufacturing and engineering MEM14006 Plan work activities MEM16006 Organise and communicate information MEM18001 Use hand tools MEM18002 Use power tools/hand held operations

MEM05017 Weld using gas metal arc welding process	MEM05050 Perform routine gas metal arc welding MEM05051 Select welding processes MEM05052 Apply safe welding practices MEM09002 Interpret technical drawing MEM11011 Undertake manual handling MEM12023 Perform engineering measurements MEM12024 Perform computations MEM13015 Work safely and effectively in manufacturing and engineering MEM14006 Plan work activities MEM16006 Organise and communicate information MEM18001 Use hand tools MEM18002 Use power tools/hand held operations
MEM05019 Weld using gas tungsten arc welding process	MEM05049 Perform routine gas tungsten arc welding MEM05051 Select welding processes MEM05052 Apply safe welding practices MEM09002 Interpret technical drawing MEM11011 Undertake manual handling MEM12023 Perform engineering measurements MEM12024 Perform computations MEM13015 Work safely and effectively in manufacturing and engineering MEM14006 Plan work activities MEM16006 Organise and communicate information MEM18001 Use hand tools MEM18002 Use power tools/hand held operations
PUAFIR204 Respond to wildfire	PUAFIR210 Prevent injury
RGRHBR302 Carry out natural mare mating procedures	ACMEQU202 Handle horses safely*
RGRHBR303 Assist with artificial insemination of mares	ACMEQU202 Handle horses safely*

RGRHBR304 Assess suitability of horses for specific uses	ACMEQU202 Handle horses safely*
RGRHBR403 Handle and care for stallions	ACMEQU202 Handle horses safely*

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC30116 Certificate III in Agriculture Release 7	AHC30116 Certificate III in Agriculture Release 6	Minor update to qualification to add units to the list of electives	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC30221 Certificate III in Dairy Production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Qualification Description

This qualification reflects the role of individuals who work as farm hands in the dairy production industry. In this role, these individuals have responsibilities for undertaking a wide range of skilled work on a dairy farm with limited supervision. Work includes caring for, and monitoring health of livestock, overseeing the harvesting of livestock milk and maintaining milking equipment and facilities to ensure maximum and high-quality production.

All work is carried out to comply with workplace policies and procedures, according to state/territory work health and safety, animal welfare, environmental and biosecurity legislation, regulations and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 17 units of competency:
 - 10 core units plus
 - 7 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 4 from the electives listed below
- the remaining 3 units from the electives listed below, or from any currently endorsed Training Package or accredited course.

Core Units

AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCCHM304	Transport and store chemicals
AHCDRY303	Coordinate and monitor milking operations
AHCDRY304	Carry out routine service of milking equipment
AHCLSK309	Implement animal health control programs
AHCLSK311	Implement feeding plans for livestock
AHCLSK318	Rear newborn and young livestock
AHCLSK330	Implement procedures for calving
AHCWRK303	Respond to emergencies
AHCWHS301	Contribute to work health and safety processes

Elective Units

AHCAIS304	Artificially inseminate livestock
AHCBAC309	Undertake preparation of land for agricultural crop production
AHCBAC311	Conserve forage
AHCBAC313	Establish pastures and crops for livestock production
AHCBAC315	Establish agricultural crops
AHCBAC316	Maintain agricultural crops
AHCBAC317	Undertake agricultural crop harvesting activities
AHCBER305	Carry out emergency disease or pest control procedures on infected premises
AHCDRY305	Conduct mechanical tests on milking machines
AHCDRY306	Operate a dairy waste utilisation system
AHCINF301	Implement property improvement, construction and

	repair
AHCINF302	Plan and construct an electric fence
AHCINF303	Plan and construct conventional fencing
AHCLSK301	Administer medication to livestock
AHCLSK305	Maintain livestock water supplies
AHCLSK308	Identify and draft livestock
AHCLSK320	Coordinate and monitor livestock transport
AHCLSK321	Service and repair bores and windmills
AHCLSK322	Transport farm produce or bulk materials
AHCLSK323	Maintain and monitor feed stocks
AHCLSK325	Castrate livestock
AHCLSK326	Mix and mill standard stockfeed
AHCLSK327	Collect, store and administer colostrum
AHCLSK328	Remove and facilitate reuse of effluent and manure from an intensive production system
AHCLSK331	Comply with industry animal welfare requirements
AHCLSK341	Coordinate artificial insemination and fertility management of livestock
AHCLSK343	Prepare for and implement natural mating of livestock
AHCMOM305	Operate specialised machinery and equipment
AHCPCM305	Implement a plant nutrition program
AHCWRK301	Collect samples for a rural production or horticulture monitoring program
AHCWRK302	Monitor weather conditions
AHCWRK305	Coordinate work site activities
AHCWRK306	Comply with industry quality assurance requirements
AHCWRK309	Apply environmentally sustainable work practices

AHCWRK310	Provide on-job training support
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Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC30221 Certificate III in Dairy Production	AHC30216 Certificate III in Agriculture (Dairy Production)	Change to qualification title Revised core and elective units to better reflect industry requirements Total number of units remain the same	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC30318 Certificate III in Rural and Environmental Pest Management

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Qualification Description

This qualification describes the skills and knowledge required for pest management contractors, pest management field officers, vertebrate pest management field officers and weed management field officers in the pest management industry.

The qualification covers those who work in weed management as well as vertebrate pest management in conservation, land management, horticulture and agriculture settings. Individuals in these roles work under general direction and:

- participate in strategic invasive species management practices
- prepare for management programs
- complete and assess management programs
- carry out weed management programs that require chemical spraying
- maintain required records.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 14 units of competency:
 - 6 core units plus
 - 8 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome.

For the award of Certificate III in Rural and Environmental Pest Management the electives are to be chosen as follows:

- 6 units must be selected from the elective groups A, B, C, D or E
- Up to 2 units from the remaining electives or any currently endorsed Training Package or accredited course packaged to reflect AQF Certificate II, III or IV outcomes.

Where appropriate, electives may be packaged to provide a qualification with a specialisation.

For the award of Certificate III in Rural and Environmental Pest Management (Pest animal controller) the electives are to be chosen as follows:

- 5 units must be selected from the elective group A
- 1 unit must be selected from the elective group C or E
- 2 units must be selected from remaining electives in group C and E or any currently endorsed Training Package or accredited course packaged to reflect AQF Certificate II, III or IV outcomes.

For the award of Certificate III in Rural and Environmental Pest Management (Weed Controller) the electives are to be chosen as follows:

- 2 units must be selected from the electives group B
- 1 unit, AHC BIO201 Inspect and clean machinery for plant, animal and soil material, must be selected
- 3 units must be selected from the elective group D or E
- 2 units must be selected from remaining group D or E or any currently endorsed Training Package or accredited course packaged to reflect AQF Certificate II, III or IV outcomes.

Core Units

AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCPMG203	Work effectively in a pest management environment
AHCPMG306	Determine pest control techniques
AHCPMG308	Implement pest management strategies
AHCWHS301	Contribute to work health and safety processes

Elective Units**Group A (Pest Controller)**

AHCFAU202	Recognise fauna
AHCPMG304	Use firearms to humanely destroy animals
AHCPMG307	Apply animal trapping techniques
AHCPMG309	Apply pest animal control techniques
AHCPMG312	Apply poison baits for vertebrate pest control in rural and environmental landscapes

Group B (Weed Controller)

AHCPCM303	Identify plant specimens
AHCPMG301	Control weeds

Group C (Vertebrate Pests)

AHCCHM310	Conduct manual fumigation of vertebrate and invertebrate pests
AHCPMG311	Use firearms for pest control activities from aircraft
AHCPMG403	Apply predator trapping techniques

Group D (Weeds)

AHCPCM202	Collect, prepare and preserve plant specimens
AHCPMG313	Prepare, monitor and maintain biological agents for weeds

Group E (General)

AHC BIO203	Inspect and clean machinery, tools and equipment to preserve biosecurity
AHC BIO303	Apply biosecurity measures

AHCECR306	Conduct photography for fieldwork
AHCECR307	Read and interpret maps
AHCEXP301	Handle and store explosives
AHCMOM302	Perform machinery maintenance
AHCMOM304	Operate machinery and equipment
AHCMOM315	Operate chemical application machinery and equipment
AHCPMG302	Control plant pests, diseases and disorders
AHCPMG305	Survey pests
AHCPMG413	Define the pest problem
AHCWRK302	Monitor weather conditions
AHCWRK303	Respond to emergencies
AHCWRK305	Coordinate work site activities
AHCWRK309	Apply environmentally sustainable work practices
AHCWRK311	Conduct site inspections
AHCWRK312	Operate in isolated and remote situations
FWPCOT3202	Navigate in remote or trackless areas
FWPCOT3259	Operate a four wheel drive on unsealed roads
HLTAID011	Provide First Aid
HLTAID013	Provide First Aid in remote or isolated site

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC30318 Certificate III in Rural and Environmental Pest	AHC30318 Certificate III in Rural and Environmental Pest	Update elective unit codes	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
Management Release 2	Management Release 1		

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC30416 Certificate III in Pork Production

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0 and meets the Standards for Training Packages 2012.

Qualification Description

This qualification provides an occupational outcome in the pork industry. The pork industry expects that graduates from this qualification will be able to perform a range of tasks associated with a person performing the job role of a piggery attendant.

The pork industry expects that graduates from this qualification will be able to perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Possible job roles relevant to this qualification include:

- Piggery attendant
- Stockperson

This qualification is suitable for an Australian Apprenticeship.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 15 units of competency:

- 2 core units plus
- 13 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 6 must be from electives group A
- 4 must be from electives group A or B
- 3 from the remaining electives listed in group A or B, or any currently endorsed Training Package or accredited course packaged at Certificate II, III or IV.

Core Units

AHCLSK331	Comply with industry animal welfare requirements
AHCWHS301	Contribute to work health and safety processes

Elective Units

Group A

AHCBIO303	Apply biosecurity measures
AHCLSK301	Administer medication to livestock
AHCLSK304	Carry out post-mortem examination of livestock
AHCLSK307	Euthanase livestock
AHCLSK308	Identify and draft livestock
AHCLSK309	Implement animal health control programs
AHCLSK313	Monitor livestock production growing environments
AHCLSK318	Rear newborn and young livestock
AHCLSK323	Maintain and monitor feed stocks
AHCLSK328	Remove and facilitate reuse of effluent and manure from an intensive production system
AHCLSK342	Prepare animals for parturition
AHCPRK309	Pregnancy test pigs
AHCPRK310	Artificially inseminate pigs
AHCWRK305	Coordinate work site activities

AHCWRK309	Apply environmentally sustainable work practices
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Group B

AHCECR302	Collect and preserve biological samples
AHCINF302	Plan and construct an electric fence
AHCLSK303	Carry out feedlot operations
AHCLSK305	Maintain livestock water supplies
AHCLSK306	Coordinate and monitor production performance
AHCLSK310	Implement feeding plans for intensive production
AHCLSK311	Implement feeding plans for livestock
AHCLSK319	Slaughter livestock
AHCLSK320	Coordinate and monitor livestock transport
AHCLSK322	Transport farm produce or bulk materials
AHCLSK325	Castrate livestock
AHCLSK326	Mix and mill standard stockfeed
AHCLSK327	Collect, store and administer colostrum
AHCLSK343	Prepare for and implement natural mating of livestock
AHCMOM201	Operate two wheel motorbikes
AHCMOM202	Operate tractors
AHCMOM203	Operate basic machinery and equipment
AHCMOM205	Operate vehicles
AHCMOM207	Conduct front-end loader operations
AHCMOM216	Operate side by side utility vehicles
AHCMOM217	Operate quad bikes
AHCMOM305	Operate specialised machinery and equipment
AHCPMG308	Implement pest management strategies

AHCPRK204	Care for weaner pigs
AHCPRK302	Treat rectal prolapse in pigs
AHCPRK305	Care for grower and finisher pigs
AHCPRK306	Monitor and maintain outdoor pig production
AHCPRK307	Mate pigs naturally
AHCPRK308	Monitor dry sow performance
AHCWRK205	Participate in workplace communications

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC30416 Certificate III in Pork Production Release 3	AHC30416 Certificate III in Pork Production Release 2	Amended packaging rules, updated elective units	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC30516 Certificate III in Poultry Production

Modification History

Release	Comments
Release 4	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.1.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0. Version created to update elective unit codes.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0 and meets the Standards for Training Packages 2012.

Qualification Description

This qualification provides an occupational outcome in the poultry industry. The poultry industry expects that graduates from this qualification will be able to perform a range of tasks associated with a person performing the job role of a poultry hand.

Job roles vary and may include:

- Poultry hand
- Poultry stockperson.

The poultry industry expects that graduates from this qualification will be able to perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

This qualification is suitable for an Australian Apprenticeship.

No licensing, legislative or certification requirements are known to apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 16 units of competency:
 - 3 core units plus
 - 13 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 10 must be from electives group A
- 2 must be from electives group A or B
- 1 from the remaining electives listed in group A or B, or any currently endorsed Training Package or accredited course packaged at Certificate II, III or IV.

Core Units

AHCLSK331	Comply with industry animal welfare requirements
AHCPLY307	Implement and monitor biosecurity measures in poultry production
AHCWHS301	Contribute to work health and safety processes

Elective Units

Group A

AHCLSK301	Administer medication to livestock
AHCLSK304	Carry out post-mortem examination of livestock
AHCLSK306	Coordinate and monitor production performance
AHCLSK307	Euthanase livestock
AHCLSK309	Implement animal health control programs
AHCLSK310	Implement feeding plans for intensive production
AHCLSK313	Monitor livestock production growing environments
AHCPLY203	Set up shed for placement of day-old chickens
AHCPLY206	Catch and load poultry
AHCPLY302	Brood poultry
AHCPLY304	Incubate eggs

AHCPLY306	Clean and disinfect poultry production sheds
AHCPMG308	Implement pest management strategies
AHCWRK204	Work effectively in the industry
AHCWRK205	Participate in workplace communications
AHCWRK306	Comply with industry quality assurance requirements
AHCWRK309	Apply environmentally sustainable work practices

Group B

AHCAGB302	Keep production records for a primary production business
AHCBIO301	Identify and report signs of unusual disease or pest
AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCLSK323	Maintain and monitor feed stocks
AHCLSK328	Remove and facilitate reuse of effluent and manure from an intensive production system
AHCMOM301	Coordinate machinery and equipment maintenance and repair
AHCMOM304	Operate machinery and equipment
AHCWRK310	Provide on-job training support
FBPFSY3002	Participate in a HACCP team

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC30516 Certificate III in	AHC30516 Certificate III in	Amended packaging rules, updated elective units	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
Poultry Production Release 4	Poultry Production Release 3		

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC30620 Certificate III in Production Horticulture

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification describes the skills and knowledge for job roles in the production horticulture and floriculture industry including field worker, seeding person, operator, irrigation maintainer, machinery maintainer and leading hand.

Individuals with this qualification perform tasks involving a broad range of skills that are applied in a wide variety of contexts, which will involve discretion and judgement in selecting and operating equipment, coordinating resources and applying contingency measures during work.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 15 units of competency:
 - 3 core units plus
 - 12 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. Any combination of electives that meets the packaging rules can be selected for the award of the *Certificate III in Production Horticulture*.

Where appropriate, electives may be packaged to provide a qualification with a specialisation area as follows:

- At least 3 electives must be selected from Group A for the award of the *Certificate III in Production Horticulture (Horticulture)*
- At least 3 electives must be selected from Group B for the award of the *Certificate III in Production Horticulture (Floriculture)*
- Plus 6 units from the remaining units listed in groups A, B or C
- 3 from the remaining units listed in groups A, B or C, or any currently endorsed Training Package or accredited course packaged at Certificate II, III or IV.

Core Units

AHCBIO303	Apply biosecurity measures
AHCWHS301	Contribute to work health and safety processes
AHCWRK306	Comply with industry quality assurance requirements

Elective Units

Group A (horticulture)

AHCBIO301	Identify and report signs of unusual disease or pest
AHCIRG346	Operate pressurised irrigation systems
AHCMOM304	Operate machinery and equipment
AHCPHT313	Implement a post-harvest program
AHCPHT314	Harvest horticultural crops mechanically
AHCPHT315	Establish horticultural crops
AHCPHT317	Coordinate horticultural crop harvesting
AHCWRK309	Apply environmentally sustainable work practices

Group B (floriculture)

AHCBIO301	Identify and report signs of unusual disease or pest
AHCNSY308	Maintain nursery plants
AHCNSY309	Receive and dispatch nursery products
AHCPCM305	Implement a plant nutrition program

AHCPCM306	Provide information on plants and their culture
AHCSOL305	Prepare growing media

Group C (electives)

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details

AHCBER302	Work effectively in an emergency disease or plant pest response
AHCBER305	Carry out emergency disease or plant pest control procedures on infected premises
AHCBER306	Carry out movement and security procedures
AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCCHM308	Use application equipment to apply fumigant in confined spaces
AHCCHM309	Fumigate soil
AHCDRG305	Install drainage systems
AHCDRG306	Measure drainage system performance
AHCDRG307	Troubleshoot drainage systems
AHCHYD301	Implement a maintenance program for hydroponic systems
AHCHYD302	Install hydroponic systems
AHCIRG337	Measure irrigation delivery system performance
AHCIRG338	Troubleshoot irrigation systems
AHCIRG345	Install pressurised irrigation systems
AHCIRG347	Maintain pressurised irrigation systems
AHCMOM202	Operate tractors

AHCMOM301	Coordinate machinery and equipment maintenance and repair
AHCMOM302	Perform machinery maintenance
AHCMOM305	Operate specialised machinery and equipment
AHCMOM311	Operate precision control technology
AHCMOM315	Operate chemical application machinery and equipment
AHCNSY310	Install and maintain plant displays
AHCNSY311	Promote sales of plants
AHCNSY312	Prepare specialised plants
AHCNSY313	Implement a propagation plan
AHCNSY314	Operate fertigation equipment
AHCPCM405	Implement an integrated pest management program
AHCPGD203	Prune shrubs and small trees
AHCPHT302	Prepare raw materials and compost feedstock
AHCPHT312	Implement a crop regulation program
AHCPHT316	Supervise mushroom substrate preparation
AHCPHT318	Prepare value added compost-based products
AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders
AHCPMG313	Prepare, monitor and maintain biological agents for weeds
AHCPMG401	Implement the pest monitoring and evaluation plan
AHCWAT302	Monitor and operate water treatment processes
AHCWRK204	Work effectively in the industry
AHCWRK302	Monitor weather conditions
AHCWRK303	Respond to emergencies

AHCWRK305	Coordinate work site activities
AHCWRK308	Handle bulk materials in storage area
FBPVIT2012	Identify and treat nursery plant disorders
FBPVIT3001	Coordinate vineyard operations
FBPVIT3002	Maintain field nursery
FBPVIT3003	Operate spreading and seeding equipment
FBPVIT3004*	Monitor and maintain nursery plants
FBPVIT3008	Operate a mechanical harvester
FBPVIT3011	Perform shed nursery activities

Prerequisite requirements

Unit of competency	Prerequisite requirement
FBPVIT3004 Monitor and maintain nursery plants	FBPVIT2012 Identify and treat nursery plants and disorders

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC30620 Certificate III in Production Horticulture	AHC30616 Certificate III in Production Horticulture	Merged qualifications AHC30616 Certificate III in Production Horticulture and AHC33216 Certificate III in Floriculture Title changed Revised packaging rules to better reflect outcomes Updated to include revised units, new and revised imported units	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC30620 Certificate III in Production Horticulture	AHC33216 Certificate III in Floriculture	Merged qualifications AHC30616 Certificate III in Production Horticulture and AHC33216 Certificate III in Floriculture Title changed Revised packaging rules to better reflect outcomes Updated to include revised units, new and revised imported units	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC30716 Certificate III in Horticulture

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Qualification Description

This qualification provides a general vocational outcome in amenity horticulture.

No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

Total number of units = 16

- Core Units = 5
- Elective Units = 11

Core Units

Unit Code	Unit Title
AHCWHS301	Contribute to work health and safety processes
AHCPCM302	Provide information on plants and their culture
AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders
AHCSOL303	Implement soil improvements for garden and turf areas

Elective Units

- Select 8 units from elective list below
- 3 units aligned to AQF levels 2, 3 or 4 may be selected from electives below or from this or any other endorsed Training Package or Accredited Course
Selected units must be relevant to job outcomes in horticulture and must be chosen to ensure the integrity of the qualification outcome at AQF level 3

NOTE: Units marked with an asterisk (*) require completion of prerequisite Unit/s which is identified under the Unit

Unit Code	Unit Title
AHCARB301	Implement a tree maintenance program
AHCPCM304	Report on health and condition of trees
AHCARB303	Perform pruning operations
AHCARB305	Dismantle trees
AHCARB306	Undertake aerial rescue
AHCARB307	Use advanced climbing techniques* <i>AHCARB312 Use standard climbing techniques to access trees**</i> <i>AHCARB311 Tie, dress, set and finish arborist knots</i> <i>HLTAID003 Provide first aid</i>
AHCARB308	Install cable and bracing
AHCARB309	Implement a tree protection program
AHCBER301	Work effectively in an emergency disease or plant pest response
AHCBIO302	Identify and report unusual disease or plant pest signs
AHCBER303	Carry out emergency disease or plant pest control procedures at infected premises
AHCBER304	Carry out movement and security procedures
AHCBIO305	Apply biosecurity measures
AHCCHM303	Prepare and apply chemicals
AHCCHM304	Transport, handle and store chemicals
AHCIRG303	Measure irrigation delivery system performance

AHCIRG306	Troubleshoot irrigation systems
AHCIRG331	Install pressurised irrigation systems
AHCIRG332	Operate pressurised irrigation systems
AHCIRG333	Maintain pressurised irrigation systems
AHCLSC301	Set out site for construction works
AHCLSC302	Construct landscape features using concrete
AHCLSC303	Construct brick and or block structures and features
AHCLSC304	Erect timber structures and features
AHCLSC305	Construct stone structures and features
AHCLSC306	Implement a paving project
AHCLSC307	Implement a retaining wall project
AHCLSC308	Install metal structures and features
AHCLSC309	Install water features
AHCLSC310	Implement a tree transplanting program
AHCMOM304	Operate machinery and equipment
AHCNSY301	Maintain nursery plants
AHCNSY302	Receive and dispatch nursery products
AHCNSY303	Install and maintain plant displays
AHCNSY304	Deliver and promote sales of plants
AHCNSY305	Prepare specialised plants
AHCNSY306	Implement a propagation plan
AHCNSY307	Operate fertigation equipment
AHCPCM301	Implement a plant nutrition program
AHCPCM303	Identify plant specimens
AHCPGD301	Implement a plant establishment program

AHCPGD302	Plan and maintain plant displays
AHCPGD303	Perform specialist amenity pruning
AHCPGD304	Implement a landscape maintenance program
AHCPGD305	Conduct operational inspection of park facilities
AHCPGD306	Implement a maintenance program for an aquatic environment
AHCSOL301	Prepare growing media
AHCTRF301	Construct turf playing surfaces
AHCTRF302	Establish turf
AHCTRF303	Implement a grassed area maintenance program
AHCTRF304	Monitor turf health
AHCTRF305	Renovate sports turf
AHCWAT301	Monitor and operate water treatment processes
AHCWRK305	Coordinate work site activities
AHCWRK311	Conduct site inspection
AHCWRK309	Apply environmentally sustainable work practices
FWPCOT3238	Operate a pole saw
FWPFGM3213	Fall trees manually (advanced)
RIIWHS302D	Implement traffic management plan

Qualification Mapping Information

This qualification is equivalent to AHC30710 Certificate III in Horticulture.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC30820 Certificate III in Arboriculture

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.1.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0.

Qualification Description

This qualification describes the skills and knowledge for trade level roles in the arboriculture industry, including, climbing arborist, EWP arborist, crane specialist, environmental arborist and an arborist works coordinator.

Individuals with this qualification perform a range of arboriculture activities including, shaping and canopy management, tree health and remediation, environmental and habitat development, to tree dismantling and removal. The work involves high risk operations either working at heights or conducting support works to individuals working above ground. Work practices operate within a strict safety regime to protect workers and public.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some States and Territories.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 18 units of competency:
 - 9 core units plus
 - 9 elective units.

Elective units must ensure the integrity of the qualification's Australian Quality Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 7 units must be from groups A, B, C, D, E or F, with all the units from at least one specialisation selected from the specialisations listed below
- the remaining 2 units may be selected from units listed in groups A, B, C, D, E or F or any currently endorsed Training Package or accredited course.

No more than 3 of the 9 electives selected can be coded with an AQF indicator below level 3 or reflect outcomes below AQF level 3.

Electives are to be packaged to provide a qualification with one or more specialisations as follows:

- All 3 electives from Group A must be selected for the award of the *Certificate III in Arboriculture (Climbing Arborist)*
- All 4 electives from Group B must be selected for the award of the *Certificate III in Arboriculture (Crane Specialist)*
- All 4 electives from Group C must be selected for the award of the *Certificate III in Arboriculture (Elevated Work Platform – EWP Arborist)*
- All 4 electives from Group D must be selected for the award of the *Certificate III in Arboriculture (Environmental arborist)*
- All 3 electives from Group E must be selected for the award of the *Certificate III in Arboriculture (Works Coordinator)*
- *Electives from Group G can only be selected where required as a prerequisite.*

Note: If more than one specialisation is completed, award of the qualification would read (for example): Certificate III in Arboriculture (Climbing Arborist, Elevated Work Platform – EWP Arborist).

Note: Units listed in the *Prerequisite requirement* column that have their own prerequisite requirements are shown with an asterisk (*)

Core Units

Unit	Title
AHCARB213	Perform ground-based rigging
AHCARB314	Implement a tree maintenance program
AHCARB315	Inspect trees for access and work
AHCARB316	Perform pruning operations
AHCARB323	Identify trees
FWPCOT2237	Maintain chainsaws
FWPCOT2239	Trim and cut felled trees

FWPFGM3212	Fall trees manually (intermediate)
HLTAID011	Provide First Aid

Electives

Group A Climbing specialist

AHCARB317	Dismantle trees
AHCARB318*	Undertake aerial rescue
AHCARB319	Use arborist climbing techniques

Group B Crane specialist

AHCARB317	Dismantle trees
AHCARB324	Use cranes to access and dismantle trees
CPCDDO3011 A*	Perform dogging
AHCARB319	Use arborist climbing techniques

Group C Elevated Work Platform (EWP) specialist

AHCARB317	Dismantle trees
TLILIC0005	Licence to operate a boom-type elevating work platform (boom length 11 metres or more)
UETDRRF002 *	Perform EWP rescue
UETDRRF08	Perform EWP controlled descent escape

Group D Environmental arborist (habitat protection and creation)

AHCARB325	Manage trees to create and maintain habitat refuges
AHCFAU201	Recognise fauna
AHCLPW304	Carry out inspection of designated area

AHCNAR202	Maintain wildlife habitat refuges
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Group E Works Coordinator

AHCARB407	Supervise and audit tree operations
AHCARB408	Perform a ground-based tree defect evaluation
AHCARB409	Conduct a safety audit

Group F General Electives

AHCARB212	Operate and maintain stump grinding machines
AHCARB321	Implement a tree protection program
AHCARB320	Install tree support systems
AHCARB322	Access trees for inspection
AHCARB406	Verify pruning specifications
AHCBIO305	Apply biosecurity measures
AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders
AHCWRK305	Coordinate work site activities
CPCCCM2010 B*	Work safely at heights
FWPCOT3238	Operate a pole saw
FWPFGM3213	Fall trees manually (advanced)
FWPHAR2206	Operate a mobile chipper/mulcher
RIIWHS205E	Control traffic with stop-slow bat

UETTDREL14	Working safely near live electrical apparatus as a non-electrical worker
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Group G Prerequisite Units

CPCCOHS200 1A	Apply OHS requirements, policies and procedures in the construction industry
HLTAID009	Provide cardiopulmonary resuscitation

Prerequisite requirements

Note: Units listed in the *Prerequisite requirement* column that have their own prerequisite requirements are shown with an asterisk (*)

Unit of competency	Prerequisite requirement
AHCARB318 Undertake aerial rescue	HLTAID011 Provide First Aid AHCARB319 Use arborists climbing techniques
CPCCCM2010B Work safely at heights	CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry
CPCCCDO3011A Perform dogging	CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry
UETDRRF002 Perform EWP rescue	HLTAID009 Provide cardiopulmonary resuscitation

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC30820 Certificate III in Arboriculture Release 3	AHC30820 Certificate III in Arboriculture Release 2	Qualification updated to correct the code of an elective unit	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC30921 Certificate III in Landscape Construction

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Qualification Description

This qualification describes the skills and knowledge for trade level roles in the landscape industry.

Individuals with this qualification perform tasks under broad supervision involving a broad range of skills that are applied in a wide variety of contexts. Discretion and judgement in selecting and operating equipment, coordinating resources and applying contingency measures during work.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 17 units of competency:
 - 10 core units plus
 - 7 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 1 must be from electives group A
- 3 must be from electives group B
- 3 from the remaining elective units, or any currently endorsed Training Package or accredited course.

Core Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCDRG305	Install drainage systems
AHCLSC311	Set out site for construction works
AHCLSC312*	Construct brick and block structures and features
AHCLSC313	Construct stone structures and features, and install stone cladding
AHCLSC316	Implement a paving project
AHCLSC317	Construct landscape features using concrete
AHCLSC319	Implement a retaining wall project
AHCPCM306	Provide information on plants and their culture
AHCPGD307	Implement a plant establishment program
AHCSOL304	Implement soil improvements for garden and turf areas

Elective Units

Group A

AHCWHS301	Contribute to work health and safety processes
CPCCWHS200 1	Apply WHS requirements, policies and procedures in the construction industry

Group B

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCBUS407	Cost a project
AHCGRI301	Maintain roof gardens, vertical gardens and green facades

AHCIRG345	Install pressurised irrigation systems
AHCLSC314	Implement a tree transplanting program
AHCLSC315	Implement an outdoor tiling project
AHCLSC318	Erect timber structures and features
AHCLSC320	Install water features
AHCLSC321	Install metal structures and features
AHCMOM213	Operate and maintain chainsaws
AHCMOM304	Operate machinery and equipment
AHPCPM204	Recognise plants
AHPCPM303	Identify plant specimens
AHCPGD310	Implement a landscape maintenance program
AHCWRK309	Apply environmentally sustainable work practices
CPCCCA3018 *	Construct, erect and dismantle formwork for stairs and ramps
CPCCCA3028 *	Erect and dismantle formwork for footings and slabs on ground
CPCCON3041 *	Place concrete
CPCCON3042 *	Finish concrete
CPCCON3043 *	Cure concrete
MSFFL3063	Install synthetic textile floor coverings to sports facilities and outdoor spaces

Prerequisite requirements

Unit of competency	Prerequisite requirement
AHCLSC312 Construct brick and block structures and	AHCLSC317 Construct landscape features using concrete

features	
CPCCCA3018 Construct erect and dismantle formwork for stairs and ramps	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
CPCCCA3028 Erect and dismantle formwork for footings and slabs on ground	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
CPCCON3041 Place concrete	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
CPCCON3042 Finish concrete	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
CPCCON3043 Cure concrete	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC30921 Certificate III in Landscape Construction	AHC30916 Certificate III in Landscape Construction	Amended packaging rules, updated core units, added elective units and elective units list	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC31021 Certificate III in Parks and Gardens

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Qualification Description

This qualification describes the skills and knowledge for trade level roles in the parks and gardens industry including gardener, greenkeeper and groundsperson.

Individuals with this qualification perform tasks under broad supervision involving a broad range of skills that are applied in a wide variety of contexts, which will involve discretion and judgement in selecting and operating equipment, coordinating resources and applying contingency measures during work.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 16 units of competency:
 - 11 core units plus
 - 5 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 4 must be from the electives listed below
- 1 from the remaining electives listed below, or any currently endorsed Training Package or accredited course.

Core Units

AHCIRG346	Operate pressurised irrigation systems
AHCMOM304	Operate machinery and equipment
AHCPCM306	Provide information on plants and their culture
AHCPGD307	Implement a plant establishment program
AHCPGD309	Perform specialist amenity pruning
AHCPGD310	Implement a landscape maintenance program
AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders
AHCSOL304	Implement soil improvements for garden and turf areas
AHCTRF309	Implement a grassed area maintenance program
AHCWHS301	Contribute to work health and safety processes

Elective Units

AHCARB314	Implement a tree maintenance program
AHCARB315	Inspect trees for access and work
AHCARB320	Install tree support systems
AHCARB321	Implement a tree protection program
AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCDRG305	Install drainage systems
AHCECR301	Maintain native ecosystem areas
AHCECR303	Implement biological reintroduction works
AHCIRG337	Measure irrigation delivery system performance
AHCIRG338	Troubleshoot irrigation systems

AHCIRG345	Install pressurised irrigation systems
AHCIRG347	Maintain pressurised irrigation systems
AHCLSC316	Implement a paving project
AHCPCM303	Identify plant specimens
AHCPCM305	Implement a plant nutrition program
AHCPCM307	Report on health and condition of trees
AHCPGD210	Transplant shrubs and small trees
AHCPGD308	Plan and maintain plant displays
AHCPGD311	Conduct operational inspection of park facilities
AHCPGD312	Implement a maintenance program for an aquatic environment
AHCSOL305	Prepare growing media
AHCTRF307	Construct turf playing surfaces
AHCTRF308	Establish turf
AHCTRF310	Monitor turf health
AHCTRF311	Renovate sports turf
AHCWRK305	Coordinate work site activities
AHCWRK309	Apply environmentally sustainable work practices
BSBOPS304	Deliver and monitor a service to customers
BSBOPS305	Process customer complaints
FBPPPL3007	Support and mentor individuals and groups
FWPCOT2254	Maintain chainsaws
FWPCOT2256	Trim and cut felled trees
FWPFGM3216	Fell trees manually (intermediate)
HLTAID011	Provide first aid

PUAFER008	Confine small emergencies in a facility
RIIWHS204E	Work safely at heights

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC31021 Certificate III in Parks and Gardens	AHC31016 Certificate III in Parks and Gardens	Amended packaging rules Core units increase by 7 units Updated elective units	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC31120 Certificate III in Nursery Operations

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.2.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification describes the skills and knowledge for trade level roles carried out under broad supervision in the nursery production and retail nursery industry. It is assumed that participants undertaking this qualification as a direct entry qualification would have nursery or horticulture industry experience prior to undertaking this qualification.

Individuals with this qualification perform tasks autonomously involving a broad range of skills that are applied in a wide variety of contexts, which will involve discretion and judgement in planning tasks, selecting and operating equipment, coordinating resources and applying contingency measures during work.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 16 units of competency:
 - 9 core units plus
 - 7 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. Electives can be chosen to provide a general qualification or a qualification with a specialisation.

For the award of the *Certificate III in Nursery Operations* choose:

- up to 7 electives from groups A, B or C
- up to 3 units from any other endorsed Training Package or accredited course packaged at Certificate II, III or IV.

For the award of the *Certificate III in Nursery Operations (Nursery Production)* choose:

- at least 4 electives from group A
- up to 3 units from the remaining units listed in groups A, B or C, or any other endorsed Training Package or accredited course packaged at Certificate II, III or IV.

For the award of the *Certificate III in Nursery Operations (Retail Nursery)* choose:

- at least 4 electives from group B
- up to 3 units from the remaining units listed in groups A, B or C, or any other endorsed Training Package or accredited course packaged at Certificate II, III or IV.

Where two specialisations are completed, award of the qualification would read (for example), *Certificate III in Nursery Operations (Nursery Production, Retail Nursery)*.

Core Units

AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCIRG338	Troubleshoot irrigation systems
AHCNSY308	Maintain nursery plants
AHCPCM305	Implement a plant nutrition program
AHCPCM306	Provide information on plants and their culture
AHCPMG302	Control plant pests, diseases and disorders
AHCSOL305	Prepare growing media
AHCWHS301	Contribute to work health and safety processes

Group A (nursery production)

AHCBIO303	Apply biosecurity measures
AHCIRG347	Maintain pressurised irrigation systems
AHCNSY309	Receive and dispatch nursery products
AHCNSY313	Implement a propagation plan

Group B (retail nursery)

AHCPCM303	Identify plant specimens
BSBMKG434	Promote products and services
SIRRMER001	Produce visual merchandise displays
SIRXCEG001	Engage the customer

Group C (general electives)

AHCBER302	Work effectively in an emergency disease or plant pest response
AHCBER305	Carry out emergency disease or plant pest control procedures on infected premises
AHCBER306	Carry out movement and security procedures
AHCBIO301	Identify and report signs of unusual disease or pest
AHCBUS408	Operate within a budget framework
AHCHYD301	Implement a maintenance program for hydroponic systems
AHCHYD302	Install hydroponic systems
AHCIRG328	Operate irrigation controller and sensor technology
AHCIRG337	Measure irrigation delivery system performance

AHCIRG345	Install pressurised irrigation systems
AHCIRG346	Operate pressurised irrigation systems
AHCMER305	Provide information on hardware products
AHCMER306	Sell products and services
AHCMOM202	Operate tractors
AHCMOM217	Operate quad bikes
AHCMOM304	Operate machinery and equipment
AHCMOM305	Operate specialised machinery and equipment
AHCNSY310	Install and maintain plant displays
AHCNSY311	Promote sales of plants
AHCNSY312	Prepare specialised plants
AHCNSY314	Operate fertigation equipment
AHCNSY403	Plan a growing-on program
AHCPCM204	Recognise plants
AHCPCM405	Implement an integrated pest management program
AHCPMG301	Control weeds
AHCSOL203	Assist with soil or growing media sampling and testing
AHCWAT302	Monitor and operate water treatment processes

AHCWRK303	Respond to emergencies
AHCWRK305	Coordinate work site activities
AHCWRK309	Apply environmentally sustainable work practices
BSBOPS304	Deliver and monitor a service to customers
BSBOPS305	Process customer complaints
SIRRINV002	Control stock
SIRRMER003	Coordinate visual merchandising activities
SIRXPDK001	Advise on products and services
SIRXRSK002	Maintain store security
TLILIC0003	Licence to operate a forklift truck

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC31120 Certificate III in Nursery Operations Release 3	AHC31120 Certificate III in Nursery Operations Release 2	Minor change to correct Packaging Rules	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC31319 Certificate III in Sports Turf Management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge for trade level roles carried out under general direction within sports turf management.

Individuals with this qualification perform tasks autonomously involving a broad range of skills that are applied in a wide variety of sports turf facilities and workplaces. They exercise discretion and judgement in planning tasks, selecting and operating equipment, coordinating resources and applying contingency measures during work.

Legislation related to the installation of irrigation and the storage, handling and application of chemicals applies in some states and territories.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 23 units of competency:
 - 18 core units plus
 - 5 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 3 units must be selected from the electives listed below
- the remaining 2 electives may be selected from the list below or currently endorsed Training Package or Accredited Course.

Core Units

AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCDRG305	Install drainage systems
AHCIRG345	Install pressurised irrigation systems
AHCIRG346	Operate pressurised irrigation systems
AHCIRG347	Maintain pressurised irrigation systems
AHCMOM304	Operate machinery and equipment
AHCPCM301	Implement a plant nutrition program
AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders
AHCSOL304	Implement soil improvements for garden and turf areas
AHCTRF306	Prepare sports turf surfaces for play
AHCTRF307	Construct turf playing surfaces
AHCTRF308	Establish turf
AHCTRF310	Monitor turf health
AHCTRF311	Renovate sports turf
AHCWHS301	Contribute to work health and safety processes
AHCWRK309	Apply environmentally sustainable work practices

Elective Units

ACMGAS308	Communicate effectively with clients and team members
AHCARB301	Implement a tree maintenance program
AHCMOM202	Operate tractors
AHCMOM213	Operate and maintain chainsaws
AHCMOM301	Coordinate machinery and equipment maintenance and

	repair
AHCMOM310	Operate land-forming machinery and equipment
AHCPCM303	Identify plant specimens
AHCPGD201	Plant trees and shrubs
AHCPGD203	Prune shrubs and small trees
AHCSOL401	Sample soils and interpret results
AHCWRK305	Coordinate work site activities
CPPSIS2012	Assist in collecting basic spatial data
FSKNUM23	Estimate, measure and calculate measurements for work
FSKRDG03	Read and respond to basic workplace instructions
RIIMPO335E	Conduct skid steer loader operations without attachments

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC31319 Certificate III in Sports Turf Management	AHC31316 Certificate III in Sports Turf Management	Total number of units required to achieve the qualification increased from 16 to 23 Changes to packaging rules, core and elective units	No equivalent qualification

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC31421 Certificate III in Conservation and Ecosystem Management

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.1.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Qualification Description

This qualification provides the skills and theoretical and practical knowledge for work or further learning in the conservation and ecosystem management industry. The qualification provides for work roles encompassing a broad range of skills, or can be focussed on one or more specialisations, including:

- Indigenous land management
- Ecological restoration
- Land, parks and wildlife management
- Pest controller
- Conservation earthworks
- Marine
- Fire
- Mined land rehabilitation

Individuals with this qualification perform a range of conservation and ecosystem management activities including, site restoration, rehabilitation and renewal and management of the rural and natural landscapes, degraded sites, and marine environments. They contribute to the preservation and maintenance of wildlife and their habitat in the natural ecosystem, parks and reserves. Activities frequently involve working with and preservation of indigenous culture and heritage resources.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 16 units of competency:
 - 2 core units plus
 - 14 elective units

Elective units must ensure the integrity of the qualification Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 6 must be selected from any of groups A, B, C, D, E, F, G and/or H
- up to 6 from Group I
- up to 4 units may be selected from any currently endorsed Training Package or accredited course.

Any combination of electives that meets the packaging rules can be selected for the award of the *Certificate III in Conservation and Ecosystem Management*. Where appropriate, electives may be packaged to provide a qualification with a specialisation area as follows:

- at least 6 electives from Group A must be selected for the award of the *Certificate III in Conservation and Ecosystem Management (Indigenous Land Management)*
- at least 6 electives from Group B must be selected for the award of the *Certificate III in Conservation and Ecosystem Management (Ecological Restoration)*
- at least 6 electives from Group C must be selected for the award of the *Certificate III in Conservation and Ecosystem Management (Land Parks and Wildlife)*
- at least 6 electives from Group D must be selected for the award of the *Certificate III in Conservation and Ecosystem Management (Conservation Earthworks)*
- at least 6 electives from Group E must be selected for the award of the *Certificate III in Conservation and Ecosystem Management (Pest Controller)*
- at least 6 electives from Group F must be selected for the award of the *Certificate III in Conservation and Ecosystem Management (Marine)*
- at least 6 electives from Group G must be selected for the award of the *Certificate III in Conservation and Ecosystem Management (Fire)*
- at least 6 electives from Group H must be selected for the award of the *Certificate III in Conservation and Ecosystem Management (Mined Land Rehabilitation)*

Note: If more than one specialisation is completed the award of the qualification would read, for example, *Certificate III in Conservation and Ecosystem Management (Indigenous Land Management and Conservation Earthworks)*.

Core Units

AHCECR309	Conduct an ecological and cultural site inspection prior to works
AHCWHS301	Contribute to work health and safety processes

Elective Units

Group A: Indigenous Land Management

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCECR301	Maintain native ecosystem areas
AHCFIR301*	Undertake burning for fuel, ecological and cultural resource management
AHCILM302	Provide appropriate information on cultural knowledge
AHCILM305	Work with an Aboriginal Community or organisation
AHCILM306	Follow Aboriginal cultural protocols
AHCILM307*	Implement Aboriginal cultural burning practices
AHCILM308	Identify traditional customs and land rights for an Indigenous Community
AHCWRK305	Coordinate work site activities
AHCWRK312	Operate in isolated and remote situations
SITTGDE001	Interpret aspects of local Australian Indigenous culture

Group B: Ecological Restoration

AHCECR301	Maintain native ecosystem areas
AHCECR302	Collect and preserve biological samples
AHCECR304	Undertake direct seeding
AHCECR305	Collect native seed
AHCECR307	Read and interpret maps
AHCECR310	Implement assisted regeneration works
AHCECR311	Implement ecosystem reconstruction works
AHCLPW302	Implement a biodiversity monitoring plan
AHCPCM303	Identify plant specimens
AHCPCM306	Provide information on plants and their culture

AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders
AHCSAW202	Recognise landforms and soil types

Group C: Lands, Parks and Wildlife

AHCECR301	Maintain native ecosystem areas
AHCECR307	Read and interpret maps
AHCFAU302	Identify fauna in the field
AHCINF301	Implement property improvement, construction and repair
AHCINF303	Plan and construct conventional fencing
AHCLPW302	Implement a biodiversity monitoring plan
AHCLPW308	Coordinate and report on data collection
AHCLPW310	Supervise park visitor activities
AHCLPW311	Construct access tracks
AHCLPW312	Carry out inspection of designated area
AHCPCM303	Identify plant specimens
AHCWRK305	Coordinate work site activities
AHCWRK309	Apply environmentally sustainable work practices
FWPCOT3202	Navigate in remote or trackless areas

Group D: Conservation Earth Works

AHCBIO303	Apply biosecurity measures
AHCLPW311	Construct access tracks
AHCMOM302	Perform machinery maintenance
AHCMOM304	Operate machinery and equipment

AHCMOM314	Transport machinery
AHCPCM204	Recognise plants
AHCSAW202	Recognise landforms and soil types
AHCSAW303	Construct conservation earthworks
AHCSAW304	Implement erosion and sediment control measures
AHCSAW402	Set out conservation earthworks
AHCWRK311	Conduct site inspections
FWPCOT3314	Comply with soil and water protection

Group E Pest Controller

AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders
AHCPMG304	Use firearms to humanely destroy animals
AHCPMG305	Survey pests
AHCPMG306	Determine pest control techniques
AHCPMG307	Apply animal trapping techniques
AHCPMG308	Implement pest management strategies
AHCPMG312	Apply poison baits for vertebrate pest control in rural and environmental landscapes
AHCPMG402	Ensure compliance with pest legislation
AHCPMG403	Apply predator trapping techniques

Group F: Marine

AHCMAR301	Conduct a subtidal marine monitoring operation from a vessel or platform
AHCMAR302	Conduct intertidal marine monitoring

AHCMAR303	Coordinate marine conservation activities on small vessels
AHCMAR304	Identify and collect marine life
AHCMAR305	Monitor ocean conditions and marine environmental quality
MARC037	Operate inboard and outboard motors
MARF027	Apply basic survival skills in the event of vessel abandonment
MARF028	Follow procedures to minimise and fight fires on board a vessel
MARF030	Survive at sea using survival craft
MARN008	Apply seamanship skills aboard a vessel up to 12 metres

Group G: Fire

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCFIR301*	Undertake burning for fuel, ecological and cultural resource management
AHCILM307*	Implement Aboriginal cultural burning practices
AHCMOM304	Operate machinery and equipment
AHCWRK302	Monitor weather conditions
FWPCOT3325	Operate a four wheel drive vehicle on unsealed roads
PUAFIR008*	Operate aerial ignition equipment in an aircraft
PUAFIR204*	Respond to wildfire
PUAFIR210	Prevent injury
PUAFIR303*	Suppress wildfire
PUAFIR310	Operate specialist appliance

Group H: Mined Land Rehabilitation

AHCECR301	Maintain native ecosystem areas
AHCECR304	Undertake direct seeding
AHCECR308	Conduct a site inspection for ecological restoration
AHCECR310	Implement assisted regeneration works
AHCFAU302	Identify fauna in the field
AHCILM305	Work with an Aboriginal Community or organisation
AHCMOM304	Operate machinery and equipment
AHCMOM315	Operate chemical application machinery and equipment
AHCPCM204	Recognise plants
AHCPCM303	Identify plant specimens
CPCCWHS100 1	Prepare to work safely in the construction industry
CPPWMT3004	Comply with environmental protection requirements when transporting waste
RIICAR302D	Rehabilitate small mine site

Group I: General Electives

An asterisk (*) next to the unit code indicates there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

ACMGEN309	Provide basic animal first aid
AHCARB325	Manage trees to create and maintain habitat refuges
AHCBIO301	Identify and report signs of unusual disease or pest
AHCBIO303	Apply biosecurity measures
AHCBUS408	Operate within a budget framework
AHCCFP301	Identify the effects of climate change as a factor in land management

AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCECR302	Collect and preserve biological samples
AHCECR303	Implement biological reintroduction works
AHCECR306	Conduct photography for fieldwork
AHCECR311	Implement ecosystem reconstruction works
AHCEXP303	Prepare and use explosives
AHCEXP304	Identify and select explosive products
AHCFAU303	Respond to wildlife emergencies
AHCFAU501	Manage fauna populations
AHCFIR202	Assist with planned burning
AHCILM305	Work with an Aboriginal Community or organisation
AHCILM306	Follow Aboriginal cultural protocols
AHCIRG436	Implement an irrigation-related environmental protection program
AHCLPW307*	Perform restricted diving for scientific purposes
AHCLPW309	Operate remotely piloted system for conservation work
AHCLPW313	Undertake sampling and testing of water
AHCLSC311	Set out site for construction works
AHCLSC304	Erect timber structures and features
AHCMAR306	Operate mobile underwater vehicles
AHCMOM301	Coordinate machinery and equipment maintenance and repair
AHCMOM305	Operate specialised machinery and equipment
AHCMOM315	Operate chemical application machinery and equipment

AHCPGD307	Implement a plant establishment program
AHCPGD310	Implement a landscape maintenance program
AHCPGD311	Conduct operational inspection of park facilities
AHCPGD312	Implement a maintenance program for an aquatic environment
AHCPMG302	Control plant pests, diseases and disorders
AHCPMG306	Determine pest control techniques
AHCPMG308	Implement pest management strategies
AHCPMG402	Ensure compliance with pest legislation
AHCSAW303	Construct conservation earthworks
AHCSAW304	Implement erosion and sediment control measures
AHCSAW402	Set out conservation earthworks
AHCSPO312	Sample seed before and after processing
AHCWRK302	Monitor weather conditions
AHCWRK303	Respond to emergencies
AHCWRK304	Respond to rescue incidents
AHCWRK305	Coordinate work site activities
AHCWRK310	Provide on-job training support
BSBPMG427	Apply project procurement procedures
BSBTEC301	Design and produce business documents
CPCCWHS100 1	Prepare to work safely in the construction industry
CPPSSI2012	Assist in collecting basic spatial data
CPPSSI2013	Store and retrieve basic spatial data
CPPSSI3011	Produce basic maps
CPPSSI4035	Apply GIS software to spatial problems

FWPCOT3301	Trim trees using a pole saw
FWPCOT3325	Operate a four wheel drive vehicle on unsealed roads
FWPCOT3326	Recover four wheel drive vehicle
FWPCOT3329	Perform complex four wheel drive operations
FWPNSY3002	Extract, clean, store and despatch tree seeds
HLTAID011	Provide First Aid
HLTAID013	Provide First Aid in remote or isolated site
HLTAID015	Provide advanced resuscitation and oxygen therapy
MARI003	Comply with regulations to ensure safe operation of a vessel up to 12 metres
MARK007	Handle a vessel up to 12 metres
MSL974021	Perform biological procedures
MSL975045*	Perform laboratory-based ecological techniques
PUAEMR005	Treat operational risk
PUAEMR006	Assess operational risk
PUAFIR017	Work safely around aircraft
PUAFIR204*	Respond to wildfire
PUAFIR210	Prevent injury
PUAOIL202	Use basic equipment operations for oil spill response
PUAOIL303	Apply health, safety and risk controls when working on oiled shorelines
PUAOIL304	Use advanced equipment operations for oil spill response
RIICAR301D	Rehabilitate exploration site
RIIENV401E	Supervise dust and noise control
RIIMEX201E	Suppress dust in open-cut environments
RIIMPO206D	Conduct bulk water truck operations

SFICRO302	Conduct crocodile surveys
SFICRO305	Prepare to work with crocodiles
SFICRO306	Work safely in crocodile habitats
SISOSCB001	SCUBA dive in open water to a maximum depth of 18 metres
SISOSCB006*	Perform diver rescues
SITTGDE002	Work as a guide
TLIC0023	Operate four wheel drive vehicle

Prerequisite requirements

Note: Units listed in the Prerequisite requirement column that have their own prerequisite requirements are shown with an asterisk (*)

Unit of competency	Prerequisite requirement
AHCFIR301 Undertake burning for fuel, ecological and cultural resource management	AHCFIR202 Assist with planned burning
AHCILM307 Implement Aboriginal cultural burning practices	AHCILM306 Follow Aboriginal cultural protocols
AHCLPW307 Perform restricted diving for scientific purposes	SISOSCB001 SCUBA dive in open water to a maximum depth of 18 metres SISOSCB006 Perform diver rescues* HLTAID011 Provide First Aid HLTAID015 Provide advanced resuscitation and oxygen therapy
MSL975045 Perform laboratory-based ecological techniques	MSL974021 Perform biological procedures
PUAFIR008 Operate aerial ignition equipment in an aircraft	PUAFIR017 Work safely around aircraft

PUAFIR204 Respond to wildfire	PUAFIR210 Prevent injury
PUAFIR303 Suppress wildfire	PUAFIR204 Respond to wildfire*
SISOSCB006 Perform diver rescues	SISOSCB001 SCUBA dive in open water to a maximum depth of 18 metres

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC31421 Certificate III in Conservation and Ecosystem Management Release 2	AHC31421 Certificate III in Conservation and Ecosystem Management Release 1	Updated packaging rules	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC31516 Certificate III in Indigenous Land Management

Modification History

Release	Comments
Release 4	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification provides a vocational outcome required for an Indigenous land worker operating within Aboriginal Communities, following Community protocols and using a mix of traditional and contemporary land management strategies.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 16 units of competency:
 - 2 core units plus
 - 14 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 4 units from Group A

- Select 7 units from Group A or Group B
- A maximum of 3 units may be selected from the elective lists of Certificate II, III or IV of this or any other endorsed Training Package or Accredited Course.
Selected units must be relevant to job outcomes in Indigenous land management and must be chosen to ensure the integrity of the qualification outcome at AQF level 3.

Core Units

Work health and safety

AHCWHS301	Contribute to work health and safety processes
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Work

AHCWRK309	Apply environmentally sustainable work practices
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Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

Group A

Indigenous land management

AHCILM302	Provide appropriate information on cultural knowledge
AHCILM305	Work with an Aboriginal Community or organisation
AHCILM306	Follow Aboriginal cultural protocols
AHCILM308	Identify traditional customs and land rights for an Indigenous Community
SITTGDE001	Interpret aspects of local Australian Indigenous culture

Fauna

AHCFAU303	Respond to wildlife emergencies
LGAREGS305 A	Undertake animal or reptile control duties

Lands, parks and wildlife

SITTGDE002	Work as a guide
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Natural area restoration

AHCECR203	Perform basic ecological restoration works
AHCECR301	Maintain native ecosystem areas
AHCECR303	Implement biological reintroduction works
AHCECR305	Collect native seed
FWPFGM3202	Extract seed

Pest management

AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders

Group B

Animal care and management

ACMGAS305	Rescue animals and apply basic first aid
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Business

BSBTEC301	Design and produce business documents
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Chemicals

AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases

Infrastructure

AHCINF301	Implement property improvement, construction and repair
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Landscaping

AHCLSC304	Erect timber structures and features
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Lands, parks and wildlife

AHCLPW310	Supervise park visitor activities
AHCLPW311	Construct access tracks
AHCLPW312	Carry out inspection of designated area
AHCLPW307	Perform restricted diving for scientific purposes
AHCLPW313	Undertake sampling and testing of water
PUAFIR204*	Respond to wildfire
PUAFIR303*	Suppress wildfire

Machinery operation and maintenance

AHCMOM305	Operate specialised machinery and equipment
AHCMOM315	Operate chemical application machinery and equipment
FWPCOT3259	Operate a four wheel drive on unsealed roads

Natural area restoration

AHCECR306	Conduct photography for fieldwork
AHCECR307	Read and interpret maps

Plants

AHCPCM303	Identify plant specimens
AHCPCM305	Implement a plant nutrition program
AHCPCM306	Provide information on plants and their culture

Vertebrate management

AHCPMG308	Implement pest management strategies
AHCPMG305	Survey pests
AHCPMG307	Apply animal trapping techniques

Work

AHCWRK303	Respond to emergencies
AHCWRK304	Respond to rescue incidents
AHCWRK305	Coordinate work site activities

Prerequisite requirements

Note: Units listed in the *Prerequisite requirement* column that have their own prerequisite requirements are shown with an asterisk (*)

Unit of competency	Prerequisite requirement
PUAFIR204 Respond to wildfire	PUAFIR210 Prevent injury
PUAFIR303 Suppress wildfire	PUAFIR204 Respond to wildfire*

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC31516 Certificate III in Indigenous Land Management Release 4	AHC31516 Certificate III in Indigenous Land Management Release 3	Updated unit codes	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC31818 Certificate III in Beekeeping

Modification History

Release	Comments
Release 2	This version released with Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Qualification Description

This qualification describes the skills and knowledge of a honey bee (*Apis*) beekeeper, including the establishment of beehives and apiaries, the transport of live bees and the management of bees for honey production and/or provision of pollination services.

Legislation, regulations and by-laws relating to beehive ownership and biosecurity codes of practice apply in some states and territories.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 18 units of competency:
 - 13 core units plus
 - 5 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 3 units must be selected from the electives listed below
- the remaining 2 units may be selected from the remaining electives listed below
- up to 2 units may be selected from any currently endorsed Training Package or accredited course packaged at AQF Certificate II, III or IV levels.

Core Units

AHCBEK203	Open and reassemble a beehive
AHCBEK205	Prepare and use a bee smoker
AHCBEK206	Assemble and maintain beekeeping components
AHCBEK301	Manage honey bee swarms
AHCBEK302	Manipulate honey bee brood
AHCBEK303	Re-queen a honey bee colony
AHCBEK304	Remove a honey crop from a hive
AHCBEK311	Transport bee hives by road to new apiary site
AHCBEK312	Extract honey
AHCBEK313	Manage pests and disease within a honey bee colony
AHCBEK405	Select and establish an apiary site
AHCWHS301	Contribute to work health and safety processes
AHCWRK306	Comply with industry quality assurance requirements

Elective Units

AHCBEK307	Collect and store propolis
AHCBEK308	Produce and harvest royal jelly
AHCBEK309	Trap and store pollen
AHCBEK310	Process raw wax into moulds
AHCBEK402	Perform queen bee artificial insemination
AHCBEK408	Provide bee pollination services
AHCBEK409	Rear queen bees
AHCBIO303	Apply biosecurity measures
AHCBUS407	Cost a project
AHCLSK322	Transport farm produce or bulk materials

AHCMOM213	Operate and maintain chainsaws
AHCPCM204	Recognise plants
AHCWRK303	Respond to emergencies
AHCWRK305	Coordinate work site activities
AHCWRK308	Handle bulk materials in storage area
BSBMKG433	Undertake marketing activities
FBPFSY2001	Implement the food safety program and procedures
FBPFSY3002	Participate in a HACCP team
FBPGPS2011	Operate a creamed honey manufacture process
FBPOPR2023	Operate a packaging process
FBPOPR2066	Apply sampling procedures
HLTAID011	Provide First Aid
TLILIC0003	Licence to operate a forklift truck

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC31818 Certificate III in Beekeeping Release 2	AHC31818 Certificate III in Beekeeping Release 1	Updated unit codes	Equivalent

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC32216 Certificate III in Commercial Composting

Modification History

Release	Comments
Release 4	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification provides a general vocational outcome for a person working in a commercial composting business. The composting industry expects this qualification to be achieved to meet job outcomes at this level.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 1 core unit plus
 - 9 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 5 units from Group A

- Select 2 units from Group A or B
- 2 units may be selected from this or any other endorsed Training Package or Accredited Course.

Selected units must be relevant to job outcomes in commercial composting and must be chosen to ensure the integrity of the qualification outcome at AQF level 3.

Core Units

AHCWHS301	Contribute to work health and safety processes
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Elective Units

Group A

AHCCOM301	Operate compost processing plant, machinery and equipment
AHCCOM401	Develop a composting recipe
AHCCOM402	Plan and schedule compost production
AHCWRK305	Coordinate work site activities
AHCWRK306	Comply with industry quality assurance requirements
AHCWRK308	Handle bulk materials in storage area
RIIMPO304E	Conduct wheel loader operations

Group B

AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCCHM308	Use application equipment to apply fumigant in confined spaces
AHCCHM309	Fumigate soil
AHCCOM201	Assess and receive raw materials for composting
AHCCOM202	Recognise and respond to fire emergencies on a

	composting site
AHCCOM203	Recognise raw materials, production processes and products on a composting site
AHCMOM301	Coordinate machinery and equipment maintenance and repair
AHCMOM302	Perform machinery maintenance
AHCMOM304	Operate machinery and equipment
AHCMOM305	Operate specialised machinery and equipment
AHCMOM315	Operate chemical application machinery and equipment

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC32216 Certificate III in Commercial Composting Release 4	AHC32216 Certificate III in Commercial Composting Release 3	Qualification updated to remove three elective units that have been deleted as part of meeting Skills Ministers' priority of removing training products with low or no enrolments, as agreed by the AISC	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC32419 Certificate III in Irrigation Technology

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge for trade level roles carried out in the irrigation industry.

Individuals with this qualification perform tasks under broad supervision involving a broad range of skills that are applied in a wide variety of contexts, which will involve discretion and judgement in selecting and operating equipment, coordinating resources and applying contingency measures during work.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 22 units of competency:
 - 9 core units plus
 - 13 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 7 must be from Group A electives
- 2 must be from Group A or B electives

- 4 from the remaining units listed in Groups A or B, or any other endorsed Training Package or accredited course packaged at Certificate III.

Core Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCINF304	Install and terminate extra low voltage wiring systems
AHCIRG337	Measure irrigation delivery system performance
AHCIRG338	Troubleshoot irrigation systems
AHCIRG339	Monitor soils under irrigation
AHCIRG340	Install irrigation pumps
AHCIRG342	Interpret irrigation plans and drawings
AHCIRG345	Install pressurised irrigation systems
AHCWHS301	Contribute to work health and safety processes
AHCWRK309	Apply environmentally sustainable work practices

Elective Units

Group A

AHCDRG305	Install drainage systems
AHCDRG306	Measure drainage system performance
AHCDRG307	Troubleshoot drainage systems
AHCDRG308	Maintain and repair irrigation drainage systems
AHCIRG301	Install gravity fed irrigation systems
AHCIRG328	Operate irrigation controller and sensor technology
AHCIRG336	Operate and maintain gravity fed irrigation systems
AHCIRG341	Operate and maintain irrigation pumping systems
AHCIRG343	Operate irrigation injection equipment
AHCIRG344	Implement an irrigation schedule

AHCIRG346	Operate pressurised irrigation systems
AHCIRG347	Maintain pressurised irrigation systems
AHCIRG348	Operate and maintain moving irrigation system
AHCWRK305	Coordinate work site activities
MEM12024	Perform computations

Group B

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCCHM101	Follow basic chemical safety rules
AHCCHM201	Apply chemicals under supervision
AHCCHM304	Transport and store chemicals
AHCIRG349	Recommend irrigation products and services
AHCLPW313	Undertake sampling and testing of water
AHCMER301	Process customer complaints
AHCMER306	Sell products and services
AHCMOM204	Undertake operational maintenance of machinery
AHCMOM208	Conduct excavator operations
AHCMOM304	Operate machinery and equipment
AUMGTW001	Perform basic welding, thermal cutting, heating and gouging
BSBWRT311	Write simple documents
CPCPCM2043 A	Carry out WHS requirements
CPCPWT3027 A*	Connect irrigation systems from drinking water supply
ICTWOR304	Manage spare parts

MEMPE001A	Use engineering workshop machines
MEM07032	Use workshop machines for basic operations
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations
MSTGN3003	Estimate and cost job
NWPIWS002	Operate regulating devices in rural irrigation systems
NWPIRR013	Construct and install irrigation delivery and stormwater drainage assets
NWPIWS004	Install meters for rural water supplies
NWPIWS006	Maintain meters for rural water supplies
NWPIWS008	Monitor and conduct maintenance in rural irrigation systems
NWPIWS012	Monitor and schedule water deliveries
NWPNET019	Prepare and restore worksite
NWPNET029	Locate, identify and protect utilities
NWPTRT028	Operate and control reclaimed water irrigation
PMBWELD301	Butt weld polyethylene plastic pipelines
PMBWELD302	Electrofusion weld polyethylene pipelines
SIRRINV001	Receive and handle retail stock
SIRRINV002	Control stock
SIRRMER003	Coordinate visual merchandising activities
SIRXCEG003	Build customer relationships and loyalty
SIRXPDK001	Advise on products and services
SITXCCS006	Provide service to customers
TLIK2010	Use infotechnology devices in the workplace
TLILIC0003	Licence to operate a forklift truck

UEECD0007	Apply work health and safety regulations, codes and practices in the workplace
UEERL0001*	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply

Prerequisite requirements

Unit of competency	Prerequisite requirement
CPCPWT3027A Connect irrigation systems from drinking water supply	CPCPCM2043A Carry out WHS requirements
UEERL0001 Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply	UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC32419 Certificate III in Irrigation Technology Release 2	AHC32419 Certificate III in Irrigation Technology Release 1	Minor update Updated the superseded AHC, BSB, NWP and UEE units	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC32516 Certificate III in Aboriginal Sites Work

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Qualification Description

The qualification enables individuals to undertake work associated with inspecting, documenting and maintaining Aboriginal cultural and heritage sites.

The qualification enables individuals to operate under recognised, appropriate cultural supervision to undertake work associated with inspecting, documenting and maintaining Aboriginal cultural and heritage sites.

There are no entry requirements for this qualification, although it is recommended that participants undertaking this qualification seek the endorsement of their local Aboriginal Community and local Aboriginal leadership when enrolling in this qualification.

No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

Total number of units = 15

- Core Units = 9
- Elective Units = 6

Core Units

NOTE: Units marked with an asterisk (*) require completion of prerequisite Unit/s which is identified under the Unit

Unit Code	Unit Title
AHCASW301	Protect places of Aboriginal cultural significance* <i>AHCILM306 Follow Aboriginal cultural protocols</i>

AHCASW302	Relate Aboriginal culture to sites work* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW303	Identify and record Aboriginal sites, objects and cultural landscapes* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW308	Apply cultural significance to Aboriginal sites and landscapes* <i>AHCASW302 Relate Aboriginal culture to sites work**</i> <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW310	Move and store Aboriginal cultural material* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW312	Maintain an Aboriginal cultural site* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW313	Apply knowledge of relevant legislation to Aboriginal sites work
AHCILM306	Follow Aboriginal cultural protocols
AHCWHS301	Contribute to work health and safety processes

Electives

- Select 4 units from Group A
- Select 2 additional units from Group A or Group B or from the elective list of any Certificate II, III or IV in this or any other endorsed Training Package or Accredited Course
- Selected units must be relevant to job outcomes in Aboriginal sites work and must be chosen to ensure the integrity of the qualification outcome at AQF level 3

Group A

NOTE: Units marked with an asterisk (*) require completion of prerequisite Unit/s which is identified under the Unit

Unit Code	Unit Title
AHCASW305	Work with Aboriginal ceremonial secret sacred materials* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW306	Use technology in Aboriginal sites work*

	<i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW307	Support the documentation of Aboriginal cultural landscapes* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW309	Interpret Aboriginal cultural landscape* <i>AHCASW302 Relate Aboriginal culture to sites work</i> <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCILM305	Work with an Aboriginal Community or organisation* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCILM307	Implement Aboriginal cultural burning practices* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCILM510	Plan for successful cultural practice at work * <i>AHCILM306 Follow Aboriginal cultural protocols</i>

Group B

NOTE: Units marked with an asterisk (*) require completion of prerequisite Unit/s which is identified under the Unit

Unit Code	Unit Title
AHCASW304	Identify Indigenous culturally significant plants* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW501	Survey and report on Aboriginal cultural sites* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCCHM303	Prepare and apply chemicals
AHCCHM304	Transport and store chemicals
AHCFAU301	Respond to wildlife emergencies
AHCILM201	Maintain cultural places
AHCILM203	Record information about Country
AHCILM302	Provide appropriate information on cultural knowledge
AHCILM308	Identify traditional customs and land rights for an Indigenous Community

AHCILM404	Record and document Community history
AHCINF301	Implement property improvement, construction and repair
AHCLPW301	Supervise park visitor activities
AHCLPW303	Construct access tracks
AHCLPW304	Carry out inspection of designated area
AHCLPW305	Perform diving for scientific purposes
AHCLPW306	Undertake sampling and testing of water
AHCLSC304	Erect timber structures and features
AHCMOM305	Operate specialised machinery and equipment
AHCMOM315	Operate chemical application machinery and equipment
AHCNAR201	Carry out natural area restoration works
AHCNAR301	Maintain natural areas
AHCNAR303	Implement revegetation works
AHCNAR305	Collect native seed
AHCNAR306	Conduct photography for fieldwork
AHCNAR307	Read and interpret maps
AHCPCM301	Implement a plant nutrition program
AHCPCM302	Provide information on plants and their culture
AHCPCM303	Identify plant specimens
AHCPMG301	Control weeds
AHCPMG302	Control pests and diseases in plants
AHCPMG305	Survey pests
AHCPMG307	Apply animal trapping techniques
AHCPMG308	Implement pest management strategies
AHCWRK303	Respond to emergencies

AHCWRK304	Respond to rescue incidents
AHCWRK305	Coordinate work site activities
BSBITU306	Design and produce business documents
CUAATS504	Work with Aboriginal and Torres Strait Islander cultural material
CUACNM301	Move and store collection material
BSBLIB502	Manage the development of collections
BSBLIB602	Develop and monitor procedures for the movement and storage of collection material
CULMS002B	Research and evaluate Aboriginal or Torres Strait Islander cultural material
CULMS010B	Contribute to the preservation of cultural material
FPICOT3259	Operate a four wheel drive on unsealed roads
FPIFGM3202B	Extract seed
LGAREGS305A	Undertake animal or reptile control duties
PUAFIR204B	Respond to wildfire* <i>PUAFIR215 Prevent injury</i>
PUAFIR303B	Suppress wildfire* <i>PUAFIR204B Respond to wildfire</i>
SITTGDE001	Interpret aspects of local Australian Indigenous culture
SITTGDE002	Work as a guide
SITTGDE007	Research and share general information on Australian Indigenous cultures
SITTGDE008	Prepare specialised interpretive content on flora, fauna and landscape
SITTGDE010	Prepare specialised interpretive content on cultural and heritage environments
SITTPPD002	Develop interpretive activities
SITXCOM004	Address protocol requirements

Qualification Mapping Information

This qualification is equivalent to AHC32513 Aboriginal-sites Work.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC32720 Certificate III in Rural Merchandising

Modification History

Release	Comments
Release 1	This version release with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification describes the skills and knowledge for job roles in the rural merchandising industry including rural merchandiser and rural sales assistant.

Individuals with this qualification perform tasks involving a broad range of skills that are applied in a wide variety of contexts, which will involve discretion and judgement in selecting equipment and services and applying contingency measures during work.

Work must comply with workplace health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 6 core units plus
 - 6 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- At least 4 must be from the electives listed below
- Up to 2 from the electives listed below and/or any other endorsed Training Package or accredited course packaged at Certificate II, III or IV.

Core Units

AHCMER306	Sell products and services
AHCWHS301	Contribute to work health and safety processes
AHCWRK204	Work effectively in the industry
AHCWRK309	Apply environmentally sustainable work practices
BSBOPS304	Deliver and monitor a service to customers
BSBOPS305	Process customer complaints

Elective Units

AHCBAC409	Provide advice on agronomic products
AHCBUS301	Use hand held e-business tools
AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCCHM406	Provide advice and sell farm chemicals
AHCIRG349	Recommend irrigation products and services
AHCIRG446	Provide irrigation sales and service
AHCLSK420	Provide advice on livestock products
AHCMER305	Provide information on hardware products
AHCMER408	Coordinate customer service and networking activities
AHCMOM403	Provide advice and sell machinery
AHCSOL405	Provide information on fertilisers and soil ameliorants
AHCWRK205	Participate in workplace communications
AHCWRK303	Respond to emergencies
AHCWRK306	Comply with industry quality assurance requirements
AHCWRK307	Develop and apply fertiliser and soil ameliorant product

	knowledge
AHCWRK308	Handle bulk materials in storage area
BSBPEF301	Organise personal work priorities
BSBPEF403	Lead personal development
ICTICT214	Operate application software packages
SIRRINV001	Receive and handle retail stock
SIRRINV002	Control stock
SIRRMER001	Produce visual merchandise displays
SIRRMER003	Coordinate visual merchandising activities
SIRXMKT002	Use social media to engage customers
SIRXPDK001	Advise on products and services
SIRXRSK002	Maintain store security
SIRXSLS002	Follow point-of-sale procedures
TLID1001	Shift materials safely using manual handling methods
TLID2004	Load and unload goods/cargo
TLILIC0003	Licence to operate a forklift truck

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC32720 Certificate III in Rural Merchandising	AHC32716 Certificate III in Rural Merchandising	Amended packaging rules, updated core and elective units	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC32816 Certificate III in Rural Operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification provides an occupational outcome in agriculture, horticulture and conservation land management and at least one and up to four other related industries.

Individuals with this qualification perform tasks in a variety of contexts, which involve some judgement in selecting equipment and services. Depending on the units selected individuals will be able to seek employment not only in rural industries but also other industry sectors, such as local government, tourism, hospitality, transport, construction, information technology and metals.

No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 16 units of competency:
 - 2 core units plus
 - 14 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- select at least 6 units from Certificate III qualifications in the AHC endorsed Training Package
- up to 8 units aligned to AQF levels 2, 3, or 4 qualifications may be selected from up to 4 currently endorsed Training Packages or Accredited Courses.

Core Units

AHCWHS301	Contribute to work health and safety processes
AHCWRK309	Apply environmentally sustainable work practices

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC32816 Certificate III in Rural Operations Release 2	AHC32816 Certificate III in Rural Operations Release 1	Minor typographical errors corrected	Equivalent qualification

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC32916 Certificate III in Shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Qualification Description

This qualification covers occupational outcomes for shearing at the professional level. This requires a high standard of workmanship at a rate of at least 120 adult merino sheep or 140 adult crossbred sheep per day. The shearing industry expects this qualification to be achieved to meet job outcomes at this level.

This qualification is suitable for an Australian Apprenticeship.

Job titles relevant to this qualification include:

- Shearer - professional level

No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

To be eligible to enrol in this qualification applicants must be able to demonstrate shearing skills and knowledge at Certificate II in Shearing level by completion of that certificate or by Recognition of Prior Learning.

Packaging Rules

Total number of units = 8

- Core Units = 8
- Elective Units = 0

Core Units

Livestock

Unit Code	Unit Title
AHCLSK331	Comply with industry animal welfare requirements

Shearing

Unit Code	Unit Title
AHCSHG204	Shear sheep to improver level
AHCSHG302	Prepare combs and cutters for machine shearing
AHCSHG303	Maintain and service shearing handpieces
AHCSHG304	Shear sheep to professional level
AHCSHG305	Maintain consistent shearing performance

Work

Unit Code	Unit Title
AHCWRK305	Coordinate work site activities

Work health and safety

Unit Code	Unit Title
AHCWHS301	Contribute to work health and safety processes

Qualification Mapping Information

This qualification is not equivalent to AHC32910 Certificate III in Shearing.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC33016 Certificate III in Wool Clip Preparation

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification is a specialist wool classing qualification for owner classers and enables them to apply for registration with AWEX Ltd as an Owner Classer.

This qualification is suitable for an Australian Apprenticeship.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 14 core units of competency

Core Units

First Aid

HLTAID011	Provide First Aid
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Wool

AHCWOL301	Appraise wool using industry descriptions
AHCWOL303	Prepare wool based on its characteristics
AHCWOL304	Prepare fleece wool for classing
AHCWOL305	Prepare skirtings and oddments

AHCWOL306	Supervise clip preparation
AHCWOL307	Document a wool clip
AHCWOL308	Prepare facilities for shearing and crutching
AHCWOL310	Press wool for a clip
AHCWOL311	Perform shed duties
AHCWOL404	Establish work routines and manage wool harvesting and preparation staff
AHCWOL405	Class fleece wool

Work

AHCWRK306	Comply with industry quality assurance requirements
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Work health and safety

AHCWHS401	Maintain work health and safety processes
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Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC33016 Certificate III in Wool Clip Preparation Release 2	AHC33016 Certificate III in Wool Clip Preparation Release 1	Qualification updated to replace superseded first aid unit, as approved by the AISC in consultation with ASQA	Equivalent

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC33116 Certificate III in Advanced Wool Handling

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Qualification Description

This qualification focuses on a specialist wool handling role and allows individuals who are already working in the wool handling industry to develop further skills and knowledge in order to fulfil specialist roles in the organisation. The wool industry expects individuals with this qualification to perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

This qualification is suitable for an Australian Apprenticeship.

Job roles and titles vary across different industry sectors. Possible job titles relevant to this qualification include:

- Shearing shed hands
- Wool handlers

No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

Total number of units = 10

- Core Units = 9
- Elective Units = 1

Core Units

Livestock

Unit Code	Unit Title
AHCLSK217	Apply animal welfare principles to handling and husbandry of livestock

Wool

Unit Code	Unit Title
AHCWOL201	Pen sheep
AHCWOL203	Carry out wool pressing
AHCWOL304	Prepare fleece wool for classing
AHCWOL305	Prepare skirtings and oddments
AHCWOL308	Prepare facilities for shearing and crutching
AHCWOL311	Perform shed duties

Work

Unit Code	Unit Title
AHCWRK306	Comply with industry quality assurance requirements

Work health and safety

Unit Code	Unit Title
AHCWHS301	Contribute to work health and safety processes

Elective Units

- Select at least 1 unit from the elective list

Wool

Unit Code	Unit Title
AHCWOL303	Prepare wool based on its characteristics

AHCWOL310	Press wool for a clip
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Qualification Mapping Information

This qualification is not equivalent to AHC33110 Certificate III in Advanced Wool handling.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC33316 Certificate III in Feedlot Operations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Qualification Description

This qualification provides an occupational outcome in beef cattle feedlot operations. Electives must be chosen to cover a feedlot maintenance, pen riding, or feeding and milling stream.

The testamur issued for this qualification is to be titled AHC33316 Certificate III in Feedlot Operations. An additional descriptor may be added by the RTO to reflect unit selection. This includes:

- AHC33316 Certificate III in Feedlot Operations (Feedlot Maintenance)
- AHC33316 Certificate III in Feedlot Operations (Feeding and Milling)
- AHC33316 Certificate III in Feedlot Operations (Pen Riding)

No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

Total number of units = 17

- Core Units = 6
- Elective Units = 11

Core Units

Biosecurity

Unit Code	Unit Title
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AHCBIO302	Identify and report unusual disease or plant pest signs
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Chemicals

Unit Code	Unit Title
AHCCHM303	Prepare and apply chemicals
AHCCHM304	Transport and store chemicals

Work

Unit Code	Unit Title
AHCWRK209	Participate in environmentally sustainable work practices
AHCWRK306	Comply with industry quality assurance requirements

Work health and safety

Unit Code	Unit Title
AHCWHS301	Contribute to work health and safety processes

Elective Units

- In order to achieve Feedlot Maintenance specialisation, 8 units must be selected from Group A
- In order to achieve Feeding and Milling specialisation, 8 units must be selected from Group B
- In order to achieve Pen Riding specialisation, 8 units must be selected from Group C
- 3 units aligned to AQF levels 2, 3, or 4 may be selected from Groups A, B, C, or D, or this or any other endorsed Training Package or Accredited Course
Selected units must be relevant to job outcomes in the feedlot industry and must be chosen to ensure the integrity of the qualification outcome at AQF level 3

NOTE: Units marked with an asterisk (*) require completion of prerequisite Unit/s which is identified under the Unit.

Group A

Infrastructure

Unit Code	Unit Title
AHCINF204	Fabricate and repair metal or plastic structures
AHCINF301	Implement property improvement, construction and repair

Livestock

Unit Code	Unit Title
AHCLSK216	Clean and maintain livestock pens
AHCLSK328	Remove and facilitate reuse of effluent and manure from an intensive production system

Machinery operation and maintenance

Unit Code	Unit Title
AHCMOM207	Conduct front-end loader operations
AHCMOM301	Coordinate machinery and equipment maintenance and repair
AHCMOM305	Operate specialised machinery and equipment

Pest management

Unit Code	Unit Title
AHCPMG301	Control weeds

Production Horticulture

Unit Code	Unit Title
AHCPHT307	Prepare raw materials and compost the feedstocks

Resources and Infrastructure

Unit Code	Unit Title
RIIWHS202D	Enter and work in confined spaces

RIIWHS204D	Work safely at heights
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Work

Unit Code	Unit Title
AHCWRK309	Apply environmentally sustainable work practices

Group B

Broadacre Cropping

Unit Code	Unit Title
AHCBAC204	Prepare grain storages
AHCBAC303	Prepare to receive grains and seeds

Livestock

Unit Code	Unit Title
AHCLSK310	Implement feeding plans for intensive production
AHCLSK326	Mix and mill standard stockfeed
AHCLSK333	Monitor pen condition and ration suitability
FDFGR3002A	Demonstrate knowledge of animal nutrition principles

Machinery operation and maintenance

Unit Code	Unit Title
AHCMOM205	Operate vehicles
AHCMOM207	Conduct front-end loader operations
AHCMOM211	Operate side by side utility vehicles
AHCMOM302	Perform machinery maintenance
AHCMOM305	Operate specialised machinery and equipment

FDFOP2038A	Operate a grinding process
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Pest management

Unit Code	Unit Title
AHCPMG301	Control weeds

Resources and Infrastructure

Unit Code	Unit Title
RIIWHS202D	Enter and work in confined spaces
RIIWHS204D	Work safely at heights

Work

Unit Code	Unit Title
AHCWRK308	Handle bulk materials in storage area

Group C

Livestock

Unit Code	Unit Title
AHCLSK301	Administer medication to livestock
AHCLSK304	Carry out post-mortem examination of livestock
AHCLSK307	Euthanase livestock
AHCLSK308	Identify and draft livestock
AHCLSK309	Implement animal health control programs
AHCLSK310	Implement feeding plans for intensive production
AHCLSK331	Comply with industry animal welfare requirements
AHCLSK332	Monitor animals in intensive production systems

AHCLSK333	Monitor pen condition and ration suitability
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Machinery operation and maintenance

Unit Code	Unit Title
AHCMOM205	Operate vehicles
AHCMOM211	Operate side by side utility vehicles

Group D

Infrastructure

Unit Code	Unit Title
AHCINF302	Plan and construct an electric fence
AHCINF303	Plan and construct conventional fencing

Machinery Operation and Maintenance

Unit Code	Unit Title
AHCMOM212	Operate quad bikes

Transport and Logistics

Unit Code	Unit Title
TLILIC2001	Licence to operate a forklift truck

Qualification Mapping Information

This qualification is equivalent to AHC33311 Certificate III in Feedlot Operations.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC33719 Certificate III in Protected Horticulture

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge for individuals who work in the protected horticulture industry undertaking skilled work in the areas of picking, packing, crop and nursery work.

Individuals with this qualification perform tasks involving a broad range of skills that are applied in a wide variety of contexts, which will involve discretion and judgement in selecting and operating equipment, coordinating resources and apply contingency measures during work.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 17 units of competency:
 - 6 core units plus
 - 11 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. Any combination of electives that meets the packaging rules can be selected for the award of the *Certificate III in Protected Horticulture*.

Where appropriate, electives may be packaged to provide a qualification with a specialisation area as follows:

- At least 3 electives must be selected from Group A electives must be selected for the award of the *Certificate III in Protected Horticulture (Picking)*
- At least 3 electives must be selected from Group B for the award of the *Certificate III in Protected Horticulture (Packing)*.
- At least 3 electives must be selected from Group C for the award of the *Certificate III in Protected Horticulture (Crop Work)*
- At least 3 electives must be selected from Group D for the award of the *Certificate III in Protected Horticulture (Nursery)*
- Plus 8 units with up to 3 from any currently endorsed Training Package or accredited course.

Where a specialisation area is not sought, the electives are to be chosen as follows:

- 8 units must be selected from groups A, B, C, D or E
- the remaining 3 electives may be selected from groups A, B, C, D or E or any currently endorsed Training Package or accredited course.

Core Units

AHCBIO305	Apply biosecurity measures
AHCWHS301	Contribute to work health and safety processes
AHCWRK309	Apply environmentally sustainable work practices
FBPFSY3001	Monitor the implementation of quality and food safety programs
FBPOPR1010	Carry out manual handling tasks
FBPOPR2070	Apply quality systems and procedures

Elective Units

Group A Picking

AHCBIO201	Inspect and clean machinery for plant, animal and soil material
AHCBIO302	Identify and report unusual disease or plant pest signs
AHCPHT214	Support horticultural crop harvesting
AHCPHT310	Coordinate horticultural crop harvesting

Group B Packing

AHCWRK207	Collect and record production data
FBPBPG2002	Operate the carton erection process
FBPBPG2004	Operate the palletising process
FBPBPG2008	Perform basic packaging tests and inspections
FBPBPG3002	Operate the labelling process
FBPOPR2068	Operate a process control interface
FBPOPR3004	Set up a production or packaging line for operation
FBPOPR3006	Operate interrelated processes in a packaging system
FBPTEC4002	Apply principles of food packaging
SIRRINV002	Control stock
TLIA2014	Use product knowledge to complete work operations
TLIA3016	Use inventory systems to organise stock control
TLIA3018	Organise despatch operations
TLIA3019	Organise receipt operations
TLIA3038	Control and order stock

Group C Crop Work

AHCBIO302	Identify and report unusual disease or plant pest signs
AHCHYD301	Implement a maintenance program for hydroponic systems
AHCHYD302	Install hydroponic systems
AHCHYD401	Establish and monitor hydroponic crops
AHCNSY307	Operate fertigation equipment
AHCPCM301	Implement a plant nutrition program
AHCPHT211	Maintain crop

AHCPHT212	Perform manual pollination of crops
AHCPHT301	Carry out a crop regulation program
AHCPHT305	Regulate crops
AHCPHT306	Establish horticultural crops
AHCPHT311	Install and maintain vertical hanging trellis
AHCPMG302	Control plant pests, diseases and disorders

Group D Nursery

AHCBIO302	Identify and report unusual disease or plant pest signs
AHCNSY203	Undertake propagation activities
AHCNSY301	Maintain nursery plants
AHCNSY307	Operate fertigation equipment
AHCPCM301	Implement a plant nutrition program
AHCPHT204	Undertake field budding and grafting
AHCPHT213	Perform plant blocking on
AHCPMG302	Control plant pests, diseases and disorders
FBPVIT2001	Bench graft vines

Group E General electives

AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCHYD301	Implement a maintenance program for hydroponic systems
AHCHYD302	Install hydroponic systems
AHCIRG337	Measure irrigation delivery system performance

AHCMOM202	Operate tractors
AHCMOM304	Operate machinery and equipment
AHCPCM302	Provide information on plants and their culture
AHCPMG202	Treat plant pests, diseases and disorders
AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders
AHCSOL305	Prepare growing media
AHCWAT301	Monitor and operate water treatment processes
AHCWRK303	Respond to emergencies
AHCWRK305	Coordinate work site activities
FBPOPR2037	Operate a filtration process
FBPOPR2063	Clean equipment in place
FBPOPR2064	Clean and sanitise equipment
FBPOPR3005	Operate interrelated processes in a production system
FBPPPL3003	Participate in improvement processes
FBPPPL3005	Participate in an audit process
FBPPPL3006	Report on workplace performance
HLTAID011	Provide First Aid
TLID2010	Operate a forklift
TLIK2010	Use infotechnology devices in the workplace
TLILIC0003	Licence to operate a forklift truck

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
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AHC33719 Certificate III in Protected Horticulture Release 2	AHC33719 Certificate III in Protected Horticulture Release 1	Qualification updated to replace superseded first aid unit, as approved by the AISC in consultation with ASQA	Equivalent
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC33816 Certificate III in Permaculture

Modification History

Release	Comments
Release 4	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.1.
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification relates to those individuals who work either independently or in teams to establish and maintain permaculture systems for private clients, organisations or community entities. They perform tasks involving a broad range of skilled applications in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, elements in a design or contingency measures.

The qualification is suited to learners who wish to work at the skilled tradesman level within permaculture projects and enterprises, and may involve supervision of others and working with people of diverse backgrounds and abilities.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 15 units of competency:
 - 5 core units plus
 - 10 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 1 unit from Group A
- Select 6 units from Group B
- Select 2 units from Group B or C
- 1 unit may be selected from Group C or this or any other endorsed Training Package or Accredited Course.

Selected units must be relevant to job outcomes in Permaculture and must be chosen to ensure the integrity of the qualification outcome at AQF level 3.

Core Units

AHCPER301	Research and communicate information on permaculture principles and practices
AHCPER302	Develop recommendations for integrated plant and animal systems
AHCPER303	Maintain integrated plant and animal systems
AHCPER316	Select plant and animal species for permaculture systems
AHCWRK311	Conduct site inspections

Elective Units

Group A

AHCPER307	Establish a rural permaculture system
AHCPER308	Establish an urban permaculture system

Group B

AHCPER305	Implement crop maintenance and harvesting programs for permaculture systems
AHCPER306	Use weedy plants in a permaculture system
AHCPER307	Establish a rural permaculture system
AHCPER308	Establish an urban permaculture system
AHCPER309	Install and maintain permaculture water systems

AHCPER310	Install structures for permaculture systems
AHCPER312	Plan organic garden and orchard systems
AHCPER313	Coordinate preparation and storage of permaculture products
AHCPER314	Read and interpret property maps and plans
AHCPER315	Coordinate community projects
AHCPER318	Plan propagation activities for a permaculture system
AHCPER319	Test, improve and maintain healthy soil in a permaculture system
AHCPER320	Manage plant pests, diseases and disorders in a permaculture system
AHCPER321	Demonstrate permaculture practices to small groups of learners
AHCPER411	Operate within a sustainable community and bioregional development program

Group C

AHCILM306	Follow Aboriginal cultural protocols
AHCILM305	Work with an Aboriginal Community or organisation
AHCINF301	Implement property improvement, construction and repair
AHCLSK319	Slaughter livestock
AHCECR301	Maintain native ecosystem areas
AHCSAW304	Implement erosion and sediment control measures
AHCWRK302	Monitor weather conditions
TAEDEL301	Provide work skill instruction

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC33816 Certificate III in Permaculture Release 4	AHC33816 Certificate III in Permaculture Release 3	Qualification updated to remove four elective units that have been deleted as part of meeting Skills Ministers' priority of removing training products with low or no enrolments, as agreed by the AISC	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC33920 Certificate III in Medicinal Cannabis Cultivation and Production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification reflects the roles of individuals who work as cultivation technicians in the medicinal cannabis industry. In this role, these individuals have responsibilities for undertaking a range of skilled work in controlled growing, licensed medicinal cannabis operations.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 14 units of competency:
 - 6 core units plus
 - 8 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualifications Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 4 units must be selected from the elective units listed below
- the remaining 4 units may be selected from the elective units listed below or any currently endorsed Training Package or accredited course.

Core Units

AHCMDC301	Apply security regulatory requirements to work in the medicinal cannabis industry
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AHCMDC302	Apply regulatory and quality requirements to the production of medicinal cannabis
AHCMDC303	Undertake propagation of medicinal cannabis
AHCMDC304	Undertake care and maintenance of medicinal cannabis
AHCMDC305	Undertake harvest and pre-processing of medicinal cannabis
AHCWHS301	Contribute to work health and safety processes

Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCIRG337	Measure irrigation delivery system performance
AHCIRG347	Maintain pressurised irrigation systems
AHCMOM305	Operate specialised machinery and equipment
AHCNSY314	Operate fertigation equipment
AHCPMG302	Control plant pests, diseases and disorders
AHCSOL305	Prepare growing media
AHCWRK207	Collect and record production data
AHCWRK303	Respond to emergencies
AHCWRK309	Apply environmentally sustainable work practices
FBPBP3002	Operate the labelling process
FBPOPR1010	Carry out manual handling tasks
FBPOPR2068	Operate a process control interface
FBPPHM3001	Apply Good Manufacturing Practice requirements
FBPPHM3003	Work in a controlled environment
FBPPHM3004	Clean and sanitise facilities and equipment

FBPPPL3003	Participate in improvement processes
FBPPPL3006	Report on workplace performance
HLTAID011	Provide first aid
MSL933005	Maintain the laboratory/field workplace fit for purpose
MSL973013	Perform basic tests
MSL973016	Perform aseptic techniques
MSL974025*	Prepare tissue and cell cultures
TLIA0015	Organise receipt and despatch operations
TLID2010	Operate a forklift
TLIK2010	Use infotechnology devices in the workplace
TLIX0004X	Administer inventory systems
TLIX0013X	Maintain stock control and receipts

Prerequisite requirements

Unit of competency	Prerequisite requirement
MSL974025 Prepare tissue and cell cultures	MSL973016 Perform aseptic techniques

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC33920 Certificate III in Medicinal Cannabis Cultivation and Production	Not applicable	Qualification has been created to address an occupational outcome required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC40116 Certificate IV in Agriculture

Modification History

Release	Comments
Release 7	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 6	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1.
Release 5	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.
Release 4	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0.
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification allows individuals to develop post-trade skills and knowledge to become specialists within the agriculture industry. It is designed to meet the needs of supervisors or team leaders in the agriculture industry.

Individuals with this qualification will take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems. Job roles vary across different industry sectors and include:

- Farm team leader
- Farm supervisor.

No licensing, legislative or certification requirements are known to apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 1 core unit plus
 - 11 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 4 units must be selected from Group A electives listed below
- 5 units must be selected from either the remaining Group A electives or from the Group B electives, or from the Prerequisite Requirements list if a unit is a required for packaging the qualification
- up to 2 units may be selected from the remaining electives listed below, or from the Prerequisite Requirements list if a unit is a required for packaging the qualification
- up to 2 units may be selected from any currently endorsed Training Package or Accredited Course packaged in qualifications at AQF levels 3, 4 or 5.

Core Units

AHCWHS401	Maintain work health and safety processes
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Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

Group A

AHCBAC410	Plan and implement a pasture establishment program
AHCBAC411	Manage pastures for livestock production
AHCBAC412	Supervise agricultural crop establishment
AHCBAC413	Plan and implement agricultural crop maintenance
AHCBAC414	Supervise agricultural crop harvesting
AHCBAC415	Maintain grain quality in storage

AHCBAC416	Save, prepare and store agricultural seed
AHCBIO401	Plan and implement a biosecurity program
AHCCHM405	Plan and implement a chemical use program
AHCDRY402	Manage milking shed operations
AHCLSK317	Plan to exhibit livestock
AHCLSK339	Pregnancy test livestock
AHCLSK341	Coordinate artificial insemination and fertility management of livestock
AHCLSK401	Develop feeding plans for a production system
AHCLSK402	Develop livestock feeding plans
AHCLSK404	Implement and monitor animal welfare programs
AHCLSK405	Implement intensive production systems
AHCLSK406	Oversee animal marking operations
AHCLSK407	Plan and monitor intensive production systems
AHCLSK409	Supervise animal health programs
AHCLSK410	Supervise feedlot operations
AHCLSK412	Arrange livestock purchases
AHCLSK413	Design livestock handling facilities
AHCLSK414	Arrange transport for farm produce or livestock
AHCLSK418*	Escort livestock during export
AHCLSK419*	Manage horses for stock work
AHCLSK421	Supervise natural mating of livestock
AHCLSK422	Identify and select animals for breeding
AHCMOM402	Supervise maintenance of property, machinery and equipment
AHCPMG412	Develop a pest management plan

AHCPRK401	Implement a feeding strategy for pig production
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Group B

AHCAGB404	Plan and implement infrastructure improvements
AHCAGB405	Analyse and interpret production data
AHCAGB406	Keep financial records for primary production business
AHCAIS402	Supervise artificial breeding and embryo transfer programs
AHCBAC409	Provide advice on agronomic products
AHCBUS406	Administer finance, insurance and legal requirements
AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCBUS409	Participate in an e-business supply chain
AHCBUS512	Develop and implement family business structures and relationships
AHCCHM404	Develop procedures to minimise risks in the use of chemicals
AHCCHM406	Provide advice and sell farm chemicals
AHCIRG435	Determine hydraulic parameters for an irrigation system
AHCIRG436	Implement an irrigation-related environmental protection program
AHCIRG437	Schedule irrigations
AHCIRG439	Interpret and apply irrigation designs
AHCIRG442	Supervise irrigation system installation
AHCLSK420	Provide advice on livestock products
AHCMER408	Coordinate customer service and networking activities
AHCMKH401	Carry out cleaning-time tests of milking machines
AHCMKH402	Design and fabricate milking equipment installations

AHCMKH403	Design and install enterprise milk cooling and storage
AHCMKH404	Install milking equipment
AHCMKH405	Performance test milking machines
AHCMOM401	Conduct major repair and overhaul of machinery and equipment
AHCMOM403	Provide advice and sell machinery
AHCORG401	Manage biodynamic production
AHCORG402	Manage organic livestock production
AHCORG403	Manage organic soil improvement
AHCPCM406	Develop a soil health and plant nutrition program
AHCSDT308	Perform tests for quality on seeds
AHCSDT412	Perform advanced tests on seeds
AHCSDT413	Handle and store seed subject to quarantine regulations
AHCSDT414	Maintain a quarantine approved laboratory
AHCSHG402	Conduct equipment experting for machine shearing
AHCSHG405	Arrange employment for shearing operations
AHCSHG407	Prepare shearing team wages
AHCSOL403	Prepare acid sulphate soil management plans
AHCSOL405	Provide information on fertilisers and soil ameliorants
AHCSOL406	Sample soils and interpret results
AHCSOL407	Develop a soil use map for a property
AHCSOL409	Supervise acid sulphate soil remediation and management projects
AHCWOL401	Determine wool classing strategies
AHCWOL402	Use individual fleece measurements to prepare wool for sale

AHCWOL403	Plan, implement and review wool harvesting and clip preparation
AHCWOL404	Establish work routines and manage wool harvesting and preparation staff
AHCWRK401	Implement and monitor quality assurance procedures
AHCWRK402	Provide information on issues and policies
AHCWRK403	Supervise work routines and staff performance
BSBCMM411	Make presentations
BSBESB406	Establish operational strategies and procedures for new business ventures Evaluate and develop small business operations
BSBESB407	Manage finances for new business ventures Manage small business finances
BSBFIN401	Report on financial activity
BSBHRM415	Coordinate recruitment and onboarding
BSBINS402	Coordinate workplace information systems
BSBLDR414	Lead team effectiveness
BSBOPS403	Apply business risk management processes Identify risk and apply risk management processes
BSBPMG428	Apply project life cycle management processes
BSBTEC401	Design and produce complex text documents
MSL913004	Plan and conduct laboratory/field work
MSMSUP280	Manage conflict at work
RGRHBR306*	Raise young horses
RGRHBR401	Maintain horse stud records
RGRHBR403*	Handle and care for breeding stallions
RGRHBR505	Oversee administration of stud records
TAEDEL301	Provide work skill instruction

Prerequisite requirements

Units listed in the *Prerequisite requirement* column that have their own prerequisite requirements are shown with an asterisk (*)

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour
ACMEQU406 Manage selection of horse for new or inexperienced handler, rider or driver	ACMEQU205 Apply knowledge of horse behaviour
AHCLSK418 Escort livestock during export	AHCLSK307 Euthanase livestock AHCLSK331 Comply with industry animal welfare requirements
AHCLSK419 Manage horses for stock work	ACMEQU406 Manage selection of horse for new or inexperienced handler, rider or driver*
RGRHBR306 Raise young horses	ACMEQU202 Handle horses safely*
RGRHBR403 Handle and care for breeding stallions	ACMEQU202 Handle horses safely*

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC40116 Certificate IV in Agriculture Release 7	AHC40116 Certificate IV in Agriculture Release 6	Minor update to qualification to add units to the list of electives	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC40219 Certificate IV in Protected Horticulture

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge for supervisory and coordinating roles in the protected horticulture industry.

Individuals with this qualification perform tasks involving technical skills, problem solving and supervisory skills to operate, monitor and improve performance of protected horticulture systems, processes and team members.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 16 units of competency:
 - 5 core units plus
 - 11 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 6 must be from electives group A
- 5 from the remaining units listed in groups A or B, or any currently endorsed Training Package or accredited course packaged at Certificate III, Certificate IV or Diploma.

Core Units

AHCWHS401	Maintain work health and safety processes
AHCWRK403	Supervise work routines and staff performance
BSBLDR403	Lead team effectiveness
BSBSMB407	Manage a small team
FBPFSY3001	Monitor the implementation of quality and food safety programs

Elective Units

Group A

AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCBUS409	Participate in an e-business supply chain
AHCCHM304	Transport and store chemicals
AHCCHM307	Prepare and apply chemicals to control pest, weeds and diseases
AHCCHM404	Develop procedures to minimise risks in the use of chemicals
AHCCHM405	Plan and implement a chemical use program
AHCHYD401	Establish and monitor hydroponic crops
AHCHYD501	Develop a plan for a hydroponic system
AHCMOM402	Supervise maintenance of property, machinery and equipment
AHCNSY401	Plan a growing-on program
AHCNSY402	Plan a propagation program
AHCPCM401	Recommend plants and cultural practices
AHCPCM402	Develop a soil health and plant nutrition program
AHCPCM501	Diagnose plant health problems

AHCPHT402	Develop a crop regulation program
AHCPHT404	Implement and monitor a horticultural crop harvesting program
AHCPHT502	Develop a horticultural production plan
AHCPHT503	Manage a controlled growing environment
AHCPMG409	Implement a pest management plan
AHCWAT503	Manage water systems
TAEDEL301	Provide work skill instruction

Group B

BSBINT303	Organise the importing and exporting of goods
BSBRSK401	Identify risk and apply risk management processes
FBPOPR3004	Set up a production or packaging line for operation
FBPTEC4002	Apply principles of food packaging
TAEASS301	Contribute to assessment
TLIA3016	Use inventory systems to organise stock control
TLIA3038	Control and order stock
TLIR4002	Source goods/services and evaluate contractors

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC40219 Certificate IV in Protected Horticulture	Not applicable	New qualification	No equivalent qualification

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC40320 Certificate IV in Production Horticulture

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.2.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification describes the skills and knowledge for supervisory/managerial job roles in the production horticulture industry including grower, field manager, supervisor, crop grower, plant manager, integrated pest manager, quality assurance, compliance manager and human resources manager.

Individuals with this qualification perform tasks involving technical skills, problem solving and supervisory skills to operate, monitor and improve performance of production horticulture systems and may supervise staff.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 5 core units plus
 - 7 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 2 units must be from electives in group A

- up to 2 units must be from electives in group A or B
- up to 3 units from the remaining units listed in groups A or B, or any currently endorsed Training Package or accredited course packaged at Certificate III, IV or Diploma.

Core Units

AHCBIO401	Plan and implement a biosecurity program
AHCBUS408	Operate within a budget framework
AHCWHS401	Maintain work health and safety processes
AHCWRK401	Implement and monitor quality assurance procedures
BSBLDR412	Communicate effectively as a workplace leader

Elective Units

Group A

AHCCHM404	Develop procedures to minimise risks in the use of chemicals
AHCCHM405	Plan and implement a chemical use program
AHCIRG437	Schedule irrigations
AHCNSY403	Plan a growing-on program
AHCNSY404	Plan a propagation program
AHCPCM404	Recommend plants and cultural practices
AHCPCM406	Develop a soil health and plant nutrition program
AHCPCM509	Apply knowledge of plant physiology to horticultural practices
AHCPHT409	Develop a crop regulation program
AHCPHT411	Implement and monitor a horticultural crop harvesting program
AHCSOL406	Sample soils and interpret results
AHCWRK403	Supervise work routines and staff performance
BSBLDR413	Lead effective workplace relationships

Group B

AHCBUS409	Participate in an e-business supply chain
AHCIRG435	Determine hydraulic parameters for an irrigation system
AHCIRG436	Implement an irrigation-related environmental protection program
AHCIRG445	Manage surface irrigation systems
AHCORG401	Manage biodynamic production
AHCORG403	Manage organic soil improvement
AHCPHT410	Develop harvesting and processing specifications to produce an olive oil
AHCPHT412	Manage mushroom substrate preparation
AHCPHT413	Oversee vineyard practices
AHCPHT414	Assess olive oil for style and quality
AHCPHT415	Control Phase II mushroom substrate process
AHCPHT416	Manage mushroom crop development
AHCSOL406	Sample soils and interpret results
AHCSOL407	Develop a soil use map for a property
AHCWRK402	Provide information on issues and policies
BSBMKG431	Assess marketing opportunities

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC40320 Certificate IV in Production Horticulture	AHC40320 Certificate IV in Production Horticulture	Updated equivalence status to correctly reflect AHC40316 Certificate IV in Production Horticulture is not equivalent to	Not applicable

Code and title current version	Code and title previous version	Comments	Equivalence status
Release 2	Release 1	AHC40320 Certificate IV in Production Horticulture	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC40416 Certificate IV in Horticulture

Modification History

Release	Comments
Release 4	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification allows individuals to develop post-trade skills and knowledge across a broad coverage of the industry prior to undertaking higher level roles in the industry.

No licensing, legislative or certification requirements are known to apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 1 core units plus
 - 11 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- select 7 units from elective list below
- 4 units aligned to AQF level 3, 4 or 5 may be selected from electives below or from this or any other endorsed Training Package or Accredited Course

- Selected units must be relevant to job outcomes in horticulture and must be chosen to ensure the integrity of the qualification outcome at AQF level 4.

Core Units

AHCWHS401	Maintain work health and safety processes
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Elective Units

AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCCHM403	Prepare safe operating procedures for calibration of equipment
AHCCHM404	Develop procedures to minimise risks in the use of chemicals
AHCCHM405	Plan and implement a chemical use program
AHCIRG435	Determine hydraulic parameters for an irrigation system
AHCIRG436	Implement an irrigation-related environmental protection program
AHCIRG437	Schedule irrigations
AHCIRG442	Supervise irrigation system installation
AHCIRG445	Manage surface irrigation systems
AHCLSC401	Supervise landscape project works
AHCMER401	Coordinate customer service and networking activities
AHCMOM401	Conduct major repair and overhaul of machinery and equipment
AHCMOM402	Supervise maintenance of property, machinery and equipment
AHCNAR401	Supervise natural area restoration works
AHCNAR402	Plan the implementation of revegetation works
AHCNSY401	Plan a growing-on program

AHCNSY402	Plan a propagation program
AHCORG401	Manage biodynamic production
AHCORG402	Manage organic livestock production
AHCORG403	Manage organic soil improvement
AHCPCM401	Recommend plants and cultural practices
AHCPCM402	Develop a soil health and plant nutrition program
AHCPGD401	Design plant displays
AHCPGD402	Plan a plant establishment program
AHCPMG409	Implement a pest management plan
AHCPMG410	Implement the pest monitoring and evaluation plan
AHCPMG411	Ensure compliance with pest legislation
AHCSOL401	Sample soils and interpret results
AHCTRF403	Develop a sports turf maintenance program
AHCTRF404	Plan and implement sports turf renovation
AHCWRK401	Implement and monitor quality assurance procedures
AHCWRK402	Provide information on issues and policies
AHCWRK403	Supervise work routines and staff performance
BSBDES403	Develop and extend design skills and practice
BSBHRM405	Support the recruitment, selection and induction of staff
BSBITU404	Produce complex desktop published documents
BSBPMG417	Apply project life cycle management processes
BSBREL402	Build client relationships and business networks
BSBRES411	Analyse and present research information
BSBSMB421	Manage small business finances
CUAACD303	Produce technical drawings

SIRXINV004A	Buy merchandise
TLIR4002	Source goods/services and evaluate contractors

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC40416 Certificate IV in Horticulture Release 4	AHC40416 Certificate IV in Horticulture Release 3	Updated elective unit codes	Equivalent qualification

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC40620 Certificate IV in Nursery Operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification describes the skills and knowledge for supervisory/managerial job roles in the nursery industry including integrated pest manager, production nursery irrigation manager, dispatch manager, head grower, sales manager, site manager, quality assurance manager, retail nursery stock supervisor, sales manager, green life buyer, nursery manager and merchandiser.

Individuals with this qualification perform tasks involving technical skills, problem solving and supervisory skills to operate, monitor and improve performance of nursery systems and may supervise nursery staff.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

To commence this qualification, individuals must demonstrate they have skills and knowledge in the application of:

- cultivating, growing and harvesting/production skills for a variety of plant types, including pest and disease control
- technology and equipment that apply in a production nursery or retail nursery workplace
- health and safety, pest management and biosecurity processes and regulations that apply in a production nursery or retail nursery workplace

The skills and knowledge may have been acquired through completion of a Certificate III or higher qualification relating to nursery or horticulture, or industry experience.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 14 units of competency:

- 4 core units plus
- 10 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

For the award of the *Certificate IV in Nursery Operations* choose:

- at least 7 units from groups A, B or C
- up to 3 units from the remaining units listed in groups A, B or C or any currently endorsed Training Package or accredited course.

For the award of the *Certificate IV in Nursery Operations (Nursery Production)* choose:

- at least 4 units from group A
- up to 3 units from the remaining units listed in groups A, B or C
- up to 3 units from the remaining units listed in groups A, B or C, or any currently endorsed Training Package or accredited course packaged at Certificate IV or Diploma.

For the award of the *Certificate IV in Nursery Operations (Retail Nursery)* choose:

- at least 4 units from group B
- up to 3 units from the remaining units listed in groups A, B or C
- up to 3 units from the remaining units listed in groups A, B or C, or any currently endorsed Training Package or accredited course packaged at Certificate IV or Diploma.

Where two specialisations are completed, award of the qualification would read (for example), *Certificate Certificate IV in Nursery Operations (Nursery Production, Retail Nursery)*

Core Units

AHCWHS401	Maintain work health and safety processes
AHCWRK403	Supervise work routines and staff performance
BSBHRM415	Coordinate recruitment and onboarding
BSBLDR414	Lead team effectiveness

Elective Units

Group A (nursery production)

AHCAGB302	Keep production records for a primary production business
AHCAGB405	Analyse and interpret production data
AHCPCM405	Implement an integrated pest management program

AHCNSY403	Plan a growing-on program
AHCNSY404	Plan a propagation program
AHCWRK401	Implement and monitor quality assurance procedures

Group B (retail nursery)

AHCMER408	Coordinate customer service and networking activities
AHCPCM404	Recommend plants and cultural practices
AHCPGD401	Design plant displays
AHCSOL405	Provide information on fertilisers and soil ameliorants
SIRRINV002	Control stock

Group C (electives)

AHCBER403	Plan and supervise control activities on infected premises
AHCBER404	Conduct field surveillance for a biosecurity emergency response
AHCBIO401	Plan and implement a biosecurity program
AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCBUS409	Participate in an e-business supply chain
AHCBUS512	Develop and implement family business structures and relationships
AHCBUS517	Monitor and review business performance
AHCCHM404	Develop procedures to minimise risks in the use of chemicals
AHCCHM405	Plan and implement a chemical use program
AHCIRG437	Schedule irrigations
AHCMOM402	Supervise maintenance of property, machinery and

	equipment
AHCPCM406	Develop a soil health and plant nutrition program
AHCPCM507	Diagnose plant health problems
AHCPHT511	Develop a horticultural production plan
AHCPMG401	Implement the pest monitoring and evaluation plan
BSBFIN401	Report on financial activity
BSBMKG431	Assess marketing opportunities
BSBTWK401	Build and maintain business relationships
BSBOPS403	Apply business risk management processes
BSBESB407	Manage finances for new business ventures
BSBSUS411	Implement and monitor environmentally sustainable work practices
SIRRMER003	Coordinate visual merchandising activities
SIRXMKT002	Use social media to engage customers
SIRXRSK002	Maintain store security

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC40620 Certificate IV in Nursery Operations	AHC40616 Certificate IV in Production Nursery	Merged qualifications AHC40616 Certificate IV in Production Nursery and AHC40716 Certificate IV in Retail Nursery Title changed Revised packaging rules to better reflect outcomes Updated to include revised units, new and revised imported units, and all	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		prerequisites as electives	
AHC40620 Certificate IV in Nursery Operations	AHC40716 Certificate IV in Retail Nursery	Merged qualifications AHC40616 Certificate IV in Production Nursery and AHC40716 Certificate IV in Retail Nursery Title changed Revised packaging rules to better reflect outcomes Updated to include revised units, new and revised imported units, and all prerequisites as electives	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC40920 Certificate IV in Conservation and Ecosystem Management

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.1.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification has the practical skills and theoretical knowledge required for specialised or skilled work in the conservation and ecosystem management industry.

The qualification provides for advanced skills and/or supervisory roles in a broad range of conservation and ecological work or can focus on areas of specific needs including:

- supervisory and management
- indigenous land management
- ecosystem management
- pest controller
- fire management.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 2 core unit plus
 - 10 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 3 units must be selected from Group A
- remaining units may be selected from Group A or B or C and up to 4 units may be selected from any currently endorsed Training Package or accredited course
- Elective Group C can only be selected if required as a prerequisite.

Where First Aid training is required, the current unit must be imported using the import rules above.

Core Units

AHCECR308	Conduct a site inspection for ecological restoration
AHCWHS401	Maintain work health and safety processes

Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

Group A

AHCECR401	Supervise ecological restoration works
AHCECR402	Plan the implementation of revegetation works
AHCBUS407	Cost a project
AHCCCF402	Report on project
AHCILM401	Protect places of cultural significance
AHCILM402	Report on place of potential cultural significance
AHCILM403	Contribute to the proposal for a negotiated outcome for a given area of Country
AHCLPW408	Implement land and sea management practices
AHCLPW409	Inspect and monitor culturally significant places
AHCLPW410	Produce maps for land management purposes
AHCLPW406	Supervise the monitoring of biodiversity
AHCPMG409	Implement a pest management plan

AHCPMG410	Implement the pest monitoring and evaluation plan
AHCPMG412	Develop a pest management plan
AHCPMG413	Define the pest problem
AHCSAW402	Set out conservation earthworks
AHCSAW404	Supervise implementation of conservation earthworks plans
AHCWRK403	Supervise work routines and staff performance
MSS024020	Recognise common geological landforms and samples
PUAFIR402*	Conduct simple prescribed burns

Group B

AHCBER403	Plan and supervise control activities on infected premises
AHCBER404	Conduct field surveillance for a biosecurity emergency response
AHCBIO401	Plan and implement a biosecurity program
AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCCCF401	Prepare project acquittal
AHCCCF402	Report on project
AHCCCF403	Obtain and manage sponsorship
AHCCCF404	Contribute to association governance
AHCCCF405	Develop community networks
AHCCCF406	Facilitate ongoing group development
AHCCCF407	Obtain resources from community and groups
AHCCCF408	Promote community programs
AHCCCF409	Participate in assessments of project submissions

AHCCCF410	Support individuals in resource management change processes
AHCCCF411	Develop approaches to include cultural and human diversity
AHCCCF415	Coordinate social events to support group purposes
AHCCCF416	Present proposed courses of action to meeting
AHCCHM404	Develop procedures to minimise risks in the use of chemicals
AHCCHM405	Plan and implement a chemical use program
AHCILM404	Record and document Community history
AHCILM405	Develop work practices to accommodate cultural identity
AHCLPW406	Supervise the monitoring of biodiversity
AHCLPW407	Process applications for changes in land use
AHCLPW410	Produce maps for land management purposes
AHCLSC401	Supervise landscape project works
AHCMOM402	Supervise maintenance of property, machinery and equipment
AHCPCM401	Recommend plants and cultural practices
AHCPGD402	Plan a plant establishment program
AHCPMG411	Ensure compliance with pest legislation
AHCPMG507	Develop a regional pest management plan
AHCPMG508	Develop a system to monitor and evaluate the pest management plan
AHCPMG509	Investigate a pest control failure
AHCSAW402	Set out conservation earthworks
AHCSAW404	Supervise implementation of conservation earthworks plans
AHCSOL409	Supervise acid sulphate soil remediation and

	management projects
AHCWRK401	Implement and monitor quality assurance procedures
AHCWRK402	Provide information on issues and policies
AHCWRK403	Supervise work routines and staff performance
BSBLDR414	Lead team effectiveness
BSBPMG428	Apply project life cycle management processes
BSBINS401	Analyse and present research information
CHCCDE002	Develop and implement community programs
FWPFGM3201	Manage seed collection
LGACOM502 B	Devise and conduct community consultations
LGAPLEM508 A	Manipulate and analyse data within geographic information systems
MSL913004	Plan and conduct laboratory/field work
MSMSUP280	Manage conflict at work
PSPPCY004	Support policy implementation
PUACOM012	Liaise with media at a local level
PUAFIR203*	Respond to urban fire*
PUAFIR204*	Respond to wildfire
PUAFIR207*	Operate breathing apparatus open circuit
PUAFIR210	Prevent injury
PUAFIR302*	Suppress urban fire*
PUAFIR303*	Suppress wildfire*
PUAFIR402*	Conduct simple prescribed burns*
PUALAW001	Protect and preserve incident scene
PUAOPE015	Conduct briefings and debriefings

PUAOPE016*	Manage a multi-team sector*
SFICRO401	Manage minor crocodile incidents in the wild
SFICRO403	Capture, transport and release crocodiles
SITTGDE007	Research and share general information on Australian Indigenous cultures
SITTGDE008	Prepare specialised interpretive content on flora, fauna and landscape
SITTGDE010	Prepare specialised interpretive content on cultural and heritage environments
SITTPPD002	Develop interpretive activities
SITXCCS002	Provide visitor information
TAEDEL301	Provide work skill instruction
TLIR4002	Source goods/services and evaluate contractors

Group C Prerequisite Unit

HLTAID011	Provide First Aid
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Prerequisite requirements

Note: Units listed in the Prerequisite requirement column that have their own prerequisite requirements are shown with an asterisk (*)

Unit of competency	Prerequisite requirement
PUAFIR203 Respond to urban fire	PUAFIR207 Operate breathing apparatus open circuit*
PUAFIR204 Respond to wildfire	PUAFIR210 Prevent injury
PUAFIR207 Operate breathing apparatus open circuit	PUAFIR210 Prevent injury
PUAFIR302 Suppress urban fire	HLTAID011 Provide First Aid PUAFIR203 Respond to urban fire*

PUAFIR303 Suppress wildfire	PUAFIR204 Respond to wildfire*
PUAFIR402 Conduct simple prescribed burns	PUAFIR303 Suppress wildfire*
PUAOPE016 Manage a multi-team sector	PUAFIR302 Suppress urban fire* OR PUAFIR303 Suppress wildfire*

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC40920 Certificate IV in Conservation and Ecosystem Management Release 3	AHC40920 Certificate IV in Conservation and Ecosystem Management Release 2	Qualification updated to replace superseded first aid unit, as approved by the AISC in consultation with ASQA	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC41019 Certificate IV in Agribusiness

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification reflects the role of workers who are responsible for the administration and day to day business operations of an agricultural or horticultural production enterprise.

At this level, workers may be required to supervise and lead other workers or teams and be involved in some decision-making. Work may take place in a range of industry sectors and in complex, regularly changing environments.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 3 core units plus
 - 9 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 7 units from the elective list
- up to 2 units from this or any other endorsed Training Package or Accredited Course.

Core Units

AHCAGB405	Analyse and interpret production data
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AHCAGB406	Keep financial records for primary production business
AHCWHS401	Maintain work health and safety processes

Elective Units

AHCAGB302	Keep production records for a primary production business
AHCAGB404	Plan and implement infrastructure improvements
AHCBAC408	Manage agricultural crop production
AHCBIO403	Plan and implement a farm or enterprise biosecurity plan
AHCBUS406	Administer finance, insurance and legal requirements
AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCBUS409	Participate in an e-business supply chain
AHCBUS512	Develop and implement family business structures and relationships
AHCCFP301	Identify the effects of climate change as a factor in land management
AHCCFP401	Increase soil organic carbon using land management practices
AHCCFP403	Identify opportunities and risks in carbon farming projects
AHCCFP404	Plan a land-based carbon farming project
AHCCFP405	Increase carbon using vegetation and/or agricultural approaches
AHCLSK501	Manage livestock production
AHCORG404	Arrange selling through community based marketing
AHCPMG411	Ensure compliance with pest legislation
AHCSHG407	Prepare shearing team wages

AHCWRK401	Implement and monitor quality assurance procedures
AHCWRK402	Provide information on issues and policies
AHCWRK403	Supervise work routines and staff performance
BSBCM401	Make a presentation
BSBFIA412	Report on financial activity
BSBHRM405	Support the recruitment, selection and induction of staff
BSBINM401	Implement workplace information system
BSBITU404	Produce complex desktop published documents
BSBLDR403	Lead team effectiveness
BSBPMG417	Apply project life cycle management processes
BSBRES411	Analyse and present research information
BSBRK401	Identify risk and apply risk management processes
BSBSMB420	Evaluate and develop small business operations
BSBSMB421	Manage small business finances
MSL913004	Plan and conduct laboratory/field work
MSMSUP280	Manage conflict at work
PSPPCY004	Support policy implementation
TAEASS301	Contribute to assessment
TAEDEL301	Provide work skill instruction
TAEDEL404	Mentor in the workplace

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC41019 Certificate IV in	AHC41016 Certificate IV in	Packaging rules changed to include two additional core	No equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
Agribusiness	Agribusiness	units Elective units revised	qualification

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC41119 Certificate IV in Irrigation Management

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge for supervisory and management job roles in the irrigation industry

Individuals with this qualification perform tasks involving technical skills, problem solving and supervisory skills to operate, monitor and improve performance of irrigation systems and supervise the installation of irrigation systems.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 8 core units plus
 - 4 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 2 must be from the electives list below
- 2 from the remaining electives listed below or any other currently endorsed Training Package or accredited course.

Core Units

AHCIRG435	Determine hydraulic parameters for an irrigation system
AHCIRG436	Implement an irrigation-related environmental protection program
AHCIRG437	Schedule irrigations
AHCIRG438	Select and manage pumping systems for irrigation
AHCIRG439	Interpret and apply irrigation designs
AHCIRG442	Supervise irrigation system installation
AHCIRG443	Supervise irrigation system maintenance
AHCWHS401	Maintain work health and safety processes

Elective Units

AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCDRG403	Coordinate and supervise installation of an irrigation drainage system
AHCDRG404	Monitor and control irrigation drainage systems
AHCINF304	Install and terminate extra low voltage wiring systems
AHCIRG337	Measure irrigation delivery system performance
AHCIRG440	Manage a moving sprinkler irrigation system
AHCIRG441	Evaluate water supply for irrigation
AHCIRG444	Manage irrigation systems
AHCIRG445	Manage surface irrigation systems
AHCMER408	Coordinate customer service and networking activities
AHCIRG446	Provide irrigation sales and service
AHCSOL406	Sample soils and interpret results

AHCWRK401	Implement and monitor quality assurance procedures
AHCWRK403	Supervise work routines and staff performance
AHCWRK405	Implement and monitor environmentally sustainable work practices
BSBHRM415	Coordinate recruitment and onboarding
BSBLDR414	Lead team effectiveness
BSBOPS402	Coordinate business operational plans
BSBINS401	Analyse and present research information
BSBINS309	Maintain business records
BSBINS410	Implement records systems for small business
BSBESB407	Manage finances for new business ventures
BSBPEF402	Develop personal work priorities
BSBWRT411	Write complex documents
ICTICT402	Determine project specifications and secure client agreement
NWPIRR033	Coordinate and monitor the operation of irrigation delivery systems
NWPTRT028	Operate and control reclaimed water irrigation
TAEASS301	Contribute to assessment
TAEDEL301	Provide work skill instruction

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC41119 Certificate IV in Irrigation Management	AHC41119 Certificate IV in Irrigation Management	Updated unit codes	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
Release 2	Release 1		

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC41316 Certificate IV in Wool Classing

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification is a specialist wool classing qualification for wool classers and enables them to apply for registration with AWEX Ltd. as a professional Australian wool classer.

This qualification is suitable for an Australian Apprenticeship.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 14 core units of competency.

Core Units

First Aid

HLTAID011	Provide First Aid
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Wool

AHCWOL301	Appraise wool using industry descriptions
AHCWOL303	Prepare wool based on its characteristics
AHCWOL304	Prepare fleece wool for classing
AHCWOL305	Prepare skirtings and oddments

AHCWOL307	Document a wool clip
AHCWOL310	Press wool for a clip
AHCWOL311	Perform shed duties
AHCWOL401	Determine wool classing strategies
AHCWOL403	Plan, implement and review wool harvesting and clip preparation
AHCWOL404	Establish work routines and manage wool harvesting and preparation staff
AHCWOL405	Class fleece wool

Work

AHCWRK401	Implement and monitor quality assurance procedures
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Work health and safety

AHCWHS401	Maintain work health and safety processes
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Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC41316 Certificate IV in Wool Classing Release 2	AHC41316 Certificate IV in Wool Classing Release 1	Qualification updated to replace superseded first aid unit, as approved by the AISC in consultation with ASQA	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC41616 Certificate IV in Organic Farming

Modification History

Release	Comments
Release 5	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1
Release 4	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification allows individuals to develop skills and knowledge within the organic farming and general agriculture industry. It is designed to meet the needs of supervisors or team leaders working in the organic agriculture industry.

This qualification is suitable for people currently working or who wish to find employment on an organic farming enterprise.

Job roles and titles will vary. Possible job titles relevant to this Qualification include:

- Organic farm team leader
- Organic farm supervisor
- Organic farmer.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 1 core unit plus
 - 11 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 4 units from Group A
- Select 5 units from Group A or Group B
- 2 units aligned to AQF levels 3, 4, or 5 may be selected from the elective list, or this or any other endorsed Training Package or Accredited Course
- Selected units must be relevant to job outcomes in agriculture and must be chosen to ensure the integrity of the qualification outcome at AQF level 4.

Core Units

AHCWHS401	Maintain work health and safety processes
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Elective Units

Group A

Business

BSBSMB420	Evaluate and develop small business operations
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Organic farming

AHCORG401	Manage biodynamic production
AHCORG402	Manage organic livestock production
AHCORG403	Manage organic soil improvement
AHCORG404	Arrange selling through community based marketing
AHCORG405	Implement sustainable practices in the organic farm based business
AHCORG406	Oversee compliance with an organic certification scheme
AHCORG408	Manage on farm composting

Pest management

AHCPMG410	Implement the pest monitoring and evaluation plan
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Group B**Agribusiness**

AHCAGB404	Plan and implement infrastructure improvements
AHCAGB405	Analyse and interpret production data

Beekeeping

AHCBEK301	Manage honey bee swarms
AHCBEK313	Manage pests and disease within a honey bee colony

Biosecurity

AHCBIO403	Plan and implement a farm or enterprise biosecurity plan
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Broadacre cropping

AHCBAC401	Manage pastures for livestock production
AHCBAC402	Plan a pasture establishment program
AHCBAC403	Supervise agricultural crop establishment
AHCBAC404	Plan and implement agricultural crop maintenance
AHCBAC405	Supervise agricultural crop harvesting

Business

AHCBUS406	Administer finance, insurance and legal requirements
AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCBUS409	Participate in an e-business supply chain

BSBRK401	Identify risk and apply risk management processes
BSBSMB421	Manage small business finances

Chemicals

AHCCHM405	Plan and implement a chemical use program
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Irrigation

AHCIRG435	Determine hydraulic parameters for an irrigation system
AHCIRG436	Implement an irrigation-related environmental protection program
AHCIRG437	Schedule irrigations

Livestock

AHCLSK402	Develop livestock feeding plans
AHCLSK404	Implement and monitor animal welfare programs
AHCLSK405	Implement intensive production systems
AHCLSK406	Oversee animal marking operations
AHCLSK407	Plan and monitor intensive production systems
AHCLSK409	Supervise animal health programs
AHCLSK411	Supervise natural mating of livestock
AHCLSK412	Arrange livestock purchases
AHCLSK414	Arrange transport for farm produce or livestock
AHCLSK416	Identify and select animals for breeding

Nursery

AHCNSY402	Plan a propagation program
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Production horticulture

AHCPHT402	Develop a crop regulation program
AHCPHT404	Implement and monitor a horticultural crop harvesting program

Soils and media

AHCSOL401	Sample soils and interpret results
AHCSOL402	Develop a soil use map for a property

Work

AHCWRK401	Implement and monitor quality assurance procedures
AHCWRK403	Supervise work routines and staff performance

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC41616 Certificate IV in Organic Farming Release 5	AHC41616 Certificate IV in Organic Farming Release 4	Qualification updated to remove one elective unit that have been deleted as part of meeting Skills Ministers' priority of removing training products with low or no enrolments, as agreed by the AISC	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC41720 Certificate IV in Pest Management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification provides occupation outcomes for supervisors and senior field officers in the pest management sector. The qualification covers those who work in weed management as well as vertebrate pest management in a range of settings including conservation, land management, agriculture, horticulture and parks and gardens.

Supervisors and senior field officers may undertake the following job functions:

- preparing and carrying out pest management programs
- participating in strategic invasive species management practices
- completing and assessing pest management programs.

Some job functions covered by this qualification may require occupational licencing or certification. Specific determination should be sought through the relevant State or Territory agency.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 4 core units plus
 - 8 elective units.

Elective units must ensure the integrity of the qualification s Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 3 units from Group A
- remaining units may be selected from Group A, Group B and a maximum of 2 units may be selected from Certificate III or above of this or any other endorsed Training Package or accredited course.

Selected units must be relevant to job outcomes in pest management and must be chosen to ensure the integrity of the qualification outcome at AQF level 4.

Core Units

AHCPMG409	Implement a pest management plan
AHCPMG412	Develop a pest management plan
AHCPMG413	Define the pest problem
AHCWHS401	Maintain work health and safety processes

Elective Units

Group A

AHCBER404	Conduct field surveillance for a biosecurity emergency response
AHCCHM404	Develop procedures to minimise risks in the use of chemicals
AHCCHM405	Plan and implement a chemical use program
AHCPMG401	Implement the pest monitoring and evaluation plan
AHCPMG402	Ensure compliance with pest legislation
BSBPMG429	Apply project stakeholder engagement techniques

Group B

AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCCCF405	Develop community networks
AHCMOM402	Supervise maintenance of property, machinery and equipment
AHCECR306	Conduct photography for fieldwork
AHCPCM510	Collect and classify plants

AHCPMG305	Survey pests
AHCPMG306	Determine pest control techniques
AHCPMG307	Apply animal trapping techniques
AHCPMG309	Apply pest animal control techniques
AHCPMG312	Apply poison baits for vertebrate pest control in rural and environmental landscapes
AHCPMG403	Apply predator trapping techniques
AHCWRK403	Supervise work routines and staff performance
BSBPMG428	Apply project life cycle management processes
CHCCDE002	Develop and implement community programs
FWPCOT3202	Navigate in remote or trackless areas
FWPCOT3259	Operate a four wheel drive on unsealed roads
HLTAID011	Provide first aid
HLTAID013	Provide first aid in remote or isolated site
LGACOM404 B	Establish cooperative arrangements with other organisations
PSPREG003	Apply regulatory powers
PSPREG008	Act on non-compliance
TLIR4002	Source goods/services and evaluate contractors

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC41720 Certificate IV in Pest Management	AHC41716 Certificate IV in Pest Management	Updated qualification code Updated unit codes in electives lists	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC42021 Certificate IV in Landscape Construction Management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Qualification Description

This qualification describes the skills and knowledge for supervisory/managerial job roles in the landscape industry including leading hand, foreman, site supervisor, landscape builder and construction manager.

Individuals with this qualification perform tasks involving technical skills, problem solving and supervisory skills to operate, monitor and improve performance of landscape systems and projects, and may supervise staff.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 2 core units plus
 - 10 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 1 must be from electives group A
- 6 must be from the electives group B

- 3 from the remaining elective units, or any currently endorsed Training Package or accredited course.

Core Units

AHCBUS407	Cost a project
AHCLSC404	Supervise landscape project works

Elective Units

Group A

AHCWHS401	Maintain work health and safety processes
CPCCB4002	Manage work health and safety in the building and construction workplace

Group B

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCBUS408	Operate within a budget framework
AHCCCF402	Report on project
AHCCHM405	Plan and implement a chemical use program
AHCECR401	Supervise ecological restoration works
AHCGRI301	Maintain roof gardens, vertical gardens and green facades
AHCGRI401	Construct roof gardens
AHCGRI402	Construct vertical gardens and green facades
AHCGRI501	Design roof gardens
AHCGRI502	Design vertical gardens and green facades
AHCIRG442	Supervise irrigation system installation
AHCLSC402	Apply building codes and standards to the construction process for Class 10 buildings

AHCLSC403*	Apply structural principles to Class 10 buildings
AHCLSC505	Manage landscape projects
AHCMER301	Process customer complaints
AHCMER408	Coordinate customer service and networking activities
AHCMOM402	Supervise maintenance of property, machinery and equipment
AHCPCM303	Identify plant specimens
AHCPCM404	Recommend plants and cultural practices
AHCPGD403	Design plant displays
AHCPGD404	Plan a plant establishment program
AHCSOL406	Sample soils and interpret results
AHCWRK401	Implement and monitor quality assurance procedures
AHCWRK402	Provide information on issues and policies
AHCWRK403	Supervise work routines and staff performance
BSBESB401	Research and develop business plans
BSBESB407	Manage finances for new business ventures
BSBHRM415	Coordinate recruitment and onboarding
BSBINS401	Analyse and present research information
BSBINS410	Implement records systems for small business
BSBLDR414	Lead team effectiveness
BSBOPS402	Coordinate business operational plans
BSBPEF402	Develop personal work priorities
BSBWRT411	Write complex documents
CPCCBBC4001	Apply building codes and standards to the construction process for Class 1 and 10 buildings
CPCCBBC4003	Select, prepare and administer a construction contract

CPCCBC4004	Identify and produce estimated costs for building and construction projects
CPCCBC4005	Produce labour and material schedules for ordering
CPCCBC4006	Select, procure and store construction materials for building and construction projects
CPCCBC4008	Supervise site communication and administration processes for building and construction projects
CPCCBC4009	Apply legal requirements to building and construction projects
CPCCBC4010*	Apply structural principles to residential and commercial constructions
CPCCBC4012	Read and interpret plans and specifications
CPCCBC4026	Arrange building applications and approvals
CPCCBC4053	Apply building codes and standards to the construction process for Class 2 to 9 Type C buildings
CUAACD313	Produce technical drawings
TLIL3003	Conduct induction process
TLIR4002	Source goods/services and evaluate contractors

Prerequisite requirements

AHCLSC403 Apply structural principles to Class 10 buildings	AHCLSC402 Apply building codes and standards to the construction process for Class 10 buildings
CPCCBC4010 Apply structural principles to residential and commercial constructions	CPCCBC4001 Apply building codes and standards to the construction process for Class 1 and 10 buildings CPCCBC4053 Apply building codes and standards to the construction process for Class 2 to 9 Type C buildings

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC42021 Certificate IV in Landscape Construction Management	AHC42020 Certificate IV in Landscape	Amended title and packaging rules, core units increased by 2, added and updated elective units	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC42116 Certificate IV in Permaculture

Modification History

Release	Comments
Release 4	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification relates to individuals who work as project supervisors and designers for private clients or organisations. They require high level permaculture design skills, and knowledge in a broad range of areas in keeping with permaculture's multi-disciplinary nature. They may be involved in supervising individuals and teams of people on urban and rural work sites and in community projects.

The qualification is suited to learners who wish to work at the supervisory level within permaculture design projects, and may involve the supervision of others and working with people of diverse backgrounds and abilities.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 5 core units plus
 - 7 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 1 units from Group A
- Select 4 units from Group B
- Select 2 units from Group B or C or this or any other endorsed Training Package or Accredited Course
- Selected units must be relevant to job outcomes in Permaculture and must be chosen to ensure the integrity of the qualification outcome at AQF level 4.

Core Units

AHCPER401	Provide advice on permaculture principles and practices
AHCPER404	Plan and implement permaculture works
AHCPER405	Select appropriate technology for a permaculture system
AHCPER406	Identify and analyse bioregional characteristics and resources
AHCPER413	Evaluate suitability of species as solutions for permaculture applications

Elective Units

Group A

AHCPER402	Design a rural permaculture system
AHCPER403	Design an urban permaculture system

Group B

AHCPER307	Establish a rural permaculture system
AHCPER308	Establish an urban permaculture system
AHCPER402	Design a rural permaculture system
AHCPER403	Design an urban permaculture system
AHCPER407	Design harvesting and storage systems for permaculture products

AHCPER408	Implement and monitor animal health and welfare programs for a permaculture system
AHCPER409	Manage a permaculture seed bank
AHCPER410	Recommend approaches for sustainable community and bioregional development
AHCPER411	Operate within a sustainable community and bioregional development program

Group C

AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCCCF405	Develop community networks
AHCORG402	Manage organic livestock production
AHCORG403	Manage organic soil improvement
AHCORG404	Arrange selling through community based marketing
AHCSAW401	Set out conservation earthworks
AHCSOL402	Develop a soil use map for a property
TAEDEL301	Provide work skill instruction

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC42116 Certificate IV in Permaculture Release 4	AHC42116 Certificate IV in Permaculture Release 3	Qualification updated to remove one elective unit that has been deleted as part of meeting Skills Ministers' priority of removing training products with low or no enrolments, as agreed by	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		the AISC	

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC42320 Certificate IV in Medicinal Cannabis Cultivation and Production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification reflects the role of individuals who work at the supervisory or managerial level in the cultivation and production sector of the medicinal cannabis industry. In this role, these individuals are responsible for ensuring workplace processes and operations comply with the legislative, regulatory and quality requirements of a controlled growing, licensed medicinal cannabis site. They also use their knowledge and skills to plan for future work activities, solve problems, and take responsibility for others.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 15 units of competency:
 - 6 core units plus
 - 9 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 5 units must be selected from the elective units listed below
- the remaining 4 units may be selected from the elective units listed below or any currently endorsed Training Package or accredited course.

Core Units

AHCMDC401	Apply security measures for medicinal cannabis
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AHCMDC402	Monitor medicinal cannabis production for compliance and quality
AHCMDC403	Plan and implement a propagation program for medicinal cannabis
AHCMDC404	Plan and implement a care and maintenance program for medicinal cannabis
AHCMDC405	Plan and implement a harvest and pre-processing program for medicinal cannabis
AHCWHS401	Maintain work health and safety processes

Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

AHCBIO401	Plan and implement a biosecurity program
AHCNSY404	Plan a propagation program
AHCPCM507	Diagnose plant health problems
AHCPHT512	Manage a controlled growing environment
AHCWRK401	Implement and monitor quality assurance procedures
AHCWRK403	Supervise work routines and staff performance
BSBLDR414	Lead team effectiveness
BSBOPS403	Apply business risk management processes
FBPPHM3003	Work in a controlled environment
FBPPHM4001	Monitor and maintain Good Manufacturing Practice requirements
FBPPHM4002	Prepare and review workplace documentation to support Good Manufacturing Practice requirements
FBPPHM4003	Facilitate contamination control
FBPPHM4005	Participate in validation of pharmaceutical manufacturing processes

FBPPHM4006	Respond to non-conformance
FBPOPR4001	Apply principles of statistical process control
MSL924003	Process and interpret data
MSL973013	Perform basic tests
MSL973016	Perform aseptic techniques
MSL974025*	Prepare tissue and cell cultures
MSL975033*	Perform tissue and cell culture techniques
TLIL5019	Implement and monitor transport logistics
TLIO5017	Manage security of storage facilities
TLIR4002	Source goods/services and evaluate contractors

Prerequisite requirements

Unit of competency	Prerequisite requirement
MSL974025 Prepare tissue and cell cultures	MSL973016 Perform aseptic techniques
MSL975033 Perform tissue and cell culture techniques	MSL973016 Perform aseptic techniques

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC42320 Certificate IV in Medicinal Cannabis Cultivation and Production	Not applicable	Qualification has been created to address an occupational outcome required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC42421 Certificate IV in Landscape Design

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Qualification Description

This qualification describes the skills and knowledge for entry level design job roles in the landscape design industry.

Individuals with this qualification perform tasks involving technical skills and problem solving to monitor and improve performance of landscape design projects.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 13 units of competency:
 - 7 core units plus
 - 6 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 2 units must be from group A
- 1 unit must be from the remaining units listed in groups A or B
- 3 units must be from the remaining units listed in groups A or B, or any currently endorsed Training Package or accredited course.

Core Units

AHCDES401	Apply construction techniques to landscape design
AHCDES402	Apply sustainability principles to landscape design
AHCDES403	Develop landscape designs
AHCDES404	Prepare simple landscape drawings
AHCPCM404	Recommend plants and cultural practices
CUAACD312	Produce computer-aided drawings
CUADES305	Source and apply information on the history and theory of design

Elective Units

Group A

AHCDES405	Produce 2-D landscape drawings using CAD software
AHCPCM303	Identify plant specimens
AHCSOL304	Implement soil improvements for garden and turf areas
AHCWHS401	Maintain work health and safety processes

Group B

AHCBUS407	Cost a project
AHCBUS408	Operate within a budget framework
AHCGRI501	Design roof gardens
AHCGRI502	Design vertical gardens and green facades
AHCIRG342	Interpret irrigation plans and drawings
AHCLSC404	Supervise landscape project works
AHCPCM306	Provide information on plants and their culture
AHCPGD403	Design plant displays
AHCPGD404	Plan a plant establishment program

AHCSOL406	Sample soils and interpret results
AHCTHH401	Develop a therapeutic horticulture design brief
BSBCRT413	Collaborate in creative processes
BSBESB401	Research and develop business plans
BSBESB402	Establish legal and risk management requirements of new business ventures
BSBESB407	Manage finances for new business ventures
BSBSTR301	Contribute to continuous improvement
BSBSTR401	Promote innovation in team environments
BSBTWK401	Build and maintain business relationships
CUAACD313	Produce technical drawings
CUADES413	Develop and extend design skills and practice

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC42421 Certificate IV in Landscape Design	Not applicable	The qualification has been created to address an occupational outcome required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC50116 Diploma of Agriculture

Modification History

Release	Comments
Release 7	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 6	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.2..
Release 5	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1.
Release 4	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification reflects the role of personnel working on farms and stations who manage enterprise production units and employees and sole operators of agribusinesses who provide crop production advice and services to production enterprises.

Industry expects individuals with this qualification will take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

Job roles vary across different industry sectors. Possible job titles relevant to this qualification include:

- Farm production manager
- Production unit manager
- Agronomist
- Station/property manager.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 0 core units plus
 - 10 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 5 units from Group A
- Select 3 units from Group A or Group B
- 2 units aligned to AQF level 4 or above may be selected from the elective list, or this or any other endorsed Training Package or Accredited Course
- Selected units must be relevant to job outcomes in agriculture and must be chosen to ensure the integrity of the qualification outcome at AQF level 5.

Elective Units

Group A

Agribusiness

AHCAGB513	Develop a farm plan
AHCAGB518	Develop climate risk management strategies

Broadacre cropping

AHCBAC417	Manage agricultural crop production
AHCBAC509	Plan and manage long-term weed, pest and disease control in crops
AHCBAC510	Manage integrated crop and pasture production
AHCBAC511	Plan and manage a stored grain program
AHCBAC512	Develop production plans for crops or pastures

AHCBAC513	Apply plant biology to agronomic practices
AHCBAC515	Manage forage conservation
AHCBAC516	Manage the harvest of crops

Business

AHCBUS511	Manage enterprise staff requirements
AHCBUS513	Market products and services
AHCBUS516	Develop and review a business plan
AHCBUS517	Monitor and review business performance

Livestock

AHCLSK501	Manage livestock production
AHCLSK502	Arrange marketing of livestock
AHCLSK504	Develop livestock health and welfare strategies
AHCLSK508	Plan, monitor and evaluate strategies to improve livestock through genetics
AHCLSK509	Develop and implement a breeding strategy
AHCLSK510	Develop production plans for livestock

Organic production

AHCORG507	Develop an organic or biodynamic management plan
AHCORG508	Prepare the enterprise for organic or biodynamic certification

Soils and media

AHCSOL505	Monitor and manage soils for production
AHCSOL506	Manage erosion and sediment control

AHCSOL507	Develop and manage a plan to reclaim land affected by salinity
AHCSOL508	Manage soils to enhance sustainability

Work health and safety

AHCWHS502	Manage work health and safety processes
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Group B

Agribusiness

AHCAGB512	Plan and manage infrastructure
AHCAGB514	Manage application of agents to crops or pastures
AHCAGB515	Develop sustainable agricultural practices that utilise renewable energy and recycling systems
AHCAGB516	Select and implement a GIS for sustainable agricultural systems
AHCAGB517	Develop and manage a plan for sustainable production
AHCAGB519	Plan and monitor production processes
AHCAGB520	Plan production for the whole business
AHCAGB521	Select and use agricultural technology
AHCAGB522	Implement the introduction of biotechnology into the production system
BSBPEF501	Manage personal and professional development

Business

AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders
AHCBUS518	Prepare and monitor budgets and financial reports
BSBFIM501	Manage budgets and financial plans

BSBHRM525	Manage recruitment and onboarding
BSBINS401	Analyse and present research information
BSBOPS504	Manage business risk
TLIL5019	Implement and monitor transport logistics
TLIR0004	Negotiate a contract
TLIR4002	Source goods/services and evaluate contractors

Chemicals

AHCCHM405	Plan and implement a chemical use program
AHCCHM501	Develop and manage a chemical use strategy

Drainage

AHCDRG502	Design drainage systems
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Livestock

AHCLSK506	Design livestock effluent systems
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Merchandising and sales

AHCMER502	Develop a sales strategy for rural products
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Machinery operation and maintenance

AHCMOM501	Manage machinery and equipment
AHCMOM502	Implement a machinery management system

Natural area restoration

AHCECR506	Develop and implement sustainable land use strategies
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Organic production

AHCORG401	Manage biodynamic production
AHCORG402	Manage organic livestock production
AHCORG403	Manage organic soil improvement

Plants

AHCPCM513	Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs
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Shearing

AHCSHG405	Arrange employment for shearing operations
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Water

AHCWAT503	Manage water systems
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Work

AHCWRK502	Collect and manage data
AHCWRK504	Assess new industry developments
AHCWRK509	Provide specialist advice to clients
AHCWRK511	Develop workplace policy and procedures for sustainability
AHCWRK512	Plan, implement and review a quality assurance program
AHCWRK505	Manage trial and research material

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC50116 Diploma of Agriculture Release 7	AHC50116 Diploma of Agriculture Release 6	Updated elective unit codes	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC50320 Diploma of Production Horticulture

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.2.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification describes the skills and knowledge for specialist or managerial job roles in the production horticulture industry including owner, farm manager, head grower, crop manager, section manager, dispatch manager, sales manager, marketing manager and specialist consultants.

Individuals with this qualification will take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 5 core units plus
 - 5 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 3 units from the electives listed below

- up to 2 units from the remaining electives listed below, or any other endorsed Training Package or accredited course packaged at Certificate IV, Diploma or Advanced Diploma.

Core Units

AHCBUS511	Manage enterprise staff requirements
AHCPCM507	Diagnose plant health problems
AHCPHT511	Develop a horticultural production plan
AHCWHS502	Manage work health and safety processes
AHCWRK512	Plan, implement and review a quality assurance program

Elective Units

AHCBER503	Manage active operational emergency disease or pest sites
AHCBER504	Manage the implementation of a biosecurity emergency control program
AHCBUS513	Market products and services
AHCBUS514	Negotiate and monitor contracts
AHCBUS516	Develop and review a business plan
AHCBUS517	Monitor and review business performance
AHCBUS518	Prepare and monitor budgets and financial reports
AHCCHM501	Develop and manage a chemical use strategy
AHCDRG502	Design drainage systems
AHCHYD501	Develop a plan for a hydroponic system
AHCIRG506	Design irrigation systems
AHCIRG508	Design irrigation system maintenance and monitoring programs
AHCIRG509	Develop an irrigation and drainage management plan
AHCMOM501	Manage machinery and equipment

AHCMOM502	Implement a machinery management system
AHCORG507	Develop an organic or biodynamic management plan
AHCORG508	Prepare the enterprise for organic or biodynamic certification
AHCPCM513	Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs
AHCPHT512	Manage a controlled growing environment
AHCSOL505	Monitor and manage soils for production
AHCSOL506	Manage erosion and sediment control
AHCSOL507	Develop and manage a plan to reclaim land affected by salinity
AHCSOL508	Manage soils to enhance sustainability
AHCWAT503	Manage water systems
AHCWAT504	Design water treatment systems
BSBOPS504	Manage business risk
TLIL5019	Implement and monitor transport logistics
TLIR4002	Source goods/services and evaluate contractors
TLIR4003	Negotiate a contract

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC50320 Diploma of Production Horticulture Release 2	AHC50320 Diploma of Production Horticulture Release 1	Updated equivalence status to correctly reflect AHC50316 Diploma of Production Horticulture is not equivalent to AHC50320 Diploma of Production Horticulture	Not applicable

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC50416 Diploma of Horticulture

Modification History

Release	Comments
Release 4	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

The Diploma of Horticulture reflects the role of those who manage amenity horticultural enterprises where a range of skills and knowledge across the breadth of the industry is required or personnel working in horticulture at a level requiring higher technical skills.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 0 core units plus
 - 10 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 8 units must be selected from the electives listed below
- 2 units may be selected from the remaining elective units listed below

- 2 units, packaged in qualifications aligned to AQF level 4 or above, may be selected from this or any other currently endorsed Training Package or Accredited Course.

Elective Units

AHCARB508	Identify, select and specify trees
AHCARB509	Develop an arboricultural impact assessment report
AHCARB510	Specify and audit tree work
AHCARB513	Examine and assess trees
AHCARB514	Diagnose tree diseases
AHCBUS511	Manage enterprise staff requirements
AHCBUS513	Market products and services
AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders
AHCBUS518	Prepare and monitor budgets and financial reports
AHCCHM501	Develop and manage a chemical use strategy
AHCDES505	Prepare a landscape design
AHCDES508	Design sustainable landscapes
AHCDES509	Assess landscape sites
AHCHYD501	Develop a plan for a hydroponic system
AHCIRG506	Design irrigation systems
AHCIRG507	Audit irrigation systems
AHCIRG508	Design irrigation system maintenance and monitoring programs
AHCIRG509	Develop an irrigation and drainage management plan
AHCIRG510	Establish and maintain an irrigation-related environmental protection program
AHCLPW506	Develop a management plan for a designated area
AHCLSC504	Survey and establish site levels

AHCLSC505	Manage landscape projects
AHCLSC506	Manage a tree transplanting program
AHCMOM501	Manage machinery and equipment
AHCMOM502	Implement a machinery management system
AHCPCM507	Diagnose plant health problems
AHCPCM510	Collect and classify plants
AHCPCM513	Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs
AHCPGD506	Manage parks and reserves
AHCPGD507	Manage plant cultural practices
AHCPGD508	Plan the restoration of parks and gardens
AHCPGD509	Develop and implement a streetscape management plan
AHCPGD510	Conduct comprehensive inspection of park facilities
AHCPHT511	Develop a horticultural production plan
AHCPHT512	Manage a controlled growing environment
AHCPMG413	Define the pest problem
AHCPMG501	Develop a regional pest management plan
AHCPMG508	Develop a system to monitor and evaluate the pest management plan
AHCPMG510	Develop a pest survey strategy
AHCSOL505	Monitor and manage soils for production
AHCTRF505	Plan the establishment of sports turf playing surfaces
AHCWAT503	Manage water systems
AHCWAT504	Design water treatment systems
AHCWHS502	Manage work health and safety processes
AHCWRK502	Collect and manage data

AHCWRK504	Assess new industry developments
AHCWRK507	Implement professional practice
AHCWRK508	Interpret legislation
AHCWRK509	Provide specialist advice to clients
AHCWRK510	Audit site operations
AHCWRK511	Develop workplace policy and procedures for sustainability
AHCWRK512	Plan, implement and review a quality assurance program
AHCWRK513	Write and present reports
AHCWRK514	Manage trial and research material
BSBFIN501	Manage budgets and financial plans
BSBHRM525	Manage recruitment and onboarding
BSBINS401	Analyse and present research information
BSBPMG430	Undertake project work
CPPWMT4005	Implement waste management site safety plans
TLIL5019	Implement and monitor transport logistics
TLIR0004	Negotiate a contract
TLIR4002	Source goods/services and evaluate contractors

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC50416 Diploma of Horticulture Release 4	AHC50416 Diploma of Horticulture Release 3	Minor update to qualification to update some units in the list of electives	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC50520 Diploma of Arboriculture

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0.

Qualification Description

This qualification describes the skills and knowledge for consulting arborists and tree managers.

Graduates with this qualification assess trees and produce reports and documentation attesting to the health and risks related to trees. They diagnose tree disorders and defects, document and communicate recommendations for tree establishment, canopy management, tree remediation, environmental and habitat development and tree removals, within a legislative and regulatory framework.

Legislation, regulations and by-laws relating to the establishment, treatment and removal of trees apply in some States and Territories.

Entry Requirements

To commence this qualification an individual must have achieved the following units of competency or their equivalent:

- AHCARB314 Implement a tree maintenance program
- AHCARB316 Perform pruning operations
- AHCARB323 Identify trees.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 8 core units plus
 - 2 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least one unit from the elective list

- one additional unit may be selected from the elective list, or from this or any other endorsed Training Package or Accredited Course that reflect outcomes at AQF level 4 or above.

Core Units

AHCARB408	Perform a ground-based tree defect evaluation
AHCARB508	Identify, select and specify trees
AHCARB509	Develop an arboricultural impact assessment report
AHCARB510	Specify and audit tree work
AHCARB511	Prepare arborist reports
AHCARB513	Examine and assess trees
AHCARB514	Diagnose tree diseases
AHCWRK508	Interpret legislation

Elective Units

AHCARB512	Generate tree plans using computer-aided design software
AHCBUS515	Prepare estimates, quotes and tenders
AHCNRM507	Manipulate and analyse data within geographic information systems
AHCPCM601	Develop and implement a plant health management strategy
AHCPGD504	Develop and implement a streetscape management plan
AHCWRK502	Collect and manage data
AHCWRK504	Assess new industry developments
AHCWRK505	Manage trial and research material
AHCWRK507	Implement professional practice
AHCWRK510	Audit site operations

AHCWRK511	Develop workplace policy and procedures for sustainability
BSBCOM602	Develop and create compliance requirements
BSBITU404	Produce complex desktop published documents
BSBMGT617	Develop and implement a business plan
CPPSIS5035	Obtain and validate spatial data
CPPSIS5064	Coordinate GIS data manipulation and analysis
LGAPLEM512 A	Provide geographic information systems data

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC50520 Diploma of Arboriculture	AHC50516 Diploma of Arboriculture	Entry requirements added Changes to the units listed in the core and electives Changes to packaging rules, with the core increased from 7 to 8 units and the electives reduced from 3 to 2 units	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC50621 Diploma of Landscape Design

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Qualification Description

This qualification describes the skills and knowledge for landscape designer job roles in the landscape industry.

Individuals with this qualification will take personal responsibility and exercise autonomy in undertaking complex work. They analyse information and exercise judgement to complete a range of advanced skilled activities.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

State/territory licensing, legislative or certification requirements apply in some jurisdiction. Users are advised to check with the relevant regulatory authority.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 6 core units plus
 - 6 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 3 must be from the electives listed below
- 3 from the remaining electives listed below or any currently endorsed Training Package or accredited course.

Core Units

AHCDES505	Prepare a landscape design
AHCDES506	Design for construction of landscape features
AHCDES507	Produce drawings for landscape design projects using CAD software
AHCDES508	Design sustainable landscapes
AHCDES509	Assess landscape sites
AHCPCM511	Specify plants for landscapes

Elective Units

AHCARB508	Identify, select and specify trees
AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders
AHCGRI401	Construct roof gardens
AHCGRI402	Construct vertical gardens and green facades
AHCGRI501	Design roof gardens
AHCGRI502	Design vertical gardens and green facades
AHCLSC504	Survey and establish site levels
AHCLSC505	Manage landscape projects
AHCPCM512	Design specialised landscape
AHCPER401	Provide advice on permaculture principles and practices
AHCPER403	Design an urban permaculture system
AHCPER404	Plan and implement permaculture works
AHCPER505	Plan and supervise the implementation of permaculture project works
AHCPGD508	Plan the restoration of parks and gardens
AHCWRK507	Implement professional practice

AHCWRK508	Interpret legislation
AHCWRK509	Provide specialist advice to clients
AHCWRK510	Audit site operations
AHCWRK513	Write and present reports
CUAACD313	Produce technical drawings
CUADES511	Implement design solutions
CUADES512	Establish, negotiate and refine a design brief

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC50621 Diploma of Landscape Design	AHC50616 Diploma of Landscape Design	Amended packaging rules, core units increased by 2, updated core units, added and updated elective units	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC50820 Diploma of Nursery Management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification describes the skills and knowledge for specialist or managerial job roles in the nursery industry including site manager, head grower, crop manager, sales manager, marketing manager, garden centre manager, nursery manager and specialist consultants.

Individuals with this qualification will take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

To commence this qualification, individuals must demonstrate they have skills and knowledge in the application of:

- cultivating, growing and harvesting/production skills for a variety of plant types, including pest and disease control
- technology and equipment that apply in a production nursery or retail nursery workplace
- health and safety, pest management and biosecurity processes and regulations that apply in a production nursery or retail nursery workplace

The skills and knowledge may have been acquired through completion of a Certificate III or higher qualification relating to nursery or horticulture, or industry experience.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 7 core units plus
 - 3 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 1 unit must be from the electives listed below
- up to 2 units from the remaining electives listed below, or any other endorsed Training Package or accredited course packaged at Certificate IV or Diploma.

Core Units

AHCBUS511	Manage enterprise staff requirements
AHCPCM507	Diagnose plant health problems
AHCPCM508	Develop an integrated pest management program
AHCWAT503	Manage water systems
AHCWRK513	Write and present reports
BSBESB406	Establish operational strategies and procedures for new business ventures
BSBPMG430	Undertake project work

Elective Units

AHCBIO401	Plan and implement a biosecurity program
AHCCHM501	Develop and manage a chemical use strategy
AHCIRG507	Audit irrigation systems
AHCIRG508	Design irrigation system maintenance and monitoring programs
AHCMER502	Develop a sales strategy for rural products
AHCMOM501	Manage machinery and equipment
AHCMOM502	Implement a machinery management system
AHCPCM509	Apply knowledge of plant physiology to horticultural practices
AHCPCM510	Collect and classify plants

AHCPHT511	Develop a horticultural production plan
AHCPHT512	Manage a controlled growing environment
AHCPMG413	Define the pest problem
AHCPMG501	Develop a regional pest management plan
AHCPMG508	Develop a system to monitor and evaluate the pest management plan
AHCPMG510	Develop a pest survey strategy
AHCSOL505	Monitor and manage soils for production
AHCSOL506	Manage erosion and sediment control
AHCSOL507	Develop and manage a plan to reclaim land affected by salinity
AHCSOL508	Manage soils to enhance sustainability
AHCWAT504	Design water treatment systems
AHCWHS502	Manage work health and safety processes
AHCWRK502	Collect and manage data
AHCWRK507	Implement professional practice
AHCWRK508	Interpret legislation
AHCWRK509	Provide specialist advice to clients
AHCWRK510	Audit site operations
AHCWRK512	Plan, implement and review a quality assurance program
AHCWRK514	Manage trial and research material
BSBOPS505	Manage organisational customer service
SIRRINV001	Receive and handle retail stock

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC50820 Diploma of Nursery Management	AHC50816 Diploma of Production Nursery Management	Revised packaging rules to better reflect outcomes	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC51019 Diploma of Sports Turf Management

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Land Management Training Package Version 6.2
Release 2	This version released with AHC Agriculture, Horticulture and Land Management Training Package Version 6.1
Release 1	This version released with AHC Agriculture, Horticulture and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge for management roles in sports turf. Job roles include senior curators/arena managers, golf course superintendents, sports turf managers, racetrack managers, senior bowling greenkeepers and turf consultants.

It applies to individuals who are responsible for the management of sports turf facilities and who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in specific technical areas. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

To commence this qualification an individual must have:

- completed a Certificate III in Sports Turf Management or an equivalent turf management trade level qualification

or

- a certificate III level qualification in amenity horticulture combined with two years current work experience in a trade level role at a sports turf facility.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 14 units of competency:

- 10 core units plus
- 4 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 2 units must be selected from the electives listed below
- up to 2 units may be selected from the remaining elective listed below or
- up to 2 units may be selected that reflect AQF level 4, 5 or 6 outcomes from this or any other currently endorsed Training Package or Accredited Course.

Core Units

AHCBUS511	Manage enterprise staff requirements
AHCBUS518	Prepare and monitor budgets and financial reports
AHCCHM501	Develop and manage a chemical use strategy
AHCIRG507	Audit irrigation systems
AHCPCM402	Develop a soil health and plant nutrition program
AHCPCM501	Diagnose plant health problems
AHCTRF505	Plan the establishment of sports turf playing surfaces
AHCTRF506	Manage sports turf renovation programs
AHCTRF507	Develop sports turf management programs
AHCTRF508	Manage sports turf facility assets

Elective Units

AHCAGB516	Select and implement a GIS for sustainable agricultural systems
AHCAGB518	Develop climate risk management strategies
AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders
AHCDRG502	Design drainage systems
AHCPCM601	Develop and implement a plant health management

	strategy
AHCPMG508	Develop a system to monitor and evaluate the pest management plan
AHCWHS502	Manage work health and safety processes
AHCWRK505	Manage trial and research material
AHCWRK511	Develop workplace policy and procedures for sustainability
BSBHRM506	Manage recruitment selection and induction processes
CHCMGT007	Work effectively with the Board of an organisation
CPCPPS5027A	Design irrigation systems
CUAACD302	Produce computer-aided drawings

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC51019 Diploma of Sports Turf Management Release 3	AHC51019 Diploma of Sports Turf Management Release 2	Qualification updated to reinstate AGB units, as agreed by the AISC	Equivalent

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC51120 Diploma of Conservation and Ecosystem Management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification reflects the skills and knowledge required for skilled and paraprofessional work in conservation and ecosystem management. Workers with this qualification perform in operational managerial and/or technical positions often with specialist skills and knowledge in a range of sectors. Examples of areas of specialisation include:

- Indigenous land management
- ecosystem restoration, rehabilitation and renewal
- conservation works
- parks management and/or administration
- wildlife management
- marine and/or coastal management
- water and catchment management.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 0 core units plus
 - 10 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 4 units selected from Group A

- remaining 6 electives can be selected from Group A, Group B and 2 units can be selected from any currently endorsed Training Package or accredited course.

Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

Group A Electives

AHCASW501*	Survey and report on Aboriginal cultural sites
AHCECR501	Manage natural areas on a rural property
AHCECR502	Conduct biological surveys
AHCECR503	Design an ecological restoration project
AHCECR504	Manage implementation of ecological restoration programs
AHCECR505	Plan river restoration works
AHCECR506	Develop and implement sustainable land use strategies
AHCFIR503	Plan and evaluate burning for fuel, ecological and cultural resource management
AHCILM306	Follow Aboriginal cultural protocols
AHCILM501	Conduct field research into natural and cultural resources
AHCILM502	Develop conservation strategies for cultural resources
AHCILM503	Manage restoration of cultural places
AHCILM504	Develop strategies for Indigenous land or sea management
AHCILM505	Map relationship of business enterprise to culture and Country
AHCILM506	Operate within Community cultures and goals
AHCILM508	Propose a negotiated outcome for a given area of Country
AHCILM510*	Plan for successful cultural practice at work
AHCILM601	Manage cultural processes in an Indigenous organisation

AHCLPW506	Develop a management plan for a designated area
AHCLPW504	Assess land use applications for legislative compliance
AHCLPW507	Implement natural and cultural resource management plans
AHCLPW602	Coordinate the preparation of a regional resource management plan
AHCNRM512	Investigate suspected breaches of natural resource management legislation
AHCNRM605	Develop a monitoring, evaluation and reporting program
AHCNRM603	Implement a monitoring, evaluation and reporting program
AHCPCM510	Collect and classify plants
AHCPMG401	Implement the pest monitoring and evaluation plan
AHCPMG413	Define the pest problem
AHCPMG501	Develop a regional pest management plan
AHCPMG506	Manage the implementation of legislation
AHCPMG508	Develop a system to monitor and evaluate the pest management plan
AHCSAW504	Design control measures and structures
AHCSAW505	Plan erosion and sediment control measures
AHCSAW503	Plan conservation earthworks
LGAPLEM612 B	Protect heritage and cultural assets
MSS024020	Recognise common geological landforms and samples
NWPIRR005	Develop and review a surface water plan
NWPIRR006	Develop and review an irrigation system plan
NWPIRR007	Implement and coordinate a surface water plan
NWPSOU006	Develop and manage a flood plan

NWPSOU007	Implement and coordinate a catchment plan
SISXRES001	Conduct sustainable work practices in open spaces
SITTGDE001	Interpret aspects of local Australian Indigenous culture

Group B Electives

AHCBER504	Manage the implementation of a biosecurity emergency control program
AHCBUS511	Manage enterprise staff requirements
AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders
AHCBUS518	Prepare and monitor budgets and financial reports
AHCFAU501	Manage fauna populations
AHCFIR504	Manage wildfire hazard reduction programs
AHCMOM501	Manage machinery and equipment
AHCMOM502	Implement a machinery management system
AHCNRM509	Develop a coastal rehabilitation strategy
AHCNRM510	Develop a water quality monitoring program
AHCNRM503	Support the implementation of waterways strategies
AHCNRM504	Interpret and report on catchment hydrology
AHCNRM505	Provide technical advice on sustainable catchment management
AHCNRM511	Plan and monitor works projects in catchments and waterways
AHCPGD503	Manage parks and reserves
AHCPGD505	Conduct comprehensive inspection of park facilities
AHCPMG412	Develop a pest management plan
AHCSOL506	Manage erosion and sediment control

AHCWHS502	Manage work health and safety processes
AHCWRK502	Collect and manage data
AHCWRK508	Interpret legislation
AHCWRK509	Provide specialist advice to clients
AHCWRK511	Develop workplace policy and procedures for sustainability
BSBPMG430	Undertake project work
BSBWHS513	Lead WHS risk management
BSBWHS518	Manage WHS hazards associated with maintenance and use of plant
CPPSIS5064	Coordinate GIS data manipulation and analysis
MSS025014*	Perform sampling and testing of contaminated sites
SITTPPD002	Develop interpretive activities
SITTPPD009	Develop environmentally sustainable tourism operations
TLIR4003	Negotiate a contract

Prerequisite requirements

Unit of competency	Prerequisite requirement
AHCASW501 Survey and report on Aboriginal cultural sites	AHCILM306 Follow Aboriginal cultural protocols
AHCILM510 Plan for successful cultural practice at work	AHCILM306 Follow Aboriginal cultural protocols
MSS025014 Perform sampling and testing of contaminated sites	MSS024020 Recognise common geological landforms and samples

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC51120 Diploma of Conservation and Ecosystem Management	AHC51116 Diploma of Conservation and Land Management	Retitled New units added into qualification Updated codes for units	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC51216 Diploma of Community Coordination and Facilitation

Modification History

Release	Comments
Release 5	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.1.
Release 4	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification reflects the role of personnel working in community coordination and facilitation, which focuses on fostering, promoting and supporting community development, particularly in rural communities that are engaged in land management activities.

Job roles and titles vary across different industry sectors. Possible job titles relevant to this qualification include:

- Volunteer
- Project manager
- Community group leader/coordinator
- Regional coordinator.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 0 core units plus
 - 10 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select a minimum of 4 units from Group A
- Select a minimum of 4 units from Group A or Group B
- A maximum of 2 units may be selected from the elective list of any Certificate IV or above of this or any other endorsed Training Package or Accredited Course.

Selected units must be relevant to job outcomes in community coordination and facilitation and must be chosen to ensure the integrity of the qualification outcome at AQF level 5.

Elective Units

Group A

Community coordination and facilitation

AHCCCF501	Evaluate project submissions
AHCCCF502	Facilitate development of group goals and projects
AHCCCF503	Promote group formation and development
AHCCCF504	Support group and community changes in resource management
AHCCCF505	Contribute to regional planning process
AHCCCF506	Manage the incorporation of a group
AHCCCF601	Coordinate the development of regional plans

Group B

Business

AHCBUS511	Manage enterprise staff requirements
AHCBUS513	Market products and services
AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders

AHCBUS516	Develop and review a business plan
AHCBUS517	Monitor and review business performance
AHCBUS518	Prepare and monitor budgets and financial reports
BSBOPS503	Develop administrative systems
BSBINS401	Analyse and present research information
TLIL5019	Implement and monitor transport logistics
TLIR4002	Source goods/services and evaluate contractors
TLIR4003	Negotiate a contract

Community coordination and facilitation

AHCCCF401	Prepare project acquittal
AHCCCF402	Report on project
AHCCCF403	Obtain and manage sponsorship
AHCCCF404	Contribute to association governance
AHCCCF405	Develop community networks
AHCCCF406	Facilitate ongoing group development
AHCCCF407	Obtain resources from community and groups
AHCCCF408	Promote community programs
AHCCCF409	Participate in assessments of project submissions
AHCCCF410	Support individuals in resource management change processes
AHCCCF411	Develop approaches to include cultural and human diversity
AHCCCF415	Coordinate social events to support group purposes
AHCCCF416	Present proposed courses of action to meeting
CHCCDE002	Develop and implement community programs

LGACOM502 B	Devise and conduct community consultations
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Lands, parks and wildlife

AHCLPW506	Develop a management plan for a designated area
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Natural resource management

AHCNRM605	Develop a monitoring, evaluation and reporting program
AHCNRM603	Implement a monitoring, evaluation and reporting program
PUACOM012	Liaise with media at a local level

Workplace Health and Safety

AHCWHS502	Manage work health and safety processes
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Work

AHCWRK502	Collect and manage data
AHCWRK513	Write and present reports
AHCWRK504	Assess new industry developments
AHCWRK514	Manage trial and research material
AHCWRK507	Implement professional practice
AHCWRK508	Interpret legislation
AHCWRK509	Provide specialist advice to clients
AHCWRK510	Audit site operations
AHCWRK511	Develop workplace policy and procedures for sustainability
AHCWRK512	Plan, implement and review a quality assurance program

BSBPMG430	Undertake project work
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Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC51216 Diploma of Community Coordination and Facilitation Release 5	AHC51216 Diploma of Community Coordination and Facilitation Release 4	Qualification updated to remove three elective units that have been deleted as part of meeting Skills Ministers' priority of removing training products with low or no enrolments, as agreed by the AISC	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC51316 Diploma of Pest Management

Modification History

Release	Comments
Release 6	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 5	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.
Release 4	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification provides occupation outcomes for senior officers and managers in the pest management sector. These roles include functions such as planning, coordinating, managing and completing small to large scale pest management programs and may include participating in emergency operations such as disease outbreak or natural disasters.

The qualification is applicable to individuals who work in weed management as well as vertebrate pest management in a range of contexts, including conservation, land management, agriculture, horticulture, and parks and gardens.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 0 core units plus
 - 10 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select at least 5 Units from Group A
- Select at least 3 Units from Group A or Group B
- A maximum of 2 units may be selected from the elective list of a Certificate IV or above of this or any other endorsed Training Package or Accredited Course.

Selected units must be relevant to job outcomes in Conservation and Land Management and must be chosen to ensure the integrity of the qualification outcome at AQF level 5.

Elective Units

Group A

Natural area restoration

AHCECR502	Conduct biological surveys
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Natural resource management

AHCNRM603	Implement a monitoring, evaluation and reporting program
AHCNRM605	Develop a monitoring, evaluation and reporting program

Pest management

AHCPMG502	Investigate a pest control failure
AHCPMG506	Manage the implementation of legislation
AHCPMG507	Develop a regional pest management plan
AHCPMG508	Develop a system to monitor and evaluate the pest management plan
AHCPMG510	Develop a pest survey strategy

Work health and safety

AHCWHS502	Manage work health and safety processes
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Group B**Biosecurity**

AHCBER403	Plan and supervise control activities on infected premises
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Business

AHCBUS511	Manage enterprise staff requirements
AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders
AHCBUS518	Prepare and monitor budgets and financial reports

Community coordination and facilitation

AHCCCF502	Facilitate development of group goals and projects
AHCCCF505	Contribute to regional planning process
AHCCCF601	Coordinate the development of regional plans

Chemicals

AHCCHM404	Develop procedures to minimise risks in the use of chemicals
AHCCHM405	Plan and implement a chemical use program
AHCCHM501	Develop and manage a chemical use strategy

Lands, parks and wildlife

AHCLPW506	Develop a management plan for a designated area
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Plants

AHCPCM510	Collect and classify plants
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Pest management

AHCPMG409	Implement a pest management plan
AHCPMG413	Define the pest problem

Work

AHCMOM402	Supervise maintenance of property, machinery and equipment
AHCWRK502	Collect and manage data
AHCWRK504	Assess new industry developments
AHCWRK509	Provide specialist advice to clients
AHCWRK513	Write and present reports
BSBINS401	Analyse and present research information
BSBPMG430	Undertake project work
CHCCDE010	Develop and lead community engagement strategies to enhance participation
LGACOM404 B	Establish cooperative arrangements with other organisations
TLIR4002	Source goods/services and evaluate contractors

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC51316 Diploma of Pest Management Release 6	AHC51316 Diploma of Pest Management Release 5	Updated elective unit codes	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC51419 Diploma of Agribusiness Management

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.2.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification reflects the role of those working in decision-making and supervisory roles on farms, stations and related rural businesses.

At this level, workers take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 3 core units plus
 - 7 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 4 units from the elective list

- up to 3 units from this or any other endorsed Training Package or Accredited Course.

Core Units

AHCAGB519	Plan and monitor production processes
AHCBUS516	Develop and review a business plan
AHCBUS517	Monitor and review business performance

Elective Units

AHCAGB512	Plan and manage infrastructure
AHCAGB513	Develop a farm plan
AHCAGB514	Manage application of agents to crops or pastures
AHCAGB515	Develop sustainable agricultural practices that utilise renewable energy and recycling systems
AHCAGB516	Select and implement a GIS for sustainable agricultural systems
AHCAGB517	Develop and manage a plan for sustainable production
AHCAGB518	Develop climate risk management strategies
AHCAGB521	Select and use agricultural technology
AHCAGB522	Implement the introduction of biotechnology into the production system
AHCAGB607	Manage succession planning
AHCAGB608	Manage financial resources
AHCBIO403	Plan and implement a farm or enterprise biosecurity plan
AHCBUS406	Administer finance, insurance and legal requirements
AHCBUS511	Manage enterprise staff requirements
AHCBUS512	Develop and implement family business structures and relationships
AHCBUS513	Market products and services

AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders
AHCBUS518	Prepare and monitor budgets and financial reports
AHCCFP402	Prepare to comply with measuring and modelling requirements of carbon farming methods
AHCCFP403	Identify opportunities and risks in carbon farming projects
AHCCFP404	Plan a land-based carbon farming project
AHCCFP501	Advise on carbon farming project planning and implementation
AHCMOM501	Manage machinery and equipment
AHCMOM502	Implement a machinery management system
AHCMOM601	Analyse machinery options
AHCNAR506	Develop and implement sustainable land use strategies
AHCORG504	Develop and manage a community based marketing supply chain
AHCSOL505	Monitor and manage soils for production
AHCWAT503	Manage water systems
AHCWHS502	Manage work health and safety processes
AHCWRK502	Collect and manage data
AHCWRK511	Develop workplace policy and procedures for sustainability
BSBADM504	Plan and implement administrative systems
BSBPRC504	Manage a supply chain
BSBRISK501	Manage risk
BSBWHS513	Lead WHS risk management
BSBWHS518	Manage WHS hazards associated with maintenance and use of plant

BSBWOR501	Manage personal work priorities and professional development
TLIR4002	Source goods/services and evaluate contractors

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC51419 Diploma of Agribusiness Management Release 3	AHC51419 Diploma of Agribusiness Management Release 2	Qualification updated to reinstate AGB units, as agreed by the AISC	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC51519 Diploma of Viticulture

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge of those in management roles within the viticulture industry.

Individuals with this qualification will take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no formal entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 6 core units plus
 - 4 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 2 must be from the electives listed below
- 2 from the remaining electives listed below, or any currently endorsed Training Package or accredited course.

Core Units

AHCBAC509	Plan and manage long-term weed, pest and disease control in crops
AHCBIO305	Apply biosecurity measures
AHCBUS511	Manage enterprise staff requirements
AHCPHT508	Develop a grape production plan
AHCSOL505	Monitor and manage soils for production
AHCWAT503	Manage water systems

Elective Units

AHCBER501	Manage active operational emergency disease or plant pest sites
AHCBIO302	Identify and report unusual disease or plant pest signs
AHCBUS513	Market products and services
AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders
AHCBUS516	Develop and review a business plan
AHCBUS518	Prepare and monitor budgets and financial reports
AHCCHM501	Develop and manage a chemical use strategy
AHCMOM311	Operate precision control technology
AHCMOM501	Manage machinery and equipment
AHCMOM502	Implement a machinery management system
AHCORG507	Develop an organic or biodynamic management plan
AHCORG508	Prepare the enterprise for organic or biodynamic certification
AHCPCM501	Diagnose plant health problems
AHCPHT507	Evaluate grapes for production
AHCPHT509	Evaluate wine

AHCPHT510	Manage a wine making process
AHCWHS502	Manage work health and safety processes
AHCWRK512	Plan, implement and review a quality assurance program
TLIL5019	Implement and monitor transport logistics
TLIR4002	Source goods/services and evaluate contractors

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC51519 Diploma of Viticulture	AHC51516 Diploma of Viticulture	Amended packaging rules, reviewed core and elective units	No equivalent qualification

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC51619 Diploma of Irrigation Design

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Qualification Description

This qualification describes the skills and knowledge for technical and leadership job roles in the irrigation industry.

Individuals with this qualification will take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 11 units of competency:
 - 6 core units plus
 - 5 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 3 must be from the electives list below
- 2 from the remaining electives listed below or any other endorsed Training Package or accredited course

Core Units

AHCIRG435	Determine hydraulic parameters for an irrigation system
AHCIRG506	Design irrigation systems
AHCIRG507	Audit irrigation systems
AHCIRG508	Design irrigation system maintenance and monitoring programs
AHCIRG509	Develop an irrigation and drainage management plan
AHCSOL402	Develop a soil use map for a property

Elective Units

AHCBUS511	Manage enterprise staff requirements
AHCBUS513	Market products and services
AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders
AHCBUS516	Develop and review a business plan
AHCBUS517	Monitor and review business performance
AHCBUS518	Prepare and monitor budgets and financial reports
AHCDRG502	Design drainage systems
AHCIRG510	Establish and maintain an irrigation-related environmental protection program
AHCMER304	Recommend irrigation products and services
AHCMER404	Provide advice on agronomic products
AHCMER407	Provide irrigation sales and service
AHCWHS502	Manage work health and safety processes
AHCWRK502	Collect and manage data
AHCWRK503	Prepare reports
AHCWRK507	Implement professional practice

AHCWRK509	Provide specialist advice to clients
AHCWRK510	Audit site operations
AHCWRK511	Develop workplace policy and procedures for sustainability
BSBCUS501	Manage quality customer service
BSBFIM501	Manage budgets and financial plans
BSBHRM506	Manage recruitment selection and induction processes
BSBRES411	Analyse and present research information
PUAMAN005	Manage projects
TLIR4002	Source goods/services and evaluate contractors

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC51619 Diploma of Irrigation Design	AHC51616 Diploma of Irrigation Management	Amended title and units updated There are no changes to the packaging rules from previous version	No equivalent qualification

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC51816 Diploma of Organic Farming

Modification History

Release	Comments
Release 5	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1.
Release 4	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification reflects the role of personnel working within an organic farming enterprise who manage enterprise production units, manage the certification and continued compliance with organic standards and develop and maintain organic produce supply chains. It is designed to meet the needs of owners and managers of organic farming enterprises.

This qualification is suitable for people currently working or who wish to find employment on an organic farming enterprise or who own an organic farming enterprise.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 2 core units plus
 - 8 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 2 units from Group A
- Select 5 units from Group A or Group B
- 1 unit aligned to AQF level 4 or above may be selected from the elective list, or this or any other endorsed Training Package or Accredited Course
- Selected units must be relevant to job outcomes in agriculture and must be chosen to ensure the integrity of the qualification outcome at AQF level 5.

Core Units

AHCAGB504	Plan production for the whole business
AHCORG506	Manage an agroecology production system

Elective Units

Group A

Organic farming

AHCORG401	Manage biodynamic production
AHCORG402	Manage organic livestock production
AHCORG403	Manage organic soil improvement
AHCORG408	Manage on farm composting
AHCORG503	Design and document an organic farm landscape
AHCORG504	Develop and manage a community based marketing supply chain
AHCORG505	Develop and monitor a sustainable production plan
AHCORG507	Develop an organic and biodynamic management plan
AHCORG508	Prepare the enterprise for organic and biodynamic certification
AHCPER507	Research and interpret requirements for a permaculture project
AHCSOL505	Monitor and manage soils for production projects

Group B**Agribusiness**

AHCAGB518	Develop climate risk management strategies
AHCBUS513	Market products and services
AHCBUS514	Negotiate and monitor contracts
AHCBUS518	Prepare and monitor budgets and financial reports
AHCMER501	Develop a sales strategy for rural products
BSBFIM501	Manage budgets and financial plans

Broadacre cropping

AHCBAC408	Manage agricultural crop production
AHCBAC503	Manage integrated crop and pasture production
AHCBAC506	Manage the harvest of crops
AHCBAC507	Develop production plans for crops
AHCBAC509	Plan and manage long-term weed, pest or disease control in crops

Business

AHCBUS511	Manage enterprise staff requirements
AHCBUS516	Develop and review a business plan
AHCBUS517	Monitor and review business performance
BSBR501	Manage risk

Chemicals

AHCCHM405	Plan and implement a chemical use program
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Livestock

AHCLSK501	Manage livestock production
AHCLSK502	Arrange marketing of livestock
AHCLSK503	Develop and implement a breeding strategy
AHCLSK504	Develop livestock health and welfare strategies
AHCLSK505	Develop production plans for livestock
AHCLSK506	Design livestock effluent systems

Natural area restoration

AHCNAR506	Develop and implement sustainable land use strategies
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Production horticulture

AHCPCM501	Diagnose plant health problems
AHCPHT502	Develop a horticultural production plan
AHCPHT503	Manage a controlled growing environment

Water

AHCIRG506	Design irrigation systems
AHCWAT503	Manage water systems

Work health and safety

AHCWHS502	Manage work health and safety processes
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Work

AHCWRK502	Collect and manage data
AHCWRK504	Assess new industry developments
AHCWRK511	Develop workplace policy and procedures for sustainability

AHCWRK512	Plan, implement and review a quality assurance program
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Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC51816 Diploma of Organic Farming Release 5	AHC51816 Diploma of Organic Farming Release 4	Qualification updated to remove one elective unit that has been deleted as part of meeting Skills Ministers' priority of removing training products with low or no enrolments, as agreed by the AISC	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC51920 Diploma of Applied Agronomy

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.2.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Qualification Description

This qualification describes the skills and knowledge of those who work as an agronomist in the agriculture and horticulture industry.

Individuals with this qualification will take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities. It is assumed that an individual undertaking this qualification will have prior agriculture or horticulture industry experience.

Work must comply with workplace health and safety, food safety, biosecurity and environmental regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 7 core units plus
 - 5 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 3 must be from the electives listed below
- 2 from the remaining electives listed below, or any currently endorsed Training Package or accredited course packaged at Certificate IV, Diploma or Advanced Diploma.

Core Units

AHCAGB521	Select and use agricultural technology
AHCBAC509	Plan and manage long-term weed, pest and disease control in crops
AHCBAC513	Apply plant biology to agronomic practices
AHCBAC514	Design and manage a crop or pasture nutrition program
AHCBUS408	Operate within a budget framework
AHCSOL508	Manage soils to enhance sustainability
AHCWRK513	Write and present reports

Elective Units

AHCAGB514	Manage application of agents to crops or pastures
AHCAGB518	Develop climate risk management strategies
AHCAGB523	Interpret and use agricultural data
AHBAC409	Provide advice on agronomic products
AHCBAC510	Manage integrated crop and pasture production
AHCBAC511	Plan and manage a stored grain program
AHCBAC512	Develop production plans for crops or pastures
AHCBUS518	Prepare and monitor budgets and financial reports
AHCCHM405	Plan and implement a chemical use program
AHCCHM501	Develop and manage a chemical use strategy
AHCIRG507	Audit irrigation systems

AHCIRG509	Develop an irrigation and drainage management plan
AHCIRG510	Establish and maintain an irrigation-related environmental protection program
AHCNRM507	Manipulate and analyse data within geographic information systems
AHCPCM507	Diagnose plant health problems
AHCPHT508	Develop a grape production plan
AHCPHT511	Develop a horticultural production plan
AHCSOL505	Monitor and manage soils for production
AHCWAT503	Manage water systems
AHCWRK502	Collect and manage data
AHCWRK509	Provide specialist advice to clients
AHCWRK512	Plan, implement and review a quality assurance program
AHCWRK514	Manage trial and research material
BSBCMM511	Communicate with influence

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC51920 Diploma of Applied Agronomy Release 3	AHC51920 Diploma of Applied Agronomy Release 2	Qualification updated to reinstate AGB units, as agreed by the AISC	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC52021 Diploma of Landscape Construction Management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Qualification Description

This qualification describes the skills and knowledge for landscape project management job roles in the landscape industry.

Individuals with this qualification will take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

Work must comply with work health and safety and environmental regulations and legislation that apply to the workplace.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 4 core units plus
 - 6 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 4 must be from the electives listed below
- 2 from the remaining elective units, or any currently endorsed Training Package or accredited course.

Core Units

AHCBUS514	Negotiate and monitor contracts
AHCBUS515	Prepare estimates, quotes and tenders
AHCLSC504	Survey and establish site levels
AHCLSC505	Manage landscape projects

Elective Units

AHCBUS518	Prepare and monitor budgets and financial reports
AHCDES505	Prepare a landscape design
AHCDES509	Assess landscape sites
AHCGRI401	Construct roof gardens
AHCGRI402	Construct vertical gardens and green facades
AHCGRI501	Design roof gardens
AHCGRI502	Design vertical gardens and green facades
AHCIRG508	Design irrigation system maintenance and monitoring programs
AHCWHS502	Manage work health and safety processes
AHCWRK508	Interpret legislation
AHCWRK509	Provide specialist advice to clients
AHCWRK510	Audit site operations
AHCWRK513	Write and present reports
BSBHRM525	Manage recruitment and onboarding
BSBTEC401	Design and produce complex text documents
CPCCBBC4008	Supervise site communication and administration processes for building and construction projects
CPCCBBC4009	Apply legal requirements to building and construction projects

TLIR4002	Source goods/services and evaluate contractors
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Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC52021 Diploma of Landscape Construction Management	AHC52016 Diploma of Landscape Project Management	Amended title and packaging rules, core units increase by 1, updated core units, added and updated elective units	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC52116 Diploma of Permaculture

Modification History

Release	Comments
Release 5	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.1.
Release 4	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.1
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification provides occupation outcomes for individuals to work in a leadership capacity for organisations, groups or enterprises. They require a whole system approach to planning, designing, managing and implementing integrated permaculture projects and programs, permaculture community programs, and the operation of permaculture enterprises.

The qualification is suited to learners who wish to work within organisations and enterprises where skills in strategic planning and project management, natural system and land use planning, and specialist permaculture design are required. Work is likely to involve working with teams of people at the strategic level as well as working with people of diverse backgrounds and abilities.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 12 units of competency:
 - 5 core units plus
 - 7 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 4 units from Group A
- Select 1 unit from Group A or B
- 2 units may be selected from Group B or from this or any other endorsed Training Package or Accredited Course.

Selected units must be relevant to job outcomes in Permaculture and must be chosen to ensure the integrity of the qualification outcome at AQF level 5.

Core Units

AHCPER401	Provide advice on permaculture principles and practices
AHCPER502	Design an integrated permaculture system
AHCPER503	Develop a strategic plan for a permaculture project or enterprise
AHCPER504	Manage a permaculture project or enterprise
AHCPER507	Research and interpret requirements for a permaculture project

Elective Units

Group A

AHCPER413	Evaluate suitability of species as solutions for permaculture applications
AHCPER501	Carry out permaculture field research
AHCPER505	Plan and supervise the implementation of permaculture project works
AHCPER508	Manage a permaculture aid and development project
AHCPER509	Design permaculture structures and features
AHCPER511	Facilitate participatory planning and learning activities

AHCPER512	Plan community governance and decision-making processes
AHCORG402	Manage organic livestock production
AHCORG403	Manage organic soil improvement

Group B

AHCAGB518	Develop climate risk management strategies
AHCBUS513	Market products and services
AHCBUS514	Negotiate and monitor contracts
AHCBUS516	Develop and review a business plan
AHCCCF501	Evaluate project submissions
AHCCCF506	Manage the incorporation of a group
AHCECR501	Manage natural areas on a rural property
AHCILM506	Operate within Community cultures and goals
AHCORG507	Develop an organic or biodynamic management plan
AHCORG508	Prepare the enterprise for organic or biodynamic certification
AHCSAW505	Plan erosion and sediment control measures
AHCWRK509	Provide specialist advice to clients
AHCWRK511	Develop workplace policy and procedures for sustainability
CHCCDE012	Work within organisation and government structures to enable community development outcomes
CHCVOL003	Recruit, induct and support volunteers

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC52116 Diploma of Permaculture Release 5	AHC52116 Diploma of Permaculture Release 4	Qualification updated to remove two elective units that have been deleted as part of meeting Skills Ministers' priority of removing training products with low or no enrolments, as agreed by the AISC	Equivalent

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC60216 Advanced Diploma of Horticulture

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification reflects the roles of individuals working in management roles in horticulture.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 8 units of competency:
 - 0 core units plus
 - 8 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 6 units from the elective list below
- 2 units may be selected from this or any other endorsed Training Package or Accredited Course.

Selected units must be relevant to job outcomes in horticulture and must be chosen to ensure the integrity of the qualification outcome at AQF level 6.

Elective Units

AHCAGB512	Plan and manage infrastructure
AHCAGB518	Develop climate risk management strategies
AHCAGB607	Manage succession planning
AHCAGB608	Manage financial resources
AHCAGB609	Develop export markets for produce
AHCAGB610	Manage the production system
AHCAGB611	Analyse business performance
AHCAGB612	Manage price risk through trading strategy
AHCBER602	Plan and oversee a biosecurity emergency incident
AHCBUS609	Develop and review an enterprise strategic plan
AHCBUS610	Manage agribusiness risk
AHCBUS611	Manage capital works
AHCBUS612	Review land management plans and strategies
AHCBUS613	Manage human resources
AHCBUS614	Develop a monitoring, evaluation and reporting program
AHCBUS615	Implement a monitoring, evaluation and reporting program
AHCMER502	Develop a sales strategy for rural products
AHCMOM601	Analyse machinery options
AHCPCM602	Develop and implement a plant health management strategy
AHCWHS502	Manage work health and safety processes
AHCWRK601	Monitor projects in a program
AHCWRK602	Lead and manage community or industry organisations
CPPWMT4005	Implement waste management site safety plans

PSPPCY004	Support policy implementation
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Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC60216 Advanced Diploma of Horticulture Release 3	AHC60216 Advanced Diploma of Horticulture Release 2	Updated elective unit codes	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC60319 Advanced Diploma of Agribusiness Management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Land Management Training Package Version 4.0.

Qualification Description

This qualification reflects the role of individuals working in a range of agribusiness leadership or consulting roles. The role reflects the need for agribusiness specific expertise in planning and analysis, managing supply chains, financial and human resource management together with an emphasis on return on investment.

At this level, workers utilise significant theoretical agribusiness knowledge and provide leadership and strategic direction across multiple enterprises.

Agribusiness leaders and consultants analyse, design and execute judgements using wide-ranging technical, conceptual and managerial competencies. Their knowledge base may be highly specialised or broad within the agribusiness field. These individuals are often accountable for group outcomes and for the overall performance of agricultural or horticultural production enterprises.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 8 units of competency:
 - 1 core unit plus
 - 7 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- at least 6 units from the elective list
- up to 1 unit from this or any other endorsed Training Package or Accredited Course.

Core Units

AHCBUS610	Manage agribusiness risk
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Elective Units

AHCAGB512	Plan and manage infrastructure
AHCAGB518	Develop climate risk management strategies
AHCAGB607	Manage succession planning
AHCAGB608	Manage financial resources
AHCAGB609	Develop export markets for produce
AHCAGB610	Manage the production system
AHCBIO403	Plan and implement a farm or enterprise biosecurity plan
AHCBUS511	Manage enterprise staff requirements
AHCBUS609	Develop and review an enterprise strategic plan
AHCBUS611	Manage capital works
AHCBUS612	Review land management plans and strategies
AHCBUS613	Manage human resources
AHCBUS614	Develop a monitoring, evaluation and reporting program
AHCBUS615	Implement a monitoring, evaluation and reporting program
AHCCFP402	Prepare to comply with measuring and modelling requirements of soil-based carbon farming methods
AHCCFP501	Advise on carbon farming project planning and implementation
AHCMER501	Develop a sales strategy for rural products
AHCMOM601	Analyse machinery options
AHCORG504	Develop and manage a community based marketing

	supply chain
AHCWRK601	Monitor projects in a program
AHCWRK602	Lead and manage community or industry organisations
AHCWRK603	Design and conduct a field-based research trial
BSBGOV502	Recruit and coordinate committee members
BSBGOV507	Manage board or committee and organisational conflict
BSBINN501	Establish systems that support innovation
BSBMGT605	Provide leadership across the organisation
BSBMGT621	Design and manage the enterprise quality management system
BSBMGT623	Monitor corporate governance activities
BSBPRC504	Manage a supply chain
CPPWMT5045A	Develop site safety plans
PSPPCY004	Support policy implementation

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC60319 Advanced Diploma of Agribusiness Management	AHC60316 Advanced Diploma of Agribusiness Management	Packaging rules changed to include core unit Elective units added	No equivalent qualification

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC60415 Advanced Diploma of Conservation and Land Management

Modification History

Release	Comments
Release 4	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Qualification Description

This qualification reflects the roles of individuals working in regional and senior management roles in conservation and land management.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 8 units of competency:
 - 0 core units plus
 - 8 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- 6 units from the elective list

- 2 units may be selected from the elective list of this or any other endorsed Training Package or Accredited Course.

Elective Units

Biosecurity

AHCBER602	Plan and oversee a biosecurity emergency incident
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Business

AHCBUS610	Manage agribusiness risk
AHCBUS613	Manage human resources
AHCNRM603	Implement a monitoring, evaluation and reporting program
AHCNRM604	Review ecological management plans and strategies
AHCNRM605	Develop a monitoring, evaluation and reporting program
BSBFIN501	Manage budgets and financial plans
BSBOPS601	Develop and implement business plans
PSPPCY010	Manage policy implementation
PUAFIR504	Assist with formulation and implementation of plans and policies
PUAFIR601*	Develop and administer organisational policies, procedures and practices

Community coordination and facilitation

AHCCCF601	Coordinate the development of regional plans
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Indigenous land management

AHCILM601	Manage cultural processes in an Indigenous organisation
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Lands, parks and wildlife

AHCLPW602	Coordinate the preparation of a regional resource management plan
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Work

AHCWRK511	Develop workplace policy and procedures for sustainability
AHCWRK601	Monitor projects in a program

Prerequisite requirements

Unit of competency	Prerequisite requirement
PUAFIR601 Develop and administer organisational policies, procedures and practices	PUAFIR504 Assist with formulation and implementation of plans and policies

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC60415 Advanced Diploma of Conservation and Land Management Release 4	AHC60415 Advanced Diploma of Conservation and Land Management Release 3	Updated elective unit codes	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC60520 Advanced Diploma of Arboriculture

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0.

Qualification Description

This qualification describes the skills and knowledge for specialist consulting arborists, senior consulting arborists, and senior tree managers.

It applies to individuals who apply advanced and paraprofessional knowledge and skills to manage trees in the context of society and infrastructure, including:

- integration of design, planning and tree diagnostics
- urban forest performance and operational management
- development of strategies and policy for arboriculture within a legislative and regulatory framework.

Legislation, regulations and by-laws relating to the establishment, treatment and removal of trees apply in all States and Territories.

Entry Requirements

Prior to commencing the qualification, an individual must have:

- a diploma of arboriculture
- or
- a diploma or higher qualification in a field related to arboriculture plus 2 years current work experience as a consulting arborist or a municipal tree manager.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 10 units of competency:
 - 4 core units plus
 - 6 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- up to 4 units selected from electives listed below
- up to 2 units may be selected from electives listed below or this or any other endorsed Training Package or accredited course

No more than 3 of the 6 electives selected can be coded with an AQF indicator below level 6 or reflect outcomes below AQF level 6.

Note: Units listed in the *Prerequisite requirement* column that have their own prerequisite requirements are shown with an asterisk (*)

Core Units

AHCARB608	Interpret diagnostic test results
AHCARB609	Measure and improve the performance of urban forests
AHCARB610	Provide consultation in a legal framework
AHCARB611	Develop an operational tree management plan

Elective Units

AHCARB512	Generate tree plans using computer-aided design software
AHCARB612	Review and develop strategic tree policy
AHCNRM507	Manipulate and analyse data within geographic information systems
AHCPCM601	Develop and implement a plant health management strategy
AHCWRK603	Design and conduct a field-based research trial
BSBCOM602	Develop and create compliance requirements
BSBMGT616	Develop and implement strategic plans
BSBMGT617	Develop and implement a business plan
CPPSIS5064	Coordinate GIS data manipulation and analysis
FWPCOT6204	Use carbon accounting to estimate emissions
FWPFGM6203	Manage sustainable tree inventory
LGACOMP008 A	Apply conflict resolution strategies

LGAGCM710 A	Manage contracts and contractors
LGAPLEM512 A	Provide geographic information systems data
LGAPLEM612 B	Protect heritage and cultural assets
PSPPCY010	Manage policy implementation

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC60520 Advanced Diploma of Arboriculture	AHC60516 Advanced Diploma of Arboriculture	Entry requirements changed Packaging rules, core and electives units changed	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC80120 Graduate Diploma of Arboriculture

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0.

Qualification Description

This qualification describes the skills and knowledge for specialist consulting arborist, senior consulting arborist, senior tree manager, senior technical arborist and research arborist.

Graduates with this qualification apply a highly technical body of knowledge and skills to undertake professional skilled work, including the use of technical investigative equipment and techniques to design, implement and evaluate scientific experiments for sectors for the arboriculture industry. Graduates may specialise in arboriculture disciplines of urban forestry, biological organisms and tree health, tree biomechanics, and interactions of trees in their environment.

Legislation, regulations and by-laws relating to the establishment, treatment and removal of trees apply in all States and Territories.

Entry Requirements

Prior to commencing the qualification, an individual must have:

- an advanced diploma of arboriculture
- or
- an advanced diploma or higher qualification in a field related to arboriculture plus 3 years current work experience as a consulting arborist or a municipal tree manager.

Packaging Rules

To achieve this qualification, competency must be demonstrated in:

- 5 units of competency:
 - 0 core units plus
 - 5 elective units.

Elective units must ensure the integrity of the qualification's Australian Qualification Framework (AQF) alignment and contribute to a valid, industry-supported vocational outcome. The electives are to be chosen as follows:

- Select 2 units from Group A
- An additional 3 units may be selected from Group A or B or C
- Elective Group C can only be selected if required as a prerequisite

No more than 2 of the 5 electives selected can be coded with an AQF indicator below level 8 or reflect outcomes below AQF level 8.

Elective Units

An asterisk (*) next to the unit code indicates that there are prerequisite requirements which must be met when packaging the qualification. Please refer to the Prerequisite requirements table for details.

Group A

AHCARB804	Analyse tree structure and biomechanics
AHCARB805	Perform mycology assays
AHCARB806	Research urban forest performance
AHCARB807	Conduct an entomology research project
AHCARB808	Contextualise diagnostic tests
AHCARB809*	Develop an urban forest management framework
AHCARB810*	Analyse edaphic interactions of trees and structures

Group B

AHCARB612	Review and develop strategic tree policy
AMPMGT806	Commercialise research and technology product or idea
BSBRES801	Initiate and lead applied research
MSL975045*	Perform laboratory-based ecological techniques

Group C Prerequisite Unit

MSL974021	Perform biological procedures
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Prerequisite requirements

Unit of competency	Prerequisite requirement
AHCARB809 Develop an urban forest management framework	AHCARB806 Research urban forest performance
AHCARB810 Analyse edaphic interactions of trees and structures	AHCARB804 Analyse tree structure and biomechanics
MSL975045 Perform laboratory-based ecological techniques	MSL974021 Perform biological procedures

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC80120 Graduate Diploma of Arboriculture	AHC80116 Graduate Diploma of Arboriculture	Changes to packaging rules, core and elective units	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB302 Keep production records for a primary production business

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to keep production business records, such as paddock and livestock activity, in accordance with workplace requirements for decision-making and auditing.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection and use of available resources.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm systems for collection and storage of	1.1 Determine physical records and inventories required for the organisation in consultation with management

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
production records	<p>1.2 Identify short-term methods for collecting information that are reliable, timely and efficient</p> <p>1.3 Identify longer-term methods for sorting and storing information that allow effective access and analysis</p> <p>1.4 Identify the most appropriate information collection and storage methods according to business requirements</p> <p>1.5 Identify the most appropriate business equipment and technology for record keeping</p>
2. Collect and maintain production records	<p>2.1 Collect records according to business procedures</p> <p>2.2 Collate and sort records for analysis, retrieval and reporting purposes</p> <p>2.3 Save records in a range of formats according to business procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Communicate effectively with others to collect information
Get the work done	<ul style="list-style-type: none"> Utilise computer-based technology to set up and maintain spreadsheets and maintain databases

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB302 Keep production records for a primary	AHCAGB301 Keep production records for a primary	<p>Performance criteria clarified</p> <p>Foundation skills added</p> <p>Assessment requirements</p>	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
production business	production business	updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB302 Keep production records for a primary production business

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has collected and maintained accurate, accessible and systematic records for a primary production business for at least three of the following purposes, utilising data that covers a full production cycle:

- livestock breeding records
- crop and pasture usage
- farm vehicle and machinery use and maintenance
- property maintenance
- stored produce
- relevant local climatic activity
- procurement
- staff leave.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the organisation's policies and procedures applying to production records
- relevant legislation and codes, relating to the operation of a business and to the tasks undertaken
- relevant sections of Industrial Relations legislation and regulations
- recording processes to meet quality assurance requirements
- the organisation's software and technology used to record and analyse production information.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology and software used to record information relevant to a primary production business
 - production records that cover a full production cycle.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB404 Plan and implement infrastructure improvements

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to plan and implement improvements to property infrastructure, which may include buildings, yards, fences, water supply systems, roads and tracks, and storage systems.

This unit applies to individuals who take responsibility for their own work. They undertake a range of routine and non-routine activities and work in known and changing contexts.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine the improvement to be carried out	1.1 Discuss possible improvements for the planning period with the relevant stakeholders 1.2 Prioritise improvements and plan schedules in line with property management and strategic plans

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Make allocations from the available budget for the planned improvements
2. Arrange the design of the improvement	2.1 Investigate designs for planned improvement, taking site features into account 2.2 Formulate improvement plan, specifying location and dimensions
3. Plan materials for property improvement	3.1 Calculate materials required for the construction of the improvement from the drawn plans, and discuss with relevant stakeholders 3.2 Obtain quotes from suppliers for the materials, and prepare proposed budget 3.3 Seek approval from management to go ahead with property improvement, based on plans and return on investment 3.4 Select suitable suppliers based on value for money and quality of service 3.5 Place orders with the chosen suppliers for the quantities, sizes and types of materials required
4. Prepare site for installation	4.1 Inspect site, and note key features for the planned property improvement 4.2 Inform all relevant stakeholders of the proposed activities 4.3 Measure and peg selected site according to the prepared plans 4.4 Prepare the site to be ready for the improvement, and take precautions to ensure that adverse environmental impacts are eliminated or minimised 4.5 Identify work health and safety hazards and take responsible action to minimise risks throughout the work
5. Supervise implementation of property improvement	5.1 Obtain all materials required for each work period and ensure they are on site ready for implementation 5.2 Implement property improvement according to the plans and prepared schedules 5.3 Monitor work to minimise adverse environmental impacts and work health and safety risks 5.4 Maintain communication with those working at the site 5.5 Check the work regularly to ensure it complies with the work plans

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.6 Dispose of any waste material responsibly 5.7 Take corrective action where required

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> • Uses scales and measurements relevant to property improvement to prepare drawings and sketches • Calculates costs of required materials and labour • Schedules and adjusts timelines for work, as required
Get the work done	<ul style="list-style-type: none"> • Problem-solves issues as they arise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB404 Plan and implement infrastructure improvements	AHCAGB401 Plan and implement property improvement	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB404 Plan and implement infrastructure improvements

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned, and safely and effectively implemented, at least one property improvement that includes one of the following physical assets:

- buildings
- dairy sheds
- shearing sheds
- shelters
- stock yards
- stock handling structures
- fences
- water supply systems
- roads and tracks
- soil conservation works
- irrigation and drainage channels
- grain and/or produce storage

In doing the above, there must also be evidence of:

- developing and monitoring an improvement plan and schedules
- determining, costing and ordering material requirements
- communicating effectively with stakeholders on infrastructure improvements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- preparing sites for property improvements

- function and requirements of the physical assets on the property
- sustainable land and water use principles and practices applicable in the region
- environmental controls and codes of practice applicable to the business and to the improvement works
- whole of property plan and property planning cycles
- legislation, regulations and codes of practice relating to soil and water degradation issues, animal health and welfare, chemical use, building construction and workplace health and safety.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - resources, equipment and materials relevant to the property improvement
- relationships:
 - communication with stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB405 Analyse and interpret production data

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to collect, analyse, interpret and present data from production activities.

This unit applies to farm supervisors who take responsibility for their own work. They undertake a range of routine and non-routine activities and work in known and changing contexts.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect and organise production data	1.1 Collect and organise production data in a format suitable for analysis and interpretation 1.2 Determine accuracy and relevance of information held by the production unit

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Ensure collection tools and methods of collecting data are reliable and make efficient use of resources 1.4 Use business equipment to access, organise and monitor data 1.5 Update, maintain and store information
2. Analyse and interpret data	2.1 Confirm that objectives to analyse and interpret data are clearly defined and consistent with enterprise requirements 2.2 Use data analysis tools and methods that are reliable and suitable for purpose 2.3 Check assumptions used in analyses are clear, justified and consistent with enterprise objectives 2.4 Check conclusions are supported by evidence and contribute to the achievement of business objectives
3. Present data	3.1 Prepare and report data in an appropriate format, style and structure using appropriate software 3.2 Check structure and format of reports are clear and conform to enterprise requirements 3.3 Present findings of analysis, with conclusions, to work team 3.4 Obtain feedback and comments on suitability and sufficiency of findings

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication skills	<ul style="list-style-type: none"> Communicate production data analysis and conclusions to a group
Get the work done	<ul style="list-style-type: none"> Account for anomalies in data

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCABG405 Analyse and interpret production data	AHCAGB402 Analyse and interpret production data	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB405 Analyse and interpret production data

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively collected, analysed, interpreted and presented production data with conclusions for one of the following:

- animal production
- livestock products
- crop production
- horticulture production.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- current legislation, industry and enterprise codes of practice and quality assurance procedures that impact on production, such as biosecurity, vegetation and cultural heritage
- enterprise record keeping and data storage practices
- enterprise policies and procedures relating to collection, analysis and maintenance of production data
- methods to collect and analyse data, relevant to the enterprise
- data management systems and methods
- principles of effective report writing
- presentation skills and aids used to report data analysis and conclusions.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer-based technology and software used to record data in a primary production business
- relationships:
 - interaction with work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB406 Keep financial records for primary production business

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to keep primary production financial records such as invoices and other related documents, in accordance with workplace requirements, for taxation and auditing purposes.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They must use discretion and judgement in the selection and use of available resources.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Undertake farm office procedures	1.1 Identify the functions to be performed in the rural office 1.2 Design or redesign a rural office including identifying and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>assessing appropriate office furniture and equipment</p> <p>1.3 Process and sort incoming information</p> <p>1.4 Maintain, update and store records in accordance with organisational requirements</p> <p>1.5 Use and maintain business equipment and technology in accordance with organisational and work health and safety requirements</p>
2. Establish and maintain financial records	<p>2.1 Create a manual or computerised record of cash flow and a chart of accounts to record financial the transactions of the business for the enterprise location</p> <p>2.2 Check documentation relating to financial transactions for validity</p> <p>2.3 Record details of income and expenditure transactions in the cashbook</p> <p>2.4 Reconcile financial record balances with bank and creditor statements</p> <p>2.5 Use financial balances to complete legislative reporting requirements</p> <p>2.6 Prepare cash flow statements on the basis of summarised cashbook entries</p>
3. Reconcile transactions	<p>3.1 Reconcile transactions with account statement</p> <p>3.2 Identify, report and rectify adjustments and errors</p> <p>3.3 Process invoices and make electronic payments</p>
4. Prepare invoices for debtors	<p>4.1 Prepare invoices accurately and, if required, distribute to nominated person for verification before despatch</p> <p>4.2 Make adjustments as required following advice from the nominated person</p>
5. Maintain financial records	<p>5.1 Copy and file invoices and other related documents required for taxation and auditing purposes</p> <p>5.2 Implement processes to archive historical documents</p> <p>5.3 Implement processes to destroy redundant documents appropriately</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Get the work done	<ul style="list-style-type: none"> Problem solve issues as they arise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB406 Keep financial records for primary production business	AHCAGB403 Keep financial records for primary production business	Element removed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB406 Keep financial records for primary production business

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has kept accurate financial records for at least one primary production business, over a period of at least three months, including:

- collected relevant documentation for purchases
- entered data to track financial records
- reconciled electronic transactions
- prepared at least one cash flow statement
- prepared and reconciled invoices
- copied and stored invoices and other related documents for taxation and auditing purposes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the organisation's policies and procedures applying to financial documentation and records
- current legislation and codes of practice, relating to keeping financial records for a primary production business
- procedures for handling financial transactions including online banking activities
- manual and computerised financial recording systems
- methods of calculating and presenting financial data
- financial accounting software package, relevant to the business
- the organisation's software and technology used to record and transmit financial information.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer-based technology and software used to keep financial records for a primary production business.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB501 Develop climate risk management strategies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop climate risk management strategies.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Survey climate and	1.1 Obtain and interpret historical climate data from a range of

Element	Performance criteria
enterprise data	sources 1.2 Identify weather and climate risk factors 1.3 Collect information on normal and significant climate events and their impact on natural and rural systems 1.4 Detail current and historical property and enterprise production 1.5 Review short and long term enterprise goals to ensure they fit within climatic constraints 1.6 Source, present and update climate and enterprise data according to enterprise requirements
2. Climate risks and opportunities are identified and analysed	2.1 Analyse forecasted changes of seasonal climate 2.2 Identify climate risks and opportunities 2.3 Determine impact on production of different weather and climate risk factors according to enterprise requirements 2.4 Identify and develop qualitative and quantitative risk and opportunity factors 2.5 Evaluate importance of climate variability and significant climate events 2.6 Outline tactics to address a range of different climate variability risks and opportunities 2.7 Identify contingency options for enterprises and the business
3. Prepare climate risk management strategies	3.1 Analyse climate variability and seasonal climate forecasts 3.2 Address insurance and other options in business strategies 3.3 Address major climate risk factors in business strategies 3.4 Prepare financial outcomes for all strategies according to enterprise guidelines 3.5 Predict impacts on the environment, property value and equity for the preferred strategies 3.6 Review preferred production, enterprise or alternative strategies and select options according to enterprise requirements 3.7 Present a planned strategy to cope with variable climate and climate risk management

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCAGB501A Develop climate risk management strategies.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB501 Develop climate risk management strategies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research, analyse and interpret climate and enterprise data
- prepare risk management strategies
- integrate climate risk with opportunities and management strategies at a business management level
- implement enterprise sustainability policies.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- current forecasting techniques and phenomena, such as El Nino, ENSO, Southern Oscillation Index (SOI) and Pacific and Indian Ocean SST patterns
- impact of weather and climate on business activities
- causes of general patterns of weather and climate over Australia
- climate variability and climate change
- direct and indirect impacts of climate variability on land management and sustainability
- property and enterprise management decisions affected by the variable climate
- recognition of climate risks and opportunities
- seasonal climate forecasting systems and related indicators
- natural disaster planning
- climate and weather issues pertaining to sustainable agriculture
- potential impacts of greenhouse warming on land and natural resource management
- strategic options and planning in response to climate variability for a range of seasons (normal, drier or wetter than normal), and other risks and opportunities

- calculating financial returns for different strategic options
- computer applications and Internet to access, record and analyse data
- principles of decision-making based on the variable climate and seasonal climate forecasts.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB504 Plan production for the whole business

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan production for the whole business.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Review and confirm the organisations	1.1 Compare the organisation's business goals and vision against

Element	Performance criteria
business goals and vision	actual business activities 1.2 Compare the values and community expectations of the organisation against actual business activities 1.3 Review the organisation's operating environment to identify potential opportunities and threats 1.4 Analyse the strengths and weaknesses of the organisation to identify potential areas for development 1.5 Access and discuss information on available innovations for use in the organisation with colleagues 1.6 Document the organisation's goals and vision
2. Prepare human resource development plans	2.1 Identify personal values, attributes and skills of the management team 2.2 Identify specific areas of expertise in the business 2.3 Assign specific areas of responsibility based on identified skills and attributes 2.4 Discuss and establish succession planning with management team 2.5 Identify skill development and training requirements 2.6 Obtain commitment to ongoing skill development from the management team 2.7 Establish communication strategies and develop a collaborative environment
3. Prepare a plan to manage land use	3.1 Survey land to identify natural resources, soil characteristics, water resources, and cultural heritage values of the property 3.2 Determine land use capacities from land condition tests and history of yields 3.3 Determine land use for individual paddocks based on land use capacities, products being produced, and the organisations goals and vision 3.4 Develop a plan to improve the management and use of land on the property, based on property resources and the organisation's goals and vision, and incorporate into the production plan 3.5 Develop organisational policy in relation to the environmental management of the land based on land use, prevalent pests and diseases, and the organisation's goals and vision
4. Plan production processes	4.1 Obtain production information for product under consideration 4.2 Confirm characteristics of the land under production and the quality of existing infrastructure 4.3 Obtain recent and historical data from organisational records for input to production planning 4.4 Collect and use information about organisational planning processes and potential for improvements or innovations to

Element	Performance criteria
	inform production planning 4.5 Identify production processes required to achieve the targeted production and compare with those that currently exist 4.6 Use production planning information as input to other organisational planning processes
5. Develop financial goals and risk management strategies	5.1 Identify the key financial performance indicators of each enterprise in the business from analysis of cash flow, profitability and net worth 5.2 Assess the financial performance of each enterprise in the business from analysis of key financial performance indicators and their impacts on business performance 5.3 Identify financial goals for each enterprise in the business from financial performance assessment and the organisation's goals and vision 5.4 Identify areas of risk in the organisation from analysis of the operating environment, production strategies, work health and safety records and staff skills 5.5 Identify and implement risk management strategies
6. Prepare and communicate the organisations vision, goals and plan	6.1 Integrate the organisation's goals and vision, human resource development, land-use, production and financial plans to reflect the decisions taken in each area 6.2 Articulate the organisation's goals, vision and plans to relevant staff 6.3 Establish a program to regularly review the organisations vision, goals and plans

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCAGB504A Plan production for the whole land/farm based business.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB504 Plan production for the whole business

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- review strategic plans and production goals
- prepare enterprise budgets and calculate financial returns of the business
- develop financial management and marketing plans for the business
- review the natural resource base of the enterprise and incorporating principles of sustainability
- incorporate into production planning the personal aims and priorities of management and, the availability, productivity and training needs of labour
- assess the skills and expertise of self and colleagues
- facilitate group decision making within the business
- plan production processes
- assess environmental impacts and implement impact reduction techniques
- implement enterprise sustainability policies.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- holistic business planning and benchmarking
- marketplace in which the organisation operates
- land use planning including sustainable land use principles and practices
- soil nutrient cycling potential and limitations
- chemical and biological methods for pest control
- property planning, financial management and enterprise budgeting systems and procedures

- relevant State or Territory legislation, regulations and codes of practice which impact on rural production businesses
- monitoring strategies for financial, production, land use, and human resource development plans
- methods for assessing skills and expertise
- reasons for and methods of succession planning
- value and methods of risk assessment.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB512 Plan and manage infrastructure

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to plan and manage property infrastructure in agricultural or horticultural production enterprises, including maintaining existing infrastructure, purchasing or constructing new infrastructure or selling or de-commissioning plant and equipment.

This unit applies to farm or enterprise managers who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine infrastructure requirements	1.1 Access information regarding the characteristics of products and their respective market requirements 1.2 Confirm characteristics of land under production and production

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>processes used, from colleagues and other planning processes</p> <p>1.3 Identify and access organisation data for input to infrastructure planning processes</p> <p>1.4 Collect and use information from other organisational planning processes to inform infrastructure planning process</p> <p>1.5 Identify and compare infrastructure required to efficiently achieve targeted production requirements, with those existing and available in the organisation</p> <p>1.6 Identify workplace health and safety hazards, assess risks and incorporate suitable controls into planning process</p> <p>1.7 Plan and budget for replacements, improvements, purchases and sales of plant and vehicles</p> <p>1.8 Ensure details about infrastructure requirements and improvements are built into other organisational planning processes</p>
2. Obtain, prepare or build infrastructure	<p>2.1 Identify solutions to bridge gaps between required and existing infrastructure</p> <p>2.2 Use a cost benefit analysis to determine preferred solution to infrastructure gaps identified</p> <p>2.3 Negotiate to obtain infrastructure or componentry at best rate for organisation</p> <p>2.4 Organise and undertake preparation work required for existing infrastructure</p> <p>2.5 Plan and commission required works</p> <p>2.6 Ensure all alterations to infrastructure or new developments give due consideration to environmental and waste management requirements</p>
3. Manage infrastructure	<p>3.1 Determine infrastructure maintenance programs including timelines and responsibilities</p> <p>3.2 Replace, purchase, sell or decommission infrastructure items according to organisational plans</p> <p>3.3 Ensure any reallocations of land are undertaken with the planning and consultation required by the organisation, and within all relevant guidelines and regulations</p> <p>3.4 Manage situations that require unplanned maintenance within organisation guidelines and policy</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.5 Make checks to ensure that program specifications are adhered to and amendments are made where necessary</p> <p>3.6 Make checks to ensure all workplace health and safety requirements are adhered to including appropriate use of personal protective equipment</p> <p>3.7 Make checks to ensure potential detrimental environmental impacts are minimised or eliminated</p>
4. Record and manage information	<p>4.1 Analyse data, observations and documentation recorded during production cycle, against infrastructure plan</p> <p>4.2 Prepare recommendations for future plans based on analysis of data</p> <p>4.3 Prepare a report that documents the plan's implementation</p> <p>4.4 Create and maintain records and documentation as described in business plan</p> <p>4.5 Complete records and documentation clearly and accurately throughout production</p> <p>4.6 Ensure relevant records are available, accessible, meaningful and useful</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret, analyse and extract information from a range of sources
Interact with others	<ul style="list-style-type: none"> Build and develop networks to support maintenance programs and buying and selling of infrastructure

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB512 Plan and manage infrastructure	AHCAGB502 Plan and manage infrastructure requirements	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB512 Plan and manage infrastructure

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has planned and managed infrastructure requirements for at least one agricultural or horticultural production enterprise, including:

- identified infrastructure requirements for the enterprise
- planned and sourced requirements for at least one infrastructure improvement
- developed an infrastructure maintenance program including scheduling and responsibilities
- recognised potential opportunities to use or install more environmentally efficient systems or equipment
- established a recording system for infrastructure improvement, purchase, construction and maintenance.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- systems for managing maintenance schedules and continuous improvement of infrastructure
- property planning, financial management and enterprise budgeting systems and procedures
- environmental controls and codes of practice relevant to the organisation
- management practices and processes to minimise noise odours and debris from production processes
- current legislation and regulations relating to infrastructure management and workplace health and safety.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer-based technology and software used to record information relevant to a primary production business
- specifications:
 - access to relevant regulations and guidelines for infrastructure management and workplace health and safety.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB513 Develop a farm plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop a farm plan. It includes auditing and managing the natural resources (water, soil, biodiversity including vegetation and wildlife), integrating the management of natural resources with business objectives and production plans.

This unit applies to farm managers whose role is to manage a property's natural resources alongside business objectives and production plans. They usually work autonomously and exercise judgement to complete a range of advanced skilled activities.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine directions for business	1.1 Establish long-term directions and goals for business through identification and analysis of values, expectations and goals of stakeholders

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Identify business and personal strengths, weaknesses, opportunities and threats</p> <p>1.3 Develop and document strategies to address strengths, weaknesses, opportunities and threats consistent with business vision</p>
2. Audit natural resources and infrastructure of property	<p>2.1 Survey land and record physical characteristics, natural resources, soil characteristics and any culturally significant sites</p> <p>2.2 Produce a soil map of property and record land classes using classification terminology</p> <p>2.3 Identify water resources and condition</p> <p>2.4 Determine land capability and identify land management options for each land class</p> <p>2.5 Show natural property features and infrastructure on property map, noting its condition</p> <p>2.6 Identify areas at risk of soil degradation</p> <p>2.7 Classify native vegetation and assess condition</p> <p>2.8 Identify any rare, threatened or endangered species or vegetation communities, as appropriate</p>
3. Address legal requirements that impact on management of property	<p>3.1 Identify legislation, regulations and codes of practice relevant to activity on property</p> <p>3.2 Ensure legal requirements are addressed in business management plans</p>
4. Develop management strategies to address natural resource management issues	<p>4.1 Develop, cost and prioritise property improvement plans, or action plans, to assist natural resource management</p> <p>4.2 Develop plans to repair degraded land and stimulate biodiversity</p> <p>4.3 Plan water supply and water management, vegetation and revegetation management, and wildlife management strategies to ensure natural resources are maintained</p> <p>4.4 Develop strategies for weed and pest animal control</p> <p>4.5 Develop plans to address fire risk and fire management</p> <p>4.6 Ensure business and production plans for the farm incorporate sustainable management of natural resources</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Review farm plan	5.1 Review and revise business and production plans to meet changing circumstances 5.2 Use digital finance and farm management tools to produce and update farm plans

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Carry out research to gather information about farm management, relevant to business
Writing	<ul style="list-style-type: none"> Document business plans
Numeracy	<ul style="list-style-type: none"> Estimate, calculate and record workplace measures
Get the work done	<ul style="list-style-type: none"> Recognise trends Use digital technology to document and update farm plans

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB513 Develop a whole farm plan	AHCAGB505 Develop a farm plan	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB513 Develop a farm plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed a farm plan for one property, including:

- audited, recorded and mapped the natural resources, infrastructure and at-risk areas of the property
- monitored legal requirements that impact on the management of the property
- developed management strategies to maintain natural resources
- integrated business objectives and production plans, with sustainable land management practices, in a whole farm plan
- reviewed and evaluated farm plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- processes used to analyse strengths, weaknesses, opportunities and threats
- sustainable land management practices to maintain natural resources and stimulate biodiversity
- property planning processes and approaches
- farm management planning tools
- land usage/capability for local area
- water, vegetation, soil, fire and wildlife management strategies
- legal requirements that impact on agricultural businesses
- risk associated with agricultural businesses and use of natural resources.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - designated land/farm site
 - digital finance and farm management tools
- specifications:
 - access to land management information, legislation, regulations and codes of practice relevant to business.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB514 Manage application of agents to crops or pastures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency specifies the skills and knowledge required to provide information or manage the application of chemical, biological or organic agents to crops or pastures, utilising application technology.

This unit of competency applies to work in a range of agricultural or support enterprises, such as agronomists and rural merchants. Work is usually undertaken without supervision. Responsibility for, and organisation of, the work of others involved in the program may be required.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Analyse application requirements	1.1 Determine goals for application of agents following a review of enterprise production plans and in consultation with land manager 1.2 Access and review records of previous nutrition, pest, weed and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	disease management including the application of any agents 1.3 Access and review relevant climate, environmental and geographic data from available information systems and sources 1.4 Access and review yield monitoring data including yield variability 1.5 Access and review relevant soil, plant and water information from tests and records
2. Develop an application plan	2.1 Identify performance targets and indicators in the production plan 2.2 Select appropriate agent/s, including adjuvants, method of application and equipment based on site analysis, recommendations, production requirements, environmental conditions and manufacturer specifications 2.3 Select spray nozzles to achieve the optimum droplet size with minimal variation and deliver the appropriate liquid flow rate for the selected agent in the desired spray distribution pattern 2.4 Determine and monitor measures to control factors influencing the level of spray drift 2.5 Determine procedures to ensure compliance with the range of appropriate commonwealth, state and local government legislation and regulations 2.6 Identify work health and safety hazards, assess risks and implement appropriate controls 2.7 Determine environmental impacts of application and implement appropriate clean up strategies to the area 2.8 Schedule applications taking the range of seasonal, geographic and resourcing factors into consideration 2.9 Record details of applications, as required by legislation, regulations and codes of practice
3. Monitor and evaluate the effectiveness of the application plan	3.1 Evaluate the effectiveness of the application at key points and make adjustments to ensure appropriate coverage 3.2 Monitor and assess environmental impacts and work health and safety hazards relating to application strategies throughout the implementation process 3.3 Make modifications to the plan as and when necessary to address environmental, work health and safety, resourcing or effectiveness

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>issues</p> <p>3.4 Analyse data, observations and documentation from the implementation of the application plan against the plan to assess effectiveness</p> <p>3.5 Prepare recommendations for future strategies based on the analysis of the data</p> <p>3.6 Record details of the implementation including information on any difficulties or issues faced, technical details, environmental and work health and safety issues, recommendations for future action, results, costs and any available data analysis</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Apply digital literacy to program application technology
Reading	<ul style="list-style-type: none"> Accurately interpret manufacturer instructions and agent labels
Numeracy	<ul style="list-style-type: none"> Calculate and measure chemicals and agents accurately, following instructions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB514 Manage application of agents to crops or pastures	AHCAGB506 Manage application technology	<p>Updated title</p> <p>Performance criteria clarified</p> <p>Foundation skills added</p> <p>Assessment requirements</p>	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
		updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB514 Manage application of agents to crops or pastures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed the application of a chemical, biological or organic agent to at least one designated crop or pasture, including:

- determined the need for the agent
- developed an application plan that includes addressing environmental and work health and safety issues
- programmed application technology
- monitored the effectiveness of the application.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- technology to manage application of agents to crops and pastures
- Geographic Information Systems (GIS) and Global Positioning Systems (GPS) and how data from these systems is used in farm management
- types of data used to define field parameters, including aspect and slope
- characteristics of pest, weed and disease species including their life cycles and reproduction capability
- principles of integrated pest and weed management
- range and classes of fertilisers, herbicides, insecticides and fungicides available and their basic chemistry
- growth stages of weeds and plant morphology
- the effects on crops of weeds, pests, diseases and/or lack of soil fertility
- mode of action of chemical or biological control agents and long term effects of these agents with respect to plant back periods and resistance
- range and effect of different nozzles, pressures, spray patterns, droplet sizes and basic physics of droplets and fluids
- work health and safety hazards and controls

- environmental impact of agents used
- best management practices and processes to minimise the impact of agents
- commonwealth, state and local government legislation and regulations.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - designated crop or pasture
 - chemical, biological or organic agents
 - spray equipment
- specifications:
 - manufacturer instructions for agents and spray equipment
 - legislation, regulations and codes of practice applicable to chemicals and land-based businesses.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB515 Develop sustainable agricultural practices that utilise renewable energy and recycling systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge to develop planning strategies to address sustainability issues, using renewable energy and opportunities to recycle products, and reduce the impact of waste from the production system.

This unit applies to those who manage land-based businesses and are required to consult with external experts such as alternative energy consultants and suppliers of alternative energy equipment, planning authorities, and government departments who administer subsidies and provide advice.

The work involves applying sustainable renewable energy systems to rural, regional and local conditions. All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify opportunities	1.1 Identify areas of enterprise where renewable energy, recycling

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
to use renewable energy	<p>products or improving work practices could be utilised to reduce greenhouse gas emissions</p> <p>1.2 Identify available government subsidies for the implementation of strategies using renewable energy or recycling and potential cost savings to the business in the longer term</p> <p>1.3 Identify the specified standards of quality, licensing, regulatory requirements, government legislation and safety issues for the introduction of any renewable energy resources and recycled products</p> <p>1.4 Identify potential income generated by on selling energy excesses or recycled products</p> <p>1.5 Measure improvement outcomes from the introduction of renewable energy sources and recycling products in relation to achieving greater sustainability</p> <p>1.6 Conduct risk assessment for work health and safety hazards associated with renewable energy and recycling initiatives</p>
2. Develop strategies to use renewable energy	<p>2.1 Develop strategies to reduce greenhouse gas emissions and use renewable energy resources, recycled products and improved work practices</p> <p>2.2 Estimate plant, material, labour and other associated costs in consultation with appropriate person or organisation</p> <p>2.3 Develop a budget for estimated plant, material, labour and other associated costs</p> <p>2.4 Develop work plan for the introduction of renewable energy resources and recycled products</p> <p>2.5 Investigate sources and availability of materials and human resources needed to complete work plan</p> <p>2.6 Develop risk management strategies including contingencies to maintain supply and deliver contract on time, and incorporate into the plan</p> <p>2.7 Develop work health and safety risk control measures and establish procedures</p>
3. Implement strategies to use renewable energy	<p>3.1 Implement and monitor the plan for renewable energy and recycling products to ensure on time supply of plant and materials</p> <p>3.2 Monitor the progress of strategies to reduce greenhouse gas emissions and recycling against schedule, quality requirements and budget</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.3 Review plan against required inputs and rectify any anomalies to meet and supply contractual arrangements on time</p> <p>3.4 Monitor work health and safety risk control measures and procedures and implement changes</p> <p>3.5 Evaluate the improvement outcomes and document appropriate corrective actions</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access, interpret and analyse complex information about renewable energy systems and recycling

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB515 Develop sustainable agricultural practices that utilise renewable energy and recycling systems	AHCAGB508 Improve agricultural sustainability using renewable energy and recycle systems	Title updated Elements updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB515 Develop sustainable agricultural practices that utilise renewable energy and recycling systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed sustainable agricultural practices that utilise renewable energy and recycling systems, including:

- identified key parts of the enterprise operation that may be converted to renewable energy sources, reducing greenhouse emissions and recycling opportunities using key principles of sustainability
- calculated the savings for at least one improvement
- implemented at least one improvement
- evaluated the improvement outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the effect of greenhouse gas emissions on the environment
- key principles of sustainability associated with using of renewable energy and recycling systems
- legislation, regulatory and licensing requirements associated with renewable energy and recycling
- subsidies available for adopting renewable energy systems
- environmental and work health and safety risk management strategies.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to an agricultural production site
- specifications:
 - access to information about sustainable work practices in agriculture, renewable energy sources and options for recycling.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB516 Select and implement a GIS for sustainable agricultural systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge to identify, select and implement a Geographic Information System (GIS) into a land based production business.

This unit applies to land based production managers who make decisions about production systems and applications, and who need to integrate GIS and Global Positioning Systems (GPS) technology and into land-based, agricultural activities.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify and assess a GIS to incorporate into the land based business	1.1 Identify appropriate GIS management hardware and software appropriate to a land based business requirement 1.2 Identify purpose and business requirements of GIS for developing

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>a sustainable land management system</p> <p>1.3 Identify and assess opportunities and limitations for operational improvements that may result from adopting GIS management systems</p> <p>1.4 Identify potential cost savings benefits as a result of using GIS and adjust enterprise production budgets</p> <p>1.5 Develop a plan to incorporate use of a GIS into land based business to improve operational efficiency, profitability and sustainability</p>
2.Implement GIS into land based business	<p>2.1 Identify appropriate training requirements for personnel to optimise efficient use of machinery and technology</p> <p>2.2 Select required machinery and technology to incorporate into production operation</p> <p>2.3 Collect GPS coordinate data; enterprise and land use management data; and yield data and enter into software program</p> <p>2.4 Create maps to model outcomes of agricultural and land management activities</p> <p>2.5 Complete work operations utilising GIS and GPS technology and minimising environmental impacts</p> <p>2.6 Identify and implement corrective action as a result of precise measurement data provided by satellite imagery</p>
3.Review operations that utilise GIS	<p>3.1 Review production data to identify increases in productivity as a result of using GIS management systems</p> <p>3.2 Review enterprise operations to identify opportunities for improvements in sustainable production using GIS</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Get the work done	<ul style="list-style-type: none"> Access, input and manipulate data using GIS

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB516 Select and implement a GIS for sustainable agricultural systems	AHCAGB509 Select and implement a Geographical Information system (GIS) for sustainable agricultural systems	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB516 Select and implement a GIS for sustainable agricultural systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has selected and implemented a Geographic Information Systems (GIS) management system to aid at least one farm management activity, including:

- stored and modelled data for specific site
- analysed maps and models to determine appropriate farm management activity
- implemented one GIS based activity to manage either:
 - yield
 - soil health
 - erosion
 - pests
 - weeds
 - or other crop related factors.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- applications of GIS based technology to assist with managing soil, salinity, erosion, weeds farming systems and biodiversity
- uses of Global Positioning Systems (GPS) equipment and technology associated with GIS
- sources of digital mapping data for local area
- financial management and strategic planning benefits from the implementation of a GIS
- mapping principles of GIS
- spatial calculations using GIS
- relevant machinery and equipment for use in agricultural systems.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - GIS and GPS technology
 - designated site for land-based production.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB517 Develop and manage a plan for sustainable production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop a farm plan for a rural enterprise to reflect sustainable production principles that may include regenerative, organic, biodynamic or biological farming principles.

This unit applies to those who have a role in managing a farm and the management system to reflect a new philosophy, utilising sustainable principles.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop goals and objectives to improve biodiversity, recycling and sustainability	1.1 Establish long-term direction and purpose of the business by identifying and analysing the values, expectations and personal goals of the people involved 1.2 Identify business and personal strengths, weaknesses, opportunities and threats and strategies to address them

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Investigate sources of information and support for improved practices 1.4 Estimate timelines for, and costs for improved practices
2. Audit the existing and natural resources on the property	2.1 Draw a property map to include land classes using classification terminology, fences and water systems, natural property features and infrastructure 2.2 Conduct a risk assessment of previous land use and an inventory of chemicals applied or evidence of application on the site 2.3 Identify areas at risk of soil degradation and develop strategies to protect the area 2.4 Develop and implement strategies to improve the health and the regeneration of remnant vegetation to support a diversity of living systems 2.5 Assess potential problem pests and weeds and use strategies to implement an eradication program
3. Develop and implement grazing and cropping strategies to improve sustainable outcomes	3.1 Use soil test results to make recommendations for soil improvement with appropriate organic fertilisers and soil conditioners to ensure a mineral-balanced and healthy soil 3.2 Develop and implement an annual grazing program and strategies to optimise pasture growth and animal production 3.3 Develop and implement a strategy for the recycling of farm waste and effluent 3.4 Assess soil biological activity and apply suitable preparations and grazing strategies to improve the soil biota and soil organic matter 3.5 Identify suitability of mulching and composting systems 3.6 Design and implement a plan using crop rotations to optimise soil fertility 3.7 Research the principles and application of biodynamic preparations
4. Manage livestock health and welfare for improved, sustainable production	4.1 Plan strategies to preserve livestock health including allowable treatments and grazing management in the short term and genetic improvement in the long term 4.2 Maintain livestock records to identify treated animals, including a record of all treatments including homeopathic remedies 4.3 Sustain the animal enterprise with pasture and suitable fodder and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	maintain consumption records to meet certification protocols
5. Manage customer feedback and satisfaction	5.1 Develop procedures to obtain, analyse and respond to customer feedback on farm product quality and integrity 5.2 Implement procedures manage customer feedback and satisfaction with sustainable product quality and integrity

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Investigate sustainable principles for production
Reading	<ul style="list-style-type: none"> Access and interpret information about sustainable farming practices
Numeracy	<ul style="list-style-type: none"> Carry out calculations to determine carbon footprint of production

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB517 Develop and manage a plan for sustainable production	AHCAGB511 Develop and manage a plan for sustainable production reflecting sustainable production principles	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB517 Develop and manage a plan for sustainable production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed and managed a plan to improve practices for one land based business to utilise sustainable farming principles, including:

- researched information on production changes and methods to manage herd, crop or pasture
- analysed benefits to the family and farm from adopting the philosophy
- assessed risks involved with conversion
- developed a comprehensive plan to transition production processes and improve sustainability.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- sustainable land management practices including regenerative farming principles
- credible sources of information relating to sustainable farming principles and practices
- property planning process
- water, vegetation, livestock, pasture, soil, fire and wildlife management strategies for sustainable farming
- risk management strategies for land based production processes
- supply chain for the sustainable farming sector and own position in the chain
- methods to manage grazing including feed budgeting and varied grazing strategies
- animal health and options for maintaining health based on pathogen life cycles and the use of suitable preparations
- how to maintain biodiversity to complement a sustainable farming philosophy.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to information about sustainable farming principles
 - land based production site
- specifications:
 - legislation, regulations and codes of practice for sustainable farming.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB518 Develop climate risk management strategies

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop climate risk management strategies for an agricultural, horticultural or land management enterprise.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

This unit applies to individuals who take responsibility for their own work. They undertake a range of routine and non-routine activities and work in known and changing contexts.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review climate and enterprise data	1.1 Obtain and interpret historical climate data, including any natural disasters, from a range of sources 1.2 Identify weather and climate risk factors 1.3 Collect information on normal and significant climate events and their impact on natural and rural systems

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Detail current and historical property and enterprise production 1.5 Review short and long term enterprise goals to ensure they fit within climatic constraints 1.6 Source, present and update climate and enterprise data according to enterprise requirements
2. Identify and analyse climate risks and opportunities	2.1 Analyse forecasted chances of seasonal climate for the enterprise region 2.2 Identify climate risks and opportunities for the site and enterprise region 2.3 Determine impact on production of different weather and climate risk factors 2.4 Use qualitative and quantitative techniques to analyse risks and opportunities 2.5 Evaluate importance of climate variability and significant climate events 2.6 Outline tactics to address a range of different climate variability risks and opportunities 2.7 Identify contingency options for enterprises and the business
3. Prepare climate risk management strategies	3.1 Analyse climate variability and seasonal climate forecasts 3.2 Predict the impact of climate variability on the environment, property value and equity 3.3 Identify business strategies that address major climate risk factors 3.4 Identify business strategies that include consideration of insurance to cover loss in the event of significant or unusual climate activity 3.5 Prepare financial forecasts for all strategies according to enterprise guidelines 3.6 Review preferred production, enterprise or alternative strategies and select options appropriate for the enterprise 3.7 Document and present strategies to manage risks associated with variable climate to stakeholders

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Analyse trends in historical data to predict future trends Calculate financial returns for different strategic options

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB518 Develop climate risk management strategies	AHCAGB501 Develop climate risk management strategies	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB518 Develop climate risk management strategies

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed climate risk management strategies for at least one site or property, including:

- researched, analysed and interpreted climate and site data
- recognised climate risks and opportunities presented for the business
- presented strategies to stakeholders, identifying how risks associated with variable climate could be managed.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types and sources of data used to record weather patterns
- qualitative and quantitative techniques to analyse risks
- impact of weather and climate on business activities
- difference between weather and climate
- causes of general patterns of weather and climate over Australia
- climate variability and climate change impacts for local region
- property and enterprise management decisions affected by the current and predicted climatic variability
- recognition of climate risks and opportunities
- seasonal climate forecasting systems and related indicators
- contingency planning including natural disaster planning for site
- a definition of risk management, including the identification, assessment, and prioritisation of risks followed by coordinated and economical application of resources to minimise, monitor and control the probability and/or impact of events
- potential impacts of climate change on land and natural resource management
- strategic options and planning in response to climate variability for a range of seasons (normal, drier or wetter than normal)

- how to calculate financial returns for different strategic options
- computer applications to access, record, analyse and model data
- principles for decision-making, based on the variable climate and seasonal climate forecasts.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology and software used to research information relevant to climate
 - access to information and data relevant to a specific site/plot of land.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB519 Plan and monitor production processes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to plan and monitor production processes, including identifying the production processes required to achieve targets; establishing production targets for each enterprise and each product, crop, herd or flock; and monitoring and evaluating production processes.

This unit applies to individuals who work in agribusiness management roles where they take personal responsibility and exercise autonomy in undertaking complex work. They analyse information and exercise judgement to complete a range of advanced skilled activities.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine production process requirements	1.1 Access information about the products being grown or manufactured and the market 1.2 Confirm characteristics of the land under production and the

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>quality of associated infrastructure</p> <p>1.3 Analyse recent and historical data from organisational records for input to production planning</p> <p>1.4 Identify potential for improvements or innovations to inform production planning</p> <p>1.5 Identify production processes required to achieve the targeted production and compare with those that currently exist</p> <p>1.6 Check production planning information is fed into other organisational planning processes</p>
2. Plan production and monitoring systems	<p>2.1 Establish targets for the enterprise, for each product, crop, herd or flock using information from organisational management and strategic plans</p> <p>2.2 Schedule production processes taking organisational factors into consideration</p> <p>2.3 Establish waste management controls to minimise waste and dispose of waste sustainably</p> <p>2.4 Establish monitoring points and performance indicators using target, environmental management and scheduling information</p> <p>2.5 Establish appropriate biosecurity and quality assurance requirements</p> <p>2.6 Establish risk management strategies to control hazards</p> <p>2.7 Document the production plan, including targets and monitoring requirements</p>
3. Monitor and evaluate the effectiveness of production processes	<p>3.1 Check that performance indicators, targets and specifications are met and amendments to the process are made where necessary</p> <p>3.2 Evaluate the effectiveness of the production processes at key points and make adjustments as necessary</p> <p>3.3 Monitor and assess environmental impacts and workplace health and safety hazards throughout the production cycle</p> <p>3.4 Modify the production process by shifting priorities and results when necessary</p> <p>3.5 Analyse data, observations and documentation from the production process against the plan</p>
4. Record and manage	4.1 Prepare recommendations for future plans based on the analysis of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
information	production data 4.2 Prepare a report that documents the plan's implementation 4.3 Maintain records and documentation as described in the production plan 4.4 Check that required information is available, accessible, meaningful and useful

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and extract information from a range sources such as professional literature, legal documents, policies and procedures
Numeracy	<ul style="list-style-type: none"> Set yield targets and objectives and estimate timelines Estimate, calculate and record complex workplace measures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB519 Plan and monitor production processes	AHCAGB503 Plan and monitor production processes	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB519 Plan and monitor production processes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has planned and monitored at least one production cycle, including:

- identified production processes required to achieve targeted production
- established production targets for each product, crop, herd, or flock
- scheduled production processes with monitoring points and performance indicators
- documented the production plan
- evaluated production processes and made modifications where required
- created and maintained records as described in the production plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental controls and codes of practice relevant to the production process
- management practices to minimise noise, odours, waste, erosion, relevant to production process
- sustainable land use principles and practices applicable in the region
- production planning processes
- biosecurity and quality assurance requirements for product
- legislation and regulations relevant to product and production processes.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - production records relevant to process
- specifications:
 - access to relevant legislation and guidelines for production processes.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB520 Plan production for the whole business

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to plan production for a whole, land-based business, including reviewing strategic plans and production goals, developing financial and marketing plans, developing workforce skills and managing land usage.

This unit applies to agribusiness managers whose role is to review and confirm the organisation's business goals and vision, its land-use, human resource development and financial plans. They analyse information from a range of sources and exercise judgement to complete a range of advanced skilled activities.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review and confirm the organisation business	1.1 Compare the organisation business goals and vision against actual business activities

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
goals and vision	<p>1.2 Compare the values and community expectations of the organisation against actual business activities</p> <p>1.3 Review the organisation operating environment to identify potential opportunities and threats</p> <p>1.4 Analyse the strengths and weaknesses of the organisation to identify potential areas for development</p> <p>1.5 Access and discuss information about innovations suitable for the enterprise, with colleagues</p> <p>1.6 Document the organisation goals and vision to provide a basis for future planning</p>
2. Prepare workforce plans	<p>2.1 Identify the values, attributes and skills of the team</p> <p>2.2 Recognise specific areas of expertise in the business</p> <p>2.3 Determine future skill requirements of the business</p> <p>2.4 Assign specific areas of responsibility to team members, based on identified skills and expertise</p> <p>2.5 Identify staff members skill development and training requirements</p> <p>2.6 Obtain commitment to ongoing skill development from the management team</p> <p>2.7 Determine succession planning processes with team</p> <p>2.8 Establish communication strategies to foster a collaborative environment</p>
3. Prepare a plan to manage land use	<p>3.1 Survey land to identify natural resources, soil characteristics, water resources, and cultural heritage sites</p> <p>3.2 Determine land use capacity from land condition tests and history of yields</p> <p>3.3 Determine land use for individual paddocks, based on land use capacity, products being produced, and the organisation goals and vision</p> <p>3.4 Develop a plan to improve the management and use of land on the property, based on property resources, sustainable practices and the organisation goals and vision</p> <p>3.5 Develop organisational policy to determine environmental management of the land, based on land use, prevalent pests and diseases, and the organisation goals and vision</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Develop financial goals and risk management strategies	<p>4.1 Identify key financial performance indicators of each enterprise in the business from analysis of cash flow, profitability and net worth</p> <p>4.2 Assess financial performance of each enterprise in the business from analysis of key financial performance indicators and their impacts on business performance</p> <p>4.3 Identify financial goals for each enterprise in the business from financial performance assessment and the organisation goals and vision</p> <p>4.4 Identify areas of risk in the organisation from analysis of the operating environment, production strategies, workplace health and safety records and staff skills</p> <p>4.5 Identify and implement risk management strategies</p>
5. Prepare and communicate the organisation vision, goals and plan	<p>5.1 Integrate the organisation goals and vision, human resource development, land-use, production and financial plans to reflect the decisions taken in each area</p> <p>5.2 Articulate the organisation goals, vision and plans to stakeholders and staff</p> <p>5.3 Establish a schedule to regularly review the organisation vision, goals and plans</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret, analyse and extract information from a range sources such as professional literature, legal documents, policies and procedures
Numeracy	<ul style="list-style-type: none"> Assess financial strategies and prepare budgets Calculate financial returns Set yield targets and objectives and estimate timelines
Get the work done	<ul style="list-style-type: none"> Problem solve issues as they arise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB520 Plan production for the whole business	AHCAGB504 Plan production for the whole business	Performance criteria clarified Element removed Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB520 Plan production for the whole business

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has planned production for one whole land-based business, including:

- reviewed strategic plans and production goals
- prepared enterprise budgets and calculated financial returns of the business
- developed financial management and marketing plans for the business
- reviewed the natural resource base of the enterprise and incorporated sustainable land management practices
- incorporated the enterprise principles and goals into land use planning
- assessed the skills and expertise of the work team and planned training to cover identified gaps.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- marketplace in which the organisation operates
- land use planning principles, including sustainable land use principles and practices
- soil nutrient cycling potential and limitations
- chemical and biological methods used for pest control
- property planning, financial management and enterprise budgeting systems and procedures
- current legislation, regulations and codes of practice that impact on rural production businesses
- monitoring strategies for financial, production, land use, and human resource development plans
- methods for assessing staff skills and expertise
- reasons for and methods of succession planning
- value of, and methods used to assess and manage risks in agribusiness.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - past production and land usage records
 - business activity records
- specifications:
 - legislation, regulations and codes of practice relevant to land-based production.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB521 Select and use agricultural technology

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to select and apply modern agricultural technology in production systems. It covers the recording and reporting of farm activities, mapping, farm and production planning, data collection and analysis.

Applications in agricultural science range from spatial information tools to the precision application of production inputs and growth models for the improvement of production.

This unit is applicable for land managers or advisors who have a role in managing or operating a land based production business or providing expert advice.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Evaluate need for agricultural technology	1.1 Identify and evaluate organisational tasks and processes that could be supported by technological applications

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Assess opportunities and limitations for operational improvements that may result from adopting specific technological applications 1.3 Evaluate equipment, tools and resource requirements and select most appropriate options 1.4 Evaluate cost-benefit of using technology 1.5 Seek independent technical advice and sources of information as required 1.6 Develop plan to incorporate use of technology to improve operational efficiency, productivity and sustainability
2. Implement technology to manage production	2.1 Record, analyse and manage production data using technology 2.2 Develop treatment strategies or input requirements using technology 2.3 Collect, store and analyse data across land based business using technology 2.4 Research information resources, report and communicate production management using technology 2.5 Integrate use of technology to improve operational efficiency, production, profitability and sustainability
3. Evaluate use of technology	3.1 Develop and review strategies to ensure use of technology is cost effective and consistent with operational goals 3.2 Assess need for additional training and support 3.3 Develop strategies to address barriers to effective use of technology when necessary 3.4 Evaluate impact of technology use on production levels, input costs and cash flow budget 3.5 Develop strategies for monitoring, evaluating and incorporating future developments in technology

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Get the work done	<ul style="list-style-type: none"> • Problem solve issues as they arise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB521 Select and use agricultural technology	AHCAGB507 Select and use agricultural technology	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB521 Select and use agricultural technology

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has selected and used at least two technological products for agricultural production, including:

- identified a range of technologies and explained how they can be applied in an agricultural production system
- obtained and processed production data using technology
- identified and managed issues that have arisen in the use of the technology
- completed a cost and benefits analysis of using the technological product.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- trends and developments in technology relevant to agriculture
- sources of information related to agricultural technology
- basic principles of cost-benefit analysis
- context in which particular organisations operate and how this may impact on the selection and use of technology
- potential barriers to learning to use technological applications, and strategies to address these
- range of technology options available to support organisational activities
- strategies that can be used to evaluate technology use
- training and technical support options available to the organisation to develop skills in the use of technology.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - sources of information about agricultural technology
 - computer-based technology and software relevant to the agricultural production business.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB522 Implement the introduction of biotechnology into the production system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to evaluate the implications of introducing biotechnology and genetically modified organisms into the current production system. This unit requires the ability of producers to identify potential risks and benefits, responsibly manage all aspects of risks to the neighbours, local community, and to the environment, relevant to the existing and new production system.

This unit applies to producers who manage, or provide advice to, land based production businesses. Work will likely require consultation with external experts, such as extension officers from state Agricultural Departments, agribusiness representatives, agronomists and regulators and insurance agencies.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Evaluate benefits and applications of introducing biotechnology in production system	1.1 Identify information on biotechnology relevant to enterprise by researching and analysing potential benefits and ramifications to production system, environment and others in the district 1.2 Identify how biotechnology can be integrated into current production system, to improve business profitability and sustainability 1.3 Compare current and historical production data for production system with potential for increased production 1.4 Investigate potential risks involved in the introduction of biotechnology to current production system 1.5 Collate information in a clear and concise manner to inform decisions 1.6 Evaluate implications for the integration of biotechnology into current production plan
2. Develop an implementation plan for introduction of biotechnology into production system	2.1 Select application of biotechnology suitable to local environment, climate, seasonal conditions, business goals and marketing objectives 2.2 Identify required changes to current production systems and develop suitable strategies for application of a farm production management plan 2.3 Develop risk management strategies including quality assurance (QA) system principles consistent with production plan requirements and marketing boards 2.4 Identify all relevant legislation, regulatory and product supplier requirements and implement according to the production plan 2.5 Identify key roles and responsibilities of personnel including training requirements 2.6 Develop an implementation production management plan including risk management strategies and QA systems
3. Implement and manage biotechnology into production system	3.1 Implement production, infrastructure and land management plans 3.2 Implement risk management strategies for production plan and record information in QA system 3.3 Manage scheduling of production processes taking organisational factors and paddock usage into consideration 3.4 Manage integration of environmental values into production process 3.5 Monitor risk management strategies plan and identify problems

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	and issues by conducting a risk management audit on property
4. Evaluate management strategies	4.1 Evaluate potential results of threats in terms of natural resources, business assets, infrastructure, environmental and community 4.2 Identify preventative and reactive action and develop further contingency plans to minimise threats and maximise opportunities 4.3 Review risk management strategies plan aimed at ensuring business stability, sustainability and profitability, while protecting and preserving natural resources and business assets 4.4 Evaluate production plan for the introduction of biotechnology into production system

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret, analyse and extract information from a range of sources such as professional literature, legal documents, policies and procedures
Oral communication	<ul style="list-style-type: none"> Interact effectively with industry contacts, colleagues and advisors

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB522 Implement the introduction of biotechnology into the production	AHCAGB510 Implement the introduction of biotechnology into the production system	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
system			

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB522 Implement the introduction of biotechnology into the production system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has introduced biotechnology into a land based production system on at least one occasion, including:

- researched implications of introducing biotechnology into one business
- recognised potential opportunities of introducing biotechnology
- developed a plan to introduce biotechnology
- conducted an audit before and after the introduction of biotechnology products to identify if risk management strategies are appropriate
- completed and maintained appropriate quality assurance documentation
- implemented and evaluated biotechnology plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- benefits and risks of introducing biotechnology into a production system, including those arising from climate change, pressure on global food supplies and the management of pests and diseases
- principles of sustainability
- state/territory legislation, regulations and codes of practice relevant to biotechnology and the development and use of genetically modified organisms in Australia
- methods of risk assessment for the production system
- implementing, monitoring and maintenance of a quality management system
- issues presented to other farmers and community when using biotechnology in a production system.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to information about biotechnology
 - land based production site
- specifications:
 - legislation, regulations and codes of practice relevant to use of biotechnology in land based businesses.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB523 Interpret and use agricultural data

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify, interpret, enter and use agricultural data, identify and address data gaps, and review agricultural data.

The unit applies to individuals who apply specialised skills and knowledge to the interpretation and implementation of agricultural data, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify, access and apply agricultural data	1.1 Discuss workplace business objectives, goals and farming system with business owner or land manager to determine purpose of information being sought

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Identify existing sources of agricultural data available in the workplace to support workplace business objectives</p> <p>1.3 Review and select appropriate software programs or applications (app) to meet workplace business objectives</p> <p>1.4 Access existing agricultural data and enter into software program or app</p> <p>1.5 Create maps and summary reports using existing data</p>
2. Interpret and explain agricultural data	<p>2.1 Interpret maps or reports to identify opportunities and limitations for operational improvements that support business objectives</p> <p>2.2 Conduct field work to ground truth data and record interpretations of data for future use</p> <p>2.3 Document data results using appropriate interpretation and presentation techniques</p> <p>2.4 Discuss and explain data results and information with business owner or land manager</p>
3. Analyse agricultural data	<p>3.1 Collect and analyse data to determine significance of results</p> <p>3.2 Undertake simple statistical analysis to detect data outliers, imbalances in generated data sets and identify erroneous data points, including determining spatial density of the managed data set</p> <p>3.3 Produce variability maps from suitable data sets</p> <p>3.4 Discuss and recommend solutions utilising agricultural data, and present to business owner or land manager for approval</p>
4. Identify and address data gaps	<p>4.1 Identify validity and reliability, and gaps in existing agricultural data</p> <p>4.2 Identify solutions to address data gaps utilising existing sources</p> <p>4.3 Identify and cost hardware and software solutions to address data gaps where required</p> <p>4.4 Discuss and recommend solutions and seek approval from business owner or land manager</p>
5. Use agricultural data	<p>5.1 Collect and organise agricultural data and enter into software program or app</p> <p>5.2 Generate maps and reports for agricultural activities for review and discussion with key business personnel</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.3 Incorporate agricultural data into business operations 5.4 Determine if corrective action is required and take appropriate action
6. Review and report agricultural data	6.1 Review production data to identify changes in productivity as a result of using agricultural data, and document results 6.2 Identify opportunities for improvements using agricultural data 6.3 Report results to business owner or land manager

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with business owner or land manager, using clear language to discuss business objectives, explain data results and information, recommend solutions and seek approval
Numeracy	<ul style="list-style-type: none"> Access, record and analyse agricultural data for input into decision making Estimate hardware and software acquisition, and calculate running costs Compare hardware and software acquisition and running costs with costs of services provided by off-property suppliers

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB523 Interpret and use agricultural data	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB523 Interpret and use agricultural data

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has interpreted and used at least three sources of agricultural data on at least two separate occasions during a production cycle, and has:

- discussed workplace objectives and purpose of information being sought with business owner or land manager
- identified, accessed, explained, documented and analysed workplace agricultural data
- generated maps or reports for agricultural activities and incorporated them into business operations
- conducted field work to ground truth data
- identified validity and reliability, gaps in existing data, and solutions to address gaps in existing agricultural data
- identified, recommended and costed hardware and software solutions to address data gaps where required
- collected and organised agricultural data and entered it into software program or application (app)
- implemented corrective actions as required
- identified and reported opportunities for improvements utilising agricultural data.
-

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the concept of farming as a system, including the interconnection of:
 - plants
 - soil
 - water

- environment
- weather
- finance
- production systems
- principles and practices for interpreting and using agricultural data, including:
 - how to distinguish between valid and invalid data and how to clean data
 - how to review data for spatial and temporal variance and compare current data to previous, or average data for consistency or variations
 - how to generate profitability maps of paddocks to highlight areas of differing return
 - how to transfer data to hardware controllers from generated maps
 - the importance of standardised data in generating whole of farm data analysis
 - data tracking and data inputs and outputs of the business
 - the importance of ground truthing
 - how agricultural data and decisions fit into the business plan, business drivers, costs and return on investment
- sources of data to assist with monitoring:
 - plants
 - soil
 - water
 - environment
 - salinity
 - erosion
 - weeds
 - biodiversity
- sources of data to assist with managing:
 - water use
 - precision mapping
 - precision and variable rate prescriptions
 - field record keeping
 - compliance record keeping
 - yield or harvest data
 - soil survey data
 - sensor network data, including; moisture probes, weather stations and canopy sensors
 - crop planning
 - agricultural machinery operation and monitoring
- types of data systems relevant to agricultural production, including:
 - Global Navigation Satellite Systems (GNSS)
 - relevant vegetation indices and their use
 - Unmanned Aerial Vehicle (UAV) imagery.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - hardware and software used to record agricultural data
- relationships:
 - business owner or land manager
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB607 Manage succession planning

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to manage and plan the succession and distribution of an estate within a family agricultural business context.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify succession planning requirements	1.1 Identify and assess contingency and succession arrangements against enterprise and individual requirements 1.2 Identify and evaluate income continuation options to find best fit for enterprise requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify and distinguish personal and business goals 1.4 Consider needs of those affected by succession arrangements in estate planning
2. Clarify succession planning arrangements	2.1 Make clear plans for retirement of, and inheritance to, all relevant parties 2.2 Consider legal and financial implications of succession planning in determining succession arrangements and estate distribution 2.3 Discuss, clarify and mediate apparent inequities in estate distribution 2.4 Seek external advice as required to clarify obligations and potential effects on business performance
3. Implement succession planning	3.1 Determine and implement strategies for estate distribution and succession 3.2 Monitor and review estate structures and transfer arrangements against tax and legislative requirements 3.3 Monitor estate planning and succession against enterprise performance 3.4 Complete relevant documentation to meet legal and procedural obligations

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access and interpret legislation, regulations and guidelines relevant to estate planning

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB607 Manage succession planning	AHCAGB602 Manage estate planning	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB607 Manage succession planning

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed succession planning for at least one agricultural business, including:

- identified estate planning requirements
- clarified estate planning arrangements
- clarified and mediated apparent inequities in estate distribution with relevant parties
- documented agreements and contracts
- identified and assessed investment, financial and retirement options.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- effective interpersonal communication techniques
- conflict resolution, negotiation and mediation techniques
- solve problems relating to estate management
- goal setting strategies
- financial information including estate structures, retirement options, wills and estate planning procedures
- legislation and regulations relevant to taxation, contracts and agreements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- access to a family agricultural business and family members
- specifications:
 - legislation, regulations and guidelines relevant to estate planning.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB608 Manage financial resources

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to manage the financial resources of the business, including reviewing the mix of liabilities, monitoring equity and return on equity.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities. They work in contexts that are subject to change and adapt a range of fundamental principles accordingly.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess capital change to finances	1.1 Determine working capital and requirement for capital development 1.2 Determine return on capital investment
2. Assess appropriate	2.1 Assess the financial risks associated with the business

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
equity levels for the business	2.2 Identify personal and business risk preferences 2.3 Analyse equity levels in comparable enterprises using benchmark data
3. Establish and maintain appropriate financing arrangements for the business	3.1 Determine capacity to service debt and meet liabilities 3.2 Identify sources of funds and compare and evaluate terms and conditions 3.3 Conduct negotiations to ensure the establishment of the most favourable terms and conditions 3.4 Source loan funds and check agreements 3.5 Monitor costs of finance to keep them within defined budget limits 3.6 Manage relationships with finance providers 3.7 Monitor the economic environment and assess implications for the business
4. Monitor and review the mix of liabilities	4.1 Conduct regular reviews of the mix of liabilities and the costs and determine the benefits associated with reconfiguring loans 4.2 Review and renegotiate loans as appropriate
5. Monitor equity, return on equity	5.1 Review valuations on assets and monitor the effect on equity 5.2 Calculate returns on assets and returns on equity and use to assist business performance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Analyse financial records and recognise trends in data

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB608 Manage financial resources	AHCAGB605 Manage business capital	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB608 Manage financial resources

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed the capital of one or more enterprises, including:

- assessed capital finance needs
- assessed appropriate equity levels for a business
- established and maintained appropriate financing arrangements
- reviewed the mix of liabilities
- assessed key indicators against financial returns for the business.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- how to interpret and analyse financial reports
- how various macroeconomic factors affect the business
- sources of finance for the business
- negotiation techniques
- accounting terms and principles, including concept of equity, return on assets (ROA), return on equity (ROE), internal rate of return (IRR), forecasting
- bank and lending institution policies and requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- access to business financial records.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB609 Develop export markets for produce

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to evaluate and develop a product for export.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Evaluate export potential	1.1 Identify competitive advantages and disadvantages for the proposed product, in respect to the product's entry to overseas markets 1.2 Analyse features of potential markets in respect to cultural factors, quality requirements, government regulations and other economic,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	political and social factors 1.3 Analyse business resources for their appropriateness and capacity to contribute to the marketing effort 1.4 Identify available capital and time for the development of the export plan
2. Develop export strategy	2.1 Conduct customer analysis and define the market niche 2.2 Develop operational plan to address the market mix 2.3 Prepare budgets to address the investment required in the operational plan 2.4 Plan strategies that target the identified market and initiate negotiations
3. Plan for implementation	3.1 Identify and address steps in an export transaction 3.2 Identify and prepare documentation requirements for export

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access and interpret legislation, regulations and guidelines relevant to exporting goods from Australia
Oral communication	<ul style="list-style-type: none"> Establish networks, negotiate agreements and resolve conflicts in a cross cultural environment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB609 Develop export	AHCAGB601 Develop export	Performance criteria clarified	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
markets for produce	markets for produce	Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB609 Develop export markets for produce

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed an export market for at least one product, including:

- researched and analysed product knowledge
- analysed a market and established market potential
- developed and implemented an export market strategy.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- export requirements for identified product
- Australian and international export and import regulations
- international regulations, pricing structures, import and export factors, production times, quality assurance factors, and production and marketing arrangements, relevant to product
- requirements of standards, codes of practice, quality assurance (QA) processes and procedures, relevant to product
- marketing plan formats
- cash flow budgeting techniques
- sensitivity analysis and investment evaluation
- communication and negotiation skills to deal with international export arrangements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - product for export
 - access to information about international market relevant to product
 - communications technology to interact with potential overseas customers
- specifications:
 - legislation, regulations and guidelines for the export of goods from Australia.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB610 Manage the production system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to manage the production system and includes alignment with business goals, the enterprise strategic plan and sustainability.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities. They work in contexts that are subject to change and adapt a range of fundamental principles accordingly.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Integrate plans for different sectors of the enterprise	1.1 Examine strategic, production, infrastructure and land management plans to identify interactions between different sectors of the enterprise

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Determine types of interactions and the impacts on resources and production system performance over time</p> <p>1.3 Assess beneficial interactions and any potential additional benefits for further improvements to the system's efficiency</p> <p>1.4 Assess detrimental interactions and adjust the production system to minimise potential losses</p> <p>1.5 Obtain and discuss information on innovations for use in the organisation and integrate with operational plans</p>
2. Develop and implement risk management strategies	<p>2.1 Analyse the business to identify its strengths and weaknesses as well as any threats to, or opportunities to improve, the organisation's sustainability and profitability</p> <p>2.2 Consider potential results of threats in terms of natural resources, business assets and infrastructure</p> <p>2.3 Develop preventative and reactive contingency plans to minimise threats and maximise opportunities</p> <p>2.4 Ensure contingency plans aim to ensure business stability and profitability while protecting and preserving natural resources and business assets</p>
3. Analyse the overall performance of the production system	<p>3.1 Undertake whole-business physical and financial analyses to determine the long-term sustainability and profitability of the production system</p> <p>3.2 Prepare and discuss results of analyses with colleagues and stakeholders for input to future planning processes</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access and analyse information about business management and production

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB610 Manage the production system	AHCAGB603 Manage the production system	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB610 Manage the production system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has integrated production plans for one organisation or enterprise, including:

- aligned relevant production systems with the enterprise strategic plan
- adjusted production systems to meet the overarching sustainability requirements of the enterprise
- adopted a systemised approach to the incorporation of production systems into the business plan
- managed change and implemented innovations and improvements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- marketplace in which the organisation operates
- property planning, financial management and enterprise budgeting systems and procedures
- legislation, regulations and codes of practice that impact on the management of the enterprise
- methods of measuring and implementing business and environmental sustainability
- financial analysis tools and techniques for land based businesses
- strategies to analyse information and data to inform decisions
- decision making processes
- sources of information to assist in analysis of operational plans, resourcing and financial analysis
- monitoring strategies for a range of operational plans
- value and methods of risk assessment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to production plans for a land based production site
- specifications:
 - legislation, regulations and codes of practice for land based production.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB611 Analyse business performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to analyse the business performance of a production enterprise and develop strategies for improving business profitability.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities. They work in contexts that are subject to change and adapt a range of fundamental principles accordingly.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Analyse financial reports	1.1 Interpret taxation reports and determine accounts to be true and fair 1.2 Review and interpret management reports generated by the

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	enterprise 1.3 Determine distribution of profit
2. Use financial analysis tools	2.1 Calculate gross margins and relevant breakdowns of profit and loss 2.2 Calculate ratios related to production activity, solvency and liquidity, gearing and profitability 2.3 Source and compare relevant performance benchmarks 2.4 Identify and analyse trends in production and profitability
3. Identify opportunities for increasing profit	3.1 Assess yield or production potential and determine current position 3.2 Identify key issues related to production efficiency 3.3 Identify key issues related to market return
4. Develop strategies for improving business performance	4.1 Use strengths, weaknesses, opportunities and threats to determine possible strategies to address production and marketing issues 4.2 Perform sensitivity analyses to evaluate strategies

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access, interpret and analyse business records and legislation and regulations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB611 Analyse business performance	AHCAGB604 Analyse business performance	Performance criteria clarified	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
		Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB611 Analyse business performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has analysed the business performance of at least one business, including:

- used financial analysis tools
- identified profit drivers for the enterprise
- benchmarked business performance against other businesses
- developed strategies for improving business performance.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- financial reports of the business
- legislation and regulations for taxation and business operation
- financial analysis tools
- performance benchmarking strategies
- issues related to production efficiency and marketing
- methods to determine strengths, weaknesses, opportunities and threats
- methods to develop business strategies.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- access to financial and production records for business
- specifications:
 - legislation and regulations relevant to taxation and business operation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAGB612 Manage price risk through trading strategy

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to manage price risk by analysing trends, forecasting and developing a trading strategy.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities. They work in contexts that are subject to change and adapt a range of fundamental principles accordingly.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Conduct market research	1.1 Collate and evaluate estimates of supply and demand 1.2 Analyse past trends and assess possible future scenarios 1.3 Relate own products to market indicators

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Determine price required	2.1 Calculate cost of production and determine break-even price 2.2 Calculate overhead costs to be allocated against the enterprise 2.3 Determine margins for profit and risk 2.4 Set forward price objectives to meet cost of production, contribution to overheads and profit required 2.5 Evaluate personal attitude to risk
3. Develop sales plan	3.1 Evaluate cash markets and assess projected price trends 3.2 Obtain and assess forward contract information 3.3 Obtain and assess futures prices 3.4 Evaluate selling options against price objectives and the assessment of price movement risk 3.5 Assess taxation and cash flow implications 3.6 Develop appropriate mix of sale options in a trading strategy 3.7 Develop contingency plans to address possible shifts in price trend
4. Implement trading strategy	4.1 Seek advice from experts as required 4.2 Monitor market information and adjust trading strategy according to contingency plans

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Get the work done	<ul style="list-style-type: none"> Check that trading strategies comply with legislative frameworks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB612 Manage price risk through trading strategy	AHCAGB606 Manage price risk through trading strategy	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAGB612 Manage price risk through trading strategy

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed price risk for one business, including:

- determined the cost of production
- allocated overhead costs against enterprises within the business
- assessed risk to financial returns through market or currency movements
- analysed trends and evaluated forecasts
- monitored and assessed price movements
- implemented a trading strategy for price risk management.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- supply, demand and price relationships
- price trends and sources of market information/forecasts
- cost of production
- overhead costs for the business
- financial risk assessment and attitudes to taking financial risk
- selling options for the relevant commodity or product
- operation of futures markets, forward selling arrangements, put options
- foreign exchange rates in relation to trade
- contract law as it applies to trade
- legislation, regulations and guidelines for taxation and trading on the share market
- cash flow and taxation planning for the business
- contingency planning as it applies to price and trade.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - financial records for a business
- specifications:
 - access to legislation and regulations relevant to trade.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAIS202 Assist with artificial insemination procedures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to assist a registered veterinarian or licensed inseminator with artificial insemination (AI) procedures, including assisting with preparing animals for insemination, supporting insemination procedures and cleaning work area..

The unit applies to individuals who assist with artificial insemination procedures under general supervision with limited autonomy or accountability.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Artificial Insemination (AIS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist with preparation of animals for insemination	1.1 Confirm with supervisor AI procedure to be undertaken 1.2 Move animals on heat to insemination area

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Restrain animals using safe and humane techniques according to workplace animal welfare practices</p> <p>1.4 Prepare tools and equipment according to supervisor instructions</p> <p>1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to task</p> <p>1.6 Check and report faulty or unsafe materials, tools, equipment or PPE to supervisor</p>
2. Support insemination procedure	<p>2.1 Sterilise and clean or dispose of insemination equipment</p> <p>2.2 Identify and prepare recipient animal</p> <p>2.3 Restrain recipient animal according to workplace animal welfare practices</p> <p>2.4 Assist with insemination procedure as directed</p> <p>2.5 Record details of insemination, identification of the semen used and identities of the female animals according to workplace requirements</p>
3 Clean work area and equipment	<p>3.1 Dispose of waste and debris according to workplace procedures</p> <p>3.2 Clean and maintain work area, tools and equipment according to workplace procedures</p> <p>3.3 Return animals to designated area</p> <p>3.4 Clean and maintain livestock handling equipment according to workplace procedures</p> <p>3.5 Report malfunctions, faults, wear or damage of tools, equipment, restraints and harnesses to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults wear or damage to tools and livestock handling equipment Participate in verbal exchanges to respond to questions and clarify

Skill	Description
	information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAIS202 Assist with artificial insemination procedures	AHCAIS201 Assist with artificial insemination procedures	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAIS202 Assist with artificial insemination procedures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assisted with artificial insemination (AI) procedures on at least one occasion, and has:

- assisted with preparation of animals for insemination
- followed workplace animal welfare practices
- followed relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- fitted, used and maintained personal protective equipment (PPE)
- supported insemination procedures
- cleaned work area and equipment on completion of work and disposed of waste
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for assisting with AI procedures, including appropriate use of PPE
- environment and biosecurity legislation and regulations and workplace practices relevant to AI procedures
- principles and practices of artificial insemination procedures, including:
 - reproductive anatomy and reproductive physiology in the livestock species
 - signs of heat, methods for detection of oestrus and management of animals on heat
 - techniques and methods for humane handling and restraint of the livestock species
 - animal welfare legislation, codes of practice and procedures relevant to assisting with AI of the livestock species
 - types, uses, maintenance, servicing and storage of equipment

- methods and procedures for cleaning of equipment used for AI
- documentation and records that are required
- requirements and procedures for cleaning and maintaining work areas.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to assisting with AI procedures
 - materials, tools and livestock handling equipment applicable to assisting with AI procedures
 - PPE applicable to artificial insemination procedures
- specifications:
 - workplace requirements applicable to health and safety in the workplace for assisting with AI procedures
 - environment and biosecurity legislation and regulations and workplace practices applicable to AI procedures
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to AI of the livestock species
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAIS301 Collect semen

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to routinely collect semen for artificial insemination of livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

Working with entire male animals is an inherently dangerous activity. Individuals who work at this level must be thoroughly competent in all aspects of handling entire male animals.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Artificial Insemination (AIS)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Prepare animals for collecting semen	1.1 Follow enterprise work health and safety, biosecurity and animal welfare policies 1.2 Select, use and maintain suitable personal protective equipment and clothing 1.3 Select and prepare appropriate equipment for semen collection 1.4 Prepare nominated sire at the appropriate semen collection area 1.5 Collect semen from the nominated sire using appropriate techniques 1.6 Transfer semen to the processing and storage area 1.7 Follow enterprise policies on testing of semen, blood and/or other biological samples for diseases which can be transmitted from male animals to female animals
2. Complete collection procedures	2.1 Carry out post-collection procedures 2.2 Dispose of waste in line with enterprise environmental policies 2.3 Clean work area and equipment appropriately 2.4 Return animals to the designated area
3. Document and record data	3.1 Complete required documentation and records accurately and promptly 3.2 Supply information to relevant authorities to promote research and improvements in industry practice

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCAIS301A Collect semen.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAIS301 Collect semen

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare animals for collecting semen
- prepare for and undertake hygienic collection of semen
- collect semen using industry approved collection techniques
- transfer semen safely to the preparation and storage area
- handle animals in a humane, stress free, and safe manner
- clean up work areas and equipment and record data.
- follow enterprise work health and safety, biosecurity and animal welfare policies.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types, uses and maintenance of personal protective equipment
- resource and manpower requirements, biosecurity and animal welfare requirements, industry standards, codes of practice and procedures for artificial insemination of the livestock species
- types, uses, maintenance, servicing and storage of equipment
- requirements and features of semen collection work areas
- requirements, methods and techniques for processing and storage of semen
- techniques and methods for humane handling and restraint of the livestock species
- relevant animal welfare practices for the conduct of artificial insemination in the livestock species
- methods and procedures for cleaning and sterilisation of equipment used for artificial insemination
- types of diseases transmissible from male to female animals through artificial insemination/semen, and methods of testing, control and prevention

- procedures for handling, measurement and usage of cleaning chemicals, disinfectants and sanitisers
- relevant work health and safety policies
- relevant environmental requirements, and procedures for disposal and management of wastes and debris
- requirements and procedures for cleaning and maintaining work areas
- relevant documentation and records that are required.

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAIS304 Artificially inseminate livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare for and artificially inseminate livestock, complete documentation and records, and complete work.

The unit applies to individuals who artificially inseminate livestock under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and biosecurity practices.

Accreditation requirements apply in some jurisdictions to performing commercial artificial insemination (AI). Users are advised to check with the relevant State or Territory regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Artificial Insemination (AIS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for insemination of animals	1.1 Organise resources and personnel to ensure optimal timing of the insemination process 1.2 Follow workplace animal welfare and hygiene practices, and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	biosecurity policies 1.3 Access and store semen supplies 1.4 Prepare animals to maximise success of insemination program 1.5 Identify potential hazards and risks, and implement safe working practices to address risks 1.6 Select, fit, use and maintain personal protective equipment applicable to the task
2. Inseminate animals	2.1 Select, prepare and thaw semen 2.2 Monitor and check insemination equipment to ensure it is sterile, clean and used appropriately 2.3 Identify and observe intended recipient animal and check for signs of oestrus activity 2.4 Restrain and prepare intended recipient animal humanely and appropriately for insemination 2.5 Conduct insemination using techniques appropriate to animal type and applying correct hygiene procedures
3. Complete documentation and records	3.1 Document and record data on insemination process 3.2 Supply information to relevant authorities to promote research and improvements in industry practice 3.3 Identify and record modifications to herd program to assist continuous improvement processes
4. Complete work	4.1 Dispose of waste according to workplace procedures 4.2 Clean and maintain work area and equipment according to workplace procedures 4.3 Return animals to designated areas

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about livestock AI operations
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare AI documents and records

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAIS304 Artificially inseminate livestock	AHCAIS303 Artificially inseminate livestock	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAIS304 Artificially inseminate livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has successfully artificially inseminated at least ten separate animals with an accuracy of over 85 percent, and has:

- prepared for insemination
- prepared equipment and work sites
- identified and controlled potential hazards and risks according to workplace procedures
- followed relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- followed workplace animal welfare and hygiene practices
- correctly selected and thawed semen for insemination
- restrained and inseminated animals using species specific techniques and recognised methods that reduce stress
- completed documentation and records
- cleaned work area and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environment and biosecurity legislation and regulations and workplace practices relevant to artificial insemination (AI) of livestock
- workplace requirements applicable to health and safety in the workplace for AI of livestock, including appropriate use of personal protective equipment (PPE)
- principles and practices of livestock AI, including:
 - basic breeding principles, including the oestrus cycle and its significance
 - relevant anatomy and physiology of female livestock

- reproductive physiology and behaviour of female livestock
- pregnancy testing
- animal health and abnormalities
- semen handling, thawing and storage techniques
- preparation requirements for AI of animals
- animal movement and behavioural characteristics
- handling equipment and techniques, harnessing and restraint methods and when to use them
- workplace and industry identification system for animals
- animal welfare legislation, codes of practice and procedures and hygiene practices relevant to AI of livestock
- legislative and regulatory controls relevant to AI
- workplace and industry policies relevant to AI and recording and reporting routines
- resource and manpower requirements, industry standards, codes of practice and procedures for AI of the livestock species
- criteria and methods for determining conception rates
- methods and procedures for improving the success of AI and its impacts on herd performance
- procedures for cleaning and maintaining work areas and equipment
- documentation and record requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to AI of livestock
 - female livestock
 - semen, materials, tools and livestock handling equipment applicable to AI of livestock
 - PPE applicable to AI of livestock
- specifications:
 - workplace requirements applicable to health and safety in the workplace for AI of livestock
 - environment and biosecurity legislation and regulations and workplace practices applicable to AI of livestock
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to AI of livestock
 - hygiene practices applicable to AI of livestock
- timeframes:

- according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCAIS402 Supervise artificial breeding and embryo transfer programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to determine livestock breeding method, and supervise, monitor and maintain livestock artificial breeding and embryo transfer (ET) programs.

The unit applies to individuals who apply specialist skills and knowledge to supervise livestock artificial breeding and embryo transfer programs. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and biosecurity practices.

Accreditation requirements apply in some jurisdictions to performing commercial artificial breeding and embryo transfer. Users are advised to check with the relevant State or Territory regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Artificial Insemination (AIS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine breeding	1.1 Review options for artificial breeding to determine most suitable

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
method	<p>and affordable method according to breeding objectives</p> <p>1.2 Select and match artificial breeding option to resources and breeding objectives</p> <p>1.3 Identify, source and arrange breeding program resources</p> <p>1.4 Prepare program schedules according to available resources</p> <p>1.5 Source personal protective equipment for staff and self, according to workplace health and safety procedures</p>
2. Implement breeding method	<p>2.1 Check the disease status of donor and recipient animals according to biosecurity requirements</p> <p>2.2 Obtain genetic material from appropriate and reliable source</p> <p>2.3 Select tools and or materials required</p> <p>2.4 Receive, check and store genetic material according to workplace procedures</p> <p>2.5 Handle animals according to workplace animal welfare practices</p> <p>2.6 Ensure females are inseminated at the optimal stage of oestrus cycle where artificial insemination is the selected option</p> <p>2.7 Check to ensure intended recipients are prepared and correctly scheduled where ET is the selected option</p> <p>2.8 Provide hormone injections to intended recipients or donors at appropriate stages of transfer programs where ET is selected option according to veterinary prescription</p> <p>2.9 Conduct embryo transfers according to codes of practice and industry standards where ET is selected option</p>
3. Monitor and maintain program	<p>3.1 Monitor environment and health of livestock in breeding program</p> <p>3.2 Review adjustments in genetic material transfer practices to enhance success of future programs</p> <p>3.3 Document and maintain data on genetic material transfer programs</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about livestock artificial breeding and embryo transfer programs
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare genetic material transfer program documents

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAIS402 Supervise artificial breeding and embryo transfer programs	AHCAIS401 Supervise artificial breeding and embryo transfer programs	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAIS402 Supervise artificial breeding and embryo transfer programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supervised a livestock artificial breeding or an embryo transfer program on at least one occasion, and has:

- determined breeding method
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations, and workplace procedures
- implemented breeding method
- applied workplace animal welfare practices
- monitored and maintained breeding program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for supervising livestock artificial breeding and embryo transfer programs, including appropriate use of personal protective equipment (PPE)
- environment and biosecurity legislation and regulations and workplace practices relevant to supervising livestock artificial breeding and embryo transfer programs
- principles and practices of livestock artificial breeding and embryo transfer programs, including:
 - animal welfare industry standards, legislation and codes of practice and procedures relevant to supervising livestock artificial breeding and embryo transfer programs
 - codes of practice, industry standards and procedures for livestock artificial insemination and embryo transfer
 - resources requirements, types and characteristics of livestock artificial breeding methods and programs

- advantages, disadvantages and cost-benefit analysis of livestock artificial breeding programs for the livestock workplace
- requirements, methods and procedures for sourcing, acquiring, transporting and storing genetic material
- reproductive physiology, reproductive behaviour and pregnancy development of female livestock
- procedures for artificial insemination
- procedures for embryo transfer
- causes, signs, treatment and management of reproductive diseases and complications in female livestock
- methods and procedures for improving the success of livestock artificial breeding programs and their impacts on herd performance
- documentation and record requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to supervising livestock artificial breeding and embryo transfer programs
 - live animals
 - materials, tools and equipment applicable to supervising livestock artificial breeding and embryo transfer programs
 - PPE applicable to supervising livestock artificial breeding and embryo transfer programs
- specifications:
 - workplace requirements applicable to health and safety in the workplace for supervising livestock artificial breeding and embryo transfer programs
 - environment and biosecurity legislation and regulations and workplace practices applicable to supervising livestock artificial breeding and embryo transfer programs
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to supervising livestock artificial breeding and embryo transfer programs
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB201 Apply a range of treatments to trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to remedy common tree problems by applying treatments including alleviating tree stress and improving soil condition. Treating trees also requires consideration of the environmental implications of treatment methods, techniques and procedures.

This unit applies to individuals who undertake defined activities, work in a structured context, apply knowledge and skills to demonstrate autonomy and limited judgement, and provide solutions to a limited range of predictable problems. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards.

Pre-requisite Unit

AHCCHM201 Apply chemicals under supervision

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to apply tree treatments	1.1 Locate trees on streets using maps 1.2 Recognise trees requiring treatment 1.3 Identify site hazards, assess risks and report to supervisor 1.4 Confirm work zone with work crew and monitor site 1.5 Select and use personal protective equipment 1.6 Select, prepare, and carry out pre-operational and safety checks, on tools and equipment 1.7 Confirm first aid and emergency personnel, equipment and procedures 1.8 Communicate with work team during operations using voice, hand and whistle signals 1.9 Read packaging labels to maintain awareness of work hazards 1.10 Clean or sterilise tools and equipment to avoid disease transfer and biosecurity issues 1.11 Record and implement work health, safety, site, environmental and traffic control measures
2. Modify environment to maintain health and vigour of tree	2.1 Remove competing plants to ensure maintenance of adequate space, light, water and nutrient requirements of tree 2.2 Apply nutrient additives at specified rates and locations 2.3 Ameliorate soil structure in relation to aeration and drainage 2.4 Ameliorate soil condition with plant-based mulch application 2.5 Determine benefit and limits of decompaction methods
3. Apply chemical treatment	3.1 Calibrate application equipment 3.2 Apply treatment with due regard for environmental implications 3.3 Apply chemicals under supervision
4. Complete treatment operations	4.1 Maintain awareness of effect on environment of own work practices 4.2 Clean and store personal protective equipment 4.3 Clear and clean site 4.4 Report applications and treatments and update work records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCARB201A Apply a range of treatments to trees.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB201 Apply a range of treatments to trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- locating trees on streets using maps
- recognising trees requiring treatment
- identifying site hazards, assessing risks and reporting to supervisor
- confirming work zone with work crew and monitoring site
- selecting and use personal protective equipment
- selecting, preparing, and carrying out pre-operational and safety checks, on tools, equipment and machinery
- confirming first aid personnel, equipment and procedures applicable to tree work
- communicating with work team during operations
- reading packaging labels to maintain awareness of work hazards
- cleaning or sterilising tools and equipment
- avoiding disease transfer and biosecurity issues
- recording and implementing work health, safety, site, environmental and traffic control measures
- removing competing plants to ensure maintenance of adequate space, light, water and nutrient requirements of tree
- applying nutrient additives at specified rates and locations
- amelioration of soil structure in relation to aeration and drainage
- amelioration of soil condition with plant-based mulch application
- determining benefit and limits of decompaction methods
- calibrating application equipment
- applying treatment with due regard for environmental implications
- applying chemicals under supervision

- maintaining awareness of effect on environment of own work practices
- cleaning and storing personal protective equipment
- clearing and cleaning sites
- awareness of work health and safety in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- methods of locating trees on streets and maps
- tree recognition
- methods of identifying site hazards, assessing risks and reporting to supervisors
- risk assessment systems
- confirmation of work zones
- how trees react to stress
- personal protective equipment
- pre-operational and safety checks, on tools, equipment and machinery
- first aid
- first aid personnel, equipment, and first aid plan procedures
- communication systems using voice, hand and whistle signals
- application of packaging instructions
- methods of cleaning and sterilising tools and equipment
- methods of disease transfer
- biosecurity principles and practices
- work health, safety, site, environmental and traffic control measures
- plant removal methods
- soil nutrition
- rates of nutrient application
- soil amelioration techniques
- soil structure, aeration and drainage
- mulch
- compaction and decompaction
- correct preparation prior to applying treatment to trees
- calibration techniques of application equipment
- chemical application techniques, usage restrictions and risk controls
- environmental implications of chemical use in own work practices.

Assessment Conditions

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - spray application equipment
 - spill kit
 - measuring and weighing equipment
 - signage - chemical use
 - personal protective equipment (PPE)
 - first aid and emergency kit
 - traffic management kit
 - signage - work zone
 - trees
- materials:
 - tree recognition form
 - hazard identification and risk control form
 - equipment and PPE check form
 - emergency preparation form
 - work communications form
 - chemical and treatment application form
 - tree maintenance form
 - soil assessment form
 - work site operations form
 - work records form

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB206 Operate and maintain stump grinding machines

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to operate motorised stump grinding machines to remove tree stumps from the ground.

This unit applies to individuals who undertake defined activities with specialised tools and methods, work in a structured context, apply knowledge and skills to demonstrate autonomy and limited judgement, and provide solutions to a limited range of predictable problems. Work is implemented with low risk work procedures, in accordance with manufacturers recommendations and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards

Pre-requisite Unit

AHCARB210 Work effectively in the arboriculture industry

HLTAID003 Provide first aid

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Prepare for stump removal operations	1.1 Determine site location and details and clarify with supervisor 1.2 Determine the depth below ground of stump grinding works 1.3 Determine and confirm location and depth of above-and-below-ground services 1.4 Unload stump grinder machine 1.5 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk
2. Carry out pre-operational and safety checks	2.1 Check maintenance log is complete and up to date 2.2 Check belts are appropriately tensioned and in good order 2.3 Check teeth are sharp 2.4 Check no teeth are missing or loose 2.5 Check tyre pressure is correct or tracks are appropriately tensioned 2.6 Check levels of oils and fluids 2.7 Check hoses 2.8 Check brakes are operational 2.9 Check cutter head rotates freely and is not obstructed
3. Check stump grinder safety features	3.1 Check guards for belt, power take-off (PTO) and grinder head are in place 3.2 Check kill switch clearly identifiable and working 3.3 Check that dead-man is working if fitted 3.4 Check debris curtain present and in good order 3.5 Check dust suppression system is working if fitted
4. Complete preparations for work	4.1 Select and use appropriate personal protective equipment 4.2 Confirm first aid and emergency personnel, equipment and procedures 4.3 Expose stump surrounds manually and check for and remove foreign bodies 4.4 Moisten surrounds as required 4.5 Record and implement work health, safety, site, environmental and traffic control measures
5. Position stump grinder	5.1 Determine exclusion zone for work operations 5.2 Isolate exclusion zone with barriers and signs 5.3 Position machine level within recommended ranges to avoid rollover 5.4 Avoid holes with machine wheels 5.5 Position machine to minimise impact from flying debris

Element	Performance criteria
	5.6 Position operator in low risk position 5.7 Position operator to provide a clear view of the stump 5.8 Locate safety screens as required
6. Undertake removal operations	6.1 Communicate with work team during operations using voice, hand and whistle signals 6.1 Confirm work zone cleared prior to starting cutter head 6.3 Plan to complete a series of grinds across the stump 6.4 Start cutter head 6.5 Stop work if exclusion zone is breached and disengage cutter head if required 6.6 Position cutter head over stump 6.7 Engage cutter head into stump surface 6.8 Maintain engine speed in revolutions-per-minute (RPM) 6.9 Ensure grinding process is accurate, smooth and ergonomic 6.10 Grind stump to recommended depth of cut on each cutting pass 6.11 Ensure the cut size of each pass is not excessively deep causing the machine to labour excessively or to stall 6.12 Grind stump to predetermined spread and depth 6.13 Operate equipment without damaging underground services and surrounding areas
7. Remove grindings	7.1 Reposition machine away from ground stump 7.2 Disengage cutter head 7.3 Wait and remain clear of cutter head until cutter head stops moving 7.4 Remove build-up of grindings
8. Perform ongoing grinding operations	8.1 Make check in calls at prearranged times 8.2 Inspect grinder as required between stumps and when refuelling 8.3 Shutdown immediately if abnormal vibration or noise develops 8.4 Stop the engine before refuelling and allow engine to cool as required 8.5 Follow Safe Work Method Statement instructions for refuelling 8.6 Replace and secure fuel cap before restarting 8.7 Disengage cutter head and ensure a complete stop before moving to a new stump
9. Complete stump removal operation	9.1 Back-fill stump hole to original ground level 9.2 Maintain clean and safe work area throughout work and upon completion 9.3 Collect waste material and dispose of or recycle in a manner

Element	Performance criteria
	causing minimal environmental damage 9.4 Clean, maintain and store tools and equipment 9.5 Perform basic maintenance, including sharpening grinder and replacing teeth as required 9.6 Load grinder in accordance with Safe Work Method Statement 9.7 Secure grinder for transport 9.8 Update records of operator usage in log record 9.9 Update records of maintenance and replacement items

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCARB206A Undertake stump removal.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB206 Operate and maintain stump grinding machines

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be observed removing stumps using a motorised stump grinder using low-risk work procedures. The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- determining site location and details and clarifying with supervisor
- determining the depth below ground of stump grinding works
- determining and confirm location and depth of above-and-below-ground services
- unload stump grinder machine
- undertaking a site-specific risk assessment by identifying work health and safety hazards and assessing risk
- checking maintenance log complete and up to date
- checking belts appropriately tensioned and in good order
- checking teeth are sharp
- checking no teeth are missing or loose
- checking tyre pressure is correct or tracks are appropriately tensioned
- checking levels of oils and fluids
- checking hoses
- checking brakes are operational
- checking cutter head rotates freely and is not obstructed
- checking guards for belt, power take-off (PTO) and grinder head are in place
- checking kill switch clearly identifiable and working
- checking that dead-man is working if fitted
- checking debris curtain present and in good order
- checking dust suppression system is working if fitted
- selecting and use appropriate personal protective equipment
- confirming first aid and emergency personnel, equipment and procedures
- exposing stump surrounds manually and check for and remove foreign bodies
- moistening surrounds as required

- recording and implementing work health, safety, site, environmental and traffic control measures
- determining exclusion zone for work operations
- isolating exclusion zone with barriers and signs
- positioning machine level within recommended ranges to avoid rollover
- avoiding holes with machine wheels
- positioning machine to minimise impact from flying debris
- positioning operator in low risk position
- positioning operator to provide a clear view of the stump
- locating safety screens as required
- communicating with work team during operations using voice, hand and whistle signals
- confirming work zone cleared prior to starting cutter head
- planning to complete a series of passes across the stump
- starting cutter head
- stopping work if exclusion zone is breached and disengage cutter head if required
- positioning cutter head over stump
- engaging cutter head into stump surface
- maintaining engine speed in revolutions-per-minute (rpm)
- ensuring grinding process is accurate, smooth and ergonomic
- grinding stump to recommended depth of cut on each cutting pass
- ensuring the cut size of each pass is not excessively deep causing the machine to labour excessively or to stall
- grinding stump to predetermined spread and depth
- operating equipment without damaging underground services and surrounding areas
- repositioning machine away from ground stump
- disengaging cutter head if risk of making unwanted contact
- waiting and remaining clear of cutter head until cutter head stops moving
- removing build-up of grindings
- making check in calls at prearranged times
- inspecting grinder as required between stumps and when refueling
- shutting down immediately if abnormal vibration and/or noise develops
- stopping the engine before refueling and allow engine to cool as required
- following safe work method statement instructions for refueling
- replacing and securing fuel cap before restarting
- disengaging cutter head and ensure a complete stop before moving to a new stump
- back-filling stump hole to original ground level
- maintaining clean and safe work area throughout work and upon completion
- collecting waste material and dispose of or recycle in a manner causing minimal environmental damage
- cleaning, maintaining and storing tools and equipment
- performing basic maintenance, including sharpening grinder and replacing teeth as required
- loading grinder in accordance with safe work method statement

- securing grinder for transport
- updating records of operator usage in log record
- updating records of maintenance and replacement items.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- site hazard identification methods
- site risk assessment systems
- control measures for work health, safety, site, environmental and traffic control
- personal protective equipment
- communication systems using voice, hand and whistle signals
- first aid
- emergency procedures
- methods of locating services
- pre-operational checks of stump grinders including:
 - logs
 - belts
 - teeth
 - tyre pressure
 - oils and fluids
 - hoses
 - brakes
 - cutter head
 - guards
- safety checks of stump grinders including:
 - guards for belt, power take-off (PTO) and grinder head
 - kill switch
 - dead man
 - debris curtain
 - dust suppression
- exclusion zones
- operation of stump grinders
- cutter head engagement and disengagement
- positioning of stump grinders and operator
- work zone
- methods of determining spread and depth of cut
- recommended depths of cut
- cutting plan
- engine speed (rpm)
- abnormal vibration

- methods of back-filling
- environmental implications of removal activities
- appropriate methods of collecting waste material and disposal or recycling methods
- basic maintenance of stump grinders
- methods of sharpening stump grinders
- methods of teeth replacement of stump grinders
- records of operator usage in log record
- methods of maintaining records for basic maintenance and replacement items.

Assessment Conditions

It is an industry requirement for competency in this unit that assessment includes a log record, verifying ten (10) hours of operating a stump grinder, and five (5) hours of unloading and loading, setup and pre-operational and safety checks, preparatory work, backfilling and cleaning up, sharpening and basic maintenance, performed by the candidate.

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - stump grinder
 - sharpening equipment
 - refuelling kit
 - spill kit
 - emergency communication system
 - personal protective equipment (PPE)
 - first aid and emergency kit
 - traffic management kit
 - signage – work zone
 - tree stumps
- materials:
 - stump grinder operations form
 - hazard identification and risk control form
 - pre-operational and safety check form
 - emergency preparation form

- work communications form
- work records form

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB211 Apply treatments to trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to remedy common tree problems by applying treatments including alleviating tree stress and improving soil condition, application of fertilisers and soil amelioration in consideration of the environmental implications of treatment methods, techniques and procedures.

The unit applies to individuals working in a broad range of arboriculture contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

The arboriculture industry requires that all arboriculture work is undertaken according to preferred industry practices (as outlined in the Companion Volume).

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to apply tree treatments	1.1 Confirm trees to be treated and work activity instructions with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Confirm workplace health and safety hazards and controls from job safety analysis (JSA) with supervisor</p> <p>1.3 Select, check and use personal protective equipment</p> <p>1.4 Select, prepare and carry out pre-operational and safety checks on tools and equipment</p> <p>1.5 Confirm availability of first aid and emergency personnel, equipment and procedures</p> <p>1.6 Select and prepare treatment tools and equipment according to workplace and biosecurity procedures</p>
2. Modify environment to maintain health and vigour of tree	<p>2.1 Undertake weed control measures to remove competing plants according to treatment instructions</p> <p>2.2 Apply soil additives according to soil condition and treatment instructions</p> <p>2.3 Apply plant-based mulch according to treatment instructions</p> <p>2.4 Use tools and equipment for de-compaction of soil according to supervisor and equipment manufacturer instructions</p>
3. Apply chemical treatment	<p>3.1 Identify chemical treatments required from supervisor instructions</p> <p>3.2 Select, prepare and calibrate application equipment</p> <p>3.3 Prepare chemical treatments according to manufacturer label and workplace safety procedures</p> <p>3.4 Apply chemical treatment according to workplace procedures</p>
4. Complete treatment operations	<p>4.1 Clean site, collect and store unused materials and dispose of waste according to workplace and environmental procedures</p> <p>4.2 Clean, maintain and store equipment and machinery according to workplace and biosecurity procedures</p> <p>4.3 Record and report treatment outcomes according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from supervisor instructions, manufacturer instruction and procedures to identify relevant and key information for performance tasks, operator safety and procedural processes
Writing	<ul style="list-style-type: none"> Complete reports and records using clear language, concepts and industry terminology to ensure clarity of meaning
Numeracy	<ul style="list-style-type: none"> Perform basic calculations to determine areas, volumes and ratios for application of chemicals and soil additives
Navigates the world of work	<ul style="list-style-type: none"> Comply with explicit biosecurity and environmental procedures, and implement application rates and safety measures on chemical labels, seeking clarification where unsure

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB211 Apply treatments to trees	AHCARB201 Apply a range of treatments to trees	Title changed Prerequisite unit removed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB211 Apply treatments to trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has applied treatments to trees on at least one occasion according to work activity instructions for the following four situations:

- control weeds
- apply soil additives and ameliorants to the tree root system
- apply plant-based mulch
- implement soil de-compaction procedures using tools and equipment.

There must also be evidence that the individual has:

- confirmed target trees and treatments required with supervisor
- identified site hazards, assessed risks and confirmed controls with supervisor, including:
 - selected, checked and used personal protective equipment
 - confirmed availability of first aid equipment and emergency procedures
- selected, prepared, calibrated and conducted pre-operational checks on tools, equipment and machinery according to operational and biosecurity procedures
- identified and prepared chemical treatments according to manufacturer label instructions
- carried out cleaning and maintenance tasks on site and equipment, including disposal of unused materials and waste safely according to environmental procedures
- maintained records and reported according to workplace procedures.

All arboriculture work is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- practices and procedures for treating trees, including:

- using maps for locating trees
- tree recognition
- site hazard and risk assessment for tree treatments, including:
 - methods for assessing risk
 - control strategies for managing risk attributed to treating trees
 - first aid personnel, equipment, emergency plans
 - personal protective equipment
- common tree disorders and treatments, including:
 - weed plants and competition for growing conditions
 - nutrient disorders and the role of fertilisers
 - soil conditions and effect on tree growth
 - pests and diseases
- basic control strategies for tree disorders, including:
 - fertiliser application methods
 - ameliorants and effect on pH, soil compaction and condition
 - mulch, moisture retention and nutrient tie down
 - managing the growing environment
 - chemical treatments
 - biological treatments
 - integrated pest control
 - methods of weed control
- tools, equipment and machinery used in the treatment of trees, including:
 - soil de-compaction equipment
 - chemical sprayers and applicators
 - tree injection systems
 - fertiliser and ameliorant spreaders and applicators
- pre-operational and safety checks on tools, equipment and machinery
- chemicals and chemical applications, including:
 - interpretation and use of chemical label instructions
 - material safety data sheets
 - measurements and calculations for weighing and mixing chemicals
 - rates of application
 - dealing with chemical spills
- methods of cleaning and sanitising tools and equipment, including:
 - methods of disease transfer
 - biosecurity principles and hygiene practices
 - calibration techniques of application equipment
 - chemical application techniques, usage restrictions and risk controls
- environmental implications of tree treatments
- waste disposal, including:

- environmental protection
- biosecurity and hygiene practices
- records and record keeping requirements of tree treatments, including legislative and regulatory requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - living trees requiring treatments or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tree treatment equipment, including sprayers
 - measuring and weighing equipment
 - chemical spill kit
 - personal protective equipment
 - safety signage
- specifications:
 - workplace and manufacturer instructions for tree treatment equipment
 - procedures for application of treatments to trees
 - materials safety data sheets
 - product labels, including chemicals.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB212 Operate and maintain stump grinding machines

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to operate motorised stump grinding machines to safely remove tree stumps.

The unit applies to individuals who operate stump grinders in a broad range of arboriculture contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for stump removal operations	1.1 Confirm work instructions and stumps to be removed with supervisor 1.2 Assess the size and scale of stump grinding works 1.3 Identify and confirm location and depth of above and below ground services with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Confirm workplace health and safety hazards and controls from job safety analysis (JSA) with supervisor 1.5 Confirm availability of first aid and emergency personnel, equipment and procedures 1.6 Unload stump grinder from transport vehicle according to workplace and safety procedures
2. Carry out stump grinder pre-operational and safety checks	2.1 Check maintenance log for outstanding performance issues, and report incomplete maintenance to supervisor 2.2 Conduct pre-start checks on stump grinder according to manufacturer instructions 2.3 Check fluid levels and fill to manufacturer specifications 2.4 Check safety guards are secure and in place 2.5 Check safety switches are functioning correctly 2.6 Check debris curtain is in working order according to manufacturer instructions
3. Complete preparations for work	3.1 Select, check and use personal protective equipment 3.2 Assess stump and surrounds for impediments to grinding operations 3.3 Implement workplace health, safety, site, environmental and traffic control measures
4. Operate stump grinder	4.1 Plan the grinding operation and position grinder according to site conditions and operator instructions 4.2 Implement stump grinder start-up procedure 4.3 Operate stump grinder to grind stump according to manufacturer and operator instructions 4.4 Monitor cutting operation and adjust cutting rate and depth according to manufacturer and supervisor instructions 4.5 Undertake corrective action when stump grinder performance or safe operation has been compromised 4.6 Implement shutdown procedures following stump removal

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Complete stump grinding operations	5.1 Dispose of waste according to work instructions and environmental procedures 5.2 Clean stump grinder and equipment according to workplace and biosecurity procedures 5.3 Perform operator maintenance according to manufacturer instructions 5.4 Report and record stump grinder usage, maintenance and repair requirements according to repair and maintenance procedures 5.5 Load and secure stump grinder onto transport vehicle according to workplace and safety procedures, and regulatory requirements 5.6 Maintain records and report stump grinding outcomes according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from maintenance logs, operating instructions and policies to identify relevant and key information for preparing and operating machinery safely
Writing	<ul style="list-style-type: none"> Complete stump grinder operation records using clear language and industry terminology to ensure clarity of meaning
Numeracy	<ul style="list-style-type: none"> Perform basic calculations to determine fuel mixtures and machine fluid level and volumes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB212 Operate and maintain	AHCARB206 Operate and maintain	Prerequisite units removed	Equivalent

stump grinding machines	stump grinding machines	Performance criteria clarified Foundation skills added Assessment requirements updated	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB212 Operate and maintain stump grinding machines

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely operated a stump grinding machine to remove at least one stump no less than 60cm in diameter, including:

- unloaded and loaded the grinder on a transport vehicle
- carried out set-up and pre-operational and safety checks
- prepared the site ready for stump grinding work
- cleaned, sharpened and maintained the stump grinder.

There must also be evidence that the individual has:

- confirmed work instructions and stumps to be removed, and assessed the size and scale of the works
- confirmed hazards and controls from job safety analysis (JSA) including:
 - located services
 - selected, checked and used appropriate personal protective equipment
 - confirmed the availability of first aid and emergency equipment, personnel and procedures
 - implemented workplace health, safety, environmental and traffic control measures
- reviewed the maintenance log for outstanding performance issues, and reported inconsistencies
- assessed stump surrounds for impediments to stump grinding operations and planned and positioned stump grinding machine according to site conditions and operating procedures
- implemented start-up procedure and operated stump grinder including monitored ongoing performance and undertook adjustments and corrective action where performance was lacking
- shut down machine according to operator instructions and cleaned stump grinder disposing of waste material according to environmental and biosecurity procedures
- maintained records and reported grinding operations according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- site hazards, risk assessment and documenting controls in JSA, including:
 - control measures for workplace health, safety, site, environmental and traffic control
 - personal protective equipment
 - first aid kits and access
 - emergency procedures
 - methods and purpose for locating above and below ground services
 - exclusion zones, barriers and fencing
- pre-operational checks of stump grinders, including:
 - maintenance logs and their purpose
 - belts and pulleys, wear and replacement
 - cutter head and teeth adjustments and sharpening
 - tyre pressure
 - oil and fluid levels
 - preparing and adding fuel
 - hydraulic hoses
 - brakes
 - engine types and fuels
- safety checks of stump grinders, including:
 - guards for belt, power take-off (PTO) and grinder head
 - kill switch
 - dead man
 - debris curtain
- operation of stump grinders, including:
 - impediments to stump grinding operations
 - cutter head engagement and disengagement
 - positioning of stump grinders and operator
 - methods for determining spread and depth of cut
 - engine speed (rpm)
 - common faults, their signs and symptoms
- environmental implications of stump grinding operations, including methods of collecting waste material and disposal and recycling
- basic maintenance of stump grinding machines, including:
 - sharpening teeth
 - teeth replacement
 - belt replacement
 - records of operator usage in log record

- methods of maintaining records for maintenance and replacement items.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - access to stumps ready for grinding
- resources, equipment and materials:
 - stump grinder
 - tooth sharpening equipment
 - tools and equipment for conducting basic maintenance practices
 - cutter teeth
 - fuel and spill kit
 - personal protective equipment
 - first aid, emergency and traffic management kit
- specifications:
 - workplace procedures for stump grinding
 - manufacturer instructions for safe operation, cleaning and storage of stump grinding equipment
 - arboriculture hygiene and biosecurity standards.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB213 Perform ground-based rigging

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to select, check and install rigging systems to support aerial tree work for the controlled descent of loads to drop zone. This unit does not cover crane operations.

The unit applies to individuals working in a broad range of arboriculture contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

The arboriculture industry requires that all ground-based tree rigging work is undertaken according to preferred industry practices (as outlined in the Companion Volume).

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist in preparation of work site	1.1 Confirm work instructions and location of worksite with supervisor 1.2 Confirm workplace health and safety hazards and controls in job

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	safety analysis (JSA) with supervisor 1.3 Confirm availability of first aid and emergency personnel, equipment and procedures
2. Prepare for rigging	2.1 Identify tree defects and contribute to tree assessment process 2.2 Discuss and confirm rigging method with work team 2.3 Confirm rigging method complies with identified risk controls with supervisor 2.4 Select rigging equipment and check for defects, removing defective equipment from service 2.5 Select, check and use personal protective equipment
3. Perform rigging operations	3.1 Communicate with work team during operations according to work site and environmental conditions, using methods agreed with work team 3.2 Tie, dress, set and finish rigging knots and hitches according to rigging system requirements 3.3 Monitor rigging system, work team movements and environmental conditions to ensure safe working conditions 3.4 Control load to drop zone and adjust rigging according to aerial worker directions 3.5 Disconnect load from rigging system 3.6 Re-check rigging equipment components for defects, and remove defective equipment from service 3.7 Return rigging components to aerial work team
4. Complete rigging operations	4.1 Confirm completed rigging operations with aerial work team 4.2 Remove and dismantle rigging system from tree 4.3 Clean, check and store tools, equipment and machinery according to workplace procedures 4.4 Report and tag defective tools and equipment 4.5 Clean and store personal protective equipment 4.6 Record and report rigging operation outcomes according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Complete reports and records using clear language and industry terminology to ensure clarity of meaning
Oral communication	<ul style="list-style-type: none"> Use open and closed questions logically to clarify work instructions Use industry terminology to communicate with team members
Get the Work Done	<ul style="list-style-type: none"> Respond to routine problems using step-by-step procedures when safely setting and preparing rigging and checking and maintaining rigging equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB213 Perform ground-based rigging	AHCARB207 Perform ground based rigging	Prerequisite unit removed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent
AHCARB213 Perform ground-based rigging	AHCARB311 Tie, dress, set and finish arborist knots	Some content is covered in this redesigned unit	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB213 Perform ground-based rigging

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has installed rigging equipment and controlled at least six loads from an aerial location to the drop zone using ropes, knots and rigging system appropriate for the load dimensions and mass.

There must also be evidence that the individual has:

- confirmed work instructions and location of worksite
- identified site hazards, assessed risks and confirmed controls with supervisor including:
 - selected, checked and used appropriate personal protective equipment
 - confirmed the availability of first aid and emergency equipment, personnel and procedures
 - implemented workplace health, safety, environmental and traffic control measures
 - contributed to tree assessment process by assessing trees for defects
 - checked and removed defective equipment from service
 - monitored rigging system, work team movements and environmental conditions for safe work conditions
- communicated with work team and discussed and confirmed rigging method and rigging equipment during operations using agreed communications methods
- tied, dressed, set and finished arborist knots according to rigging task, including demonstrating the following knots:
 - alpine butterfly knot
 - bowline on the bight
 - cow hitch with better half
 - clove hitch and two half hitches
 - half hitch pre-knot
 - klemheist friction knot
 - marline pre-knot

- marline spike hitch
- riggers knot and two half hitches
- running bowline
- sheet bend
- slippery sheet bend
- timber hitch
- zeppelin bend
- controlled load to drop zone, adjusting rigging according to aerial worker instructions and disconnected load from rigging system
- returned rigging components to aerial work team after checking components for defects
- confirmed completion of rigging operation with aerial work team and removed and dismantled rigging system including:
 - cleaned, checked and stored tools and equipment from worksite
 - reported and tagged defective tools and equipment
- recorded and reported rigging outcomes according to workplace procedures.

All ground-based tree rigging work is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- current industry practices (as outlined in the Companion Volume) for ground-based tree rigging work and tree dismantling
- safe operations in ground-based rigging, including:
 - first aid, emergency personnel, equipment and procedures
 - workplace health, safety, site, environmental and traffic control measures
 - identification of ground-based hazards
 - above ground hazards and risk
 - personal protective equipment
 - monitoring the safety of working conditions
- procedures for tree assessment before rigging operations, including tree examination for tree defects
- ground-based rigging procedures and practices, including:
 - rigging equipment and its performance
 - rigging methods and rigging systems
 - examination of rigging equipment for defects, and procedures to manage defective equipment
 - assembling and installing rigging equipment
 - checking rigging equipment
 - tying, dressing, setting and finishing arborist knots for rigging

- communications strategies used in arboriculture, including:
 - voice
 - hand
 - whistle signals
 - electronic communications
 - communications specific to the rigging task
- techniques for controlling, raising, lowering and redirecting loads, including balancing load on centre of gravity
- cleaning, storing and maintaining tools and equipment
- records and reporting procedures for rigging operations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - worksite with aerial tree operations or environment that accurately represents workplace conditions
- resources, equipment and materials:
 - rigging equipment
 - static and dynamic rope systems
 - harnesses
 - lowering and friction devices
 - high decibel whistle
 - personal protective equipment
 - first aid and emergency kit
 - rescue kit
- specifications:
 - access to current preferred industry practices (as outlined in the Companion Volume) for ground-based tree rigging work and tree dismantling
 - workplace and manufacturer instructions for safe operation of rigging equipment
- relationships:
 - supervisor and aerial work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB214 Recognise trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to recognise trees and their environmental and social benefits.

The unit applies to individuals working in a broad range of arboriculture contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Examine tree features	1.1 Confirm the location and range of trees to be recognised with supervisor 1.2 Examine and record the morphological characteristics of tree specimens 1.3 Examine and record the tactile and sensory characteristics of tree

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	specimens
2. Examine tree condition	2.1 Examine tree for general condition of health and vigour 2.2 Record condition of tree health, noting signs and symptoms of tree disorders, and report to supervisor according to workplace procedures
3. Recognise tree	3.1 Use reference material to compare plant specimen characteristics to assist in tree recognition 3.2 Recognise tree by common name and botanical name 3.3 Confirm accuracy of tree recognition with work team
4. Recognise tree benefits	4.1 Examine tree for ecological habitat for localised biota 4.2 Recognise localised ecological and environmental benefits provided by tree 4.3 Recognise social benefits and value of tree
5. Report on results	5.1 Record key features observed in the process of tree recognition 5.2 Inform client of tree recognition process according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from reference materials to identify relevant characteristics for the recognising and basic classification of trees
Writing	<ul style="list-style-type: none"> Document outcomes of trees and their characteristics according to basic nomenclature for tree identification
Navigates the world of work	<ul style="list-style-type: none"> Follow international standards for plant classification and nomenclature

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB214 Recognise trees	AHCARB208 Recognise trees	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB214 Recognise trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has recognised at least a minimum of 35 different trees local to the region, and has:

- confirmed the location and range of trees to recognise with supervisor
- examined and recorded the characteristics of tree, including:
 - form, structures and local environment of tree
 - shape, colour and size of leaves
 - features of buds, branches and bark
 - flower type, colour and shape
 - features of fruit
 - tactile and sensory characteristics
 - general condition of health and vigour and signs and symptoms of tree disorders
 - ecological habitat for local biota
- used reference materials to assist tree recognition to common name and botanical name and confirmed with work team
- recognised ecological, environmental and social benefits provided by tree
- informed client of tree recognition outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- methods of recognising trees
- botanical features of trees and their morphological and sensory characteristics, including:
 - form, structures and local environment of tree
 - shape, colour and size of leaves
 - features of buds, branches and bark

- flower type, colour and shape
- features of fruit if present
- use of sensory methods in tree recognition
- general health and condition of trees and their indicative features for recognising tree species, including:
 - signs and symptoms of diseases
 - presence or absence of pests
 - other indicative disorders that assist in recognition of trees
- methods of collecting and recording information and data relevant to tree recognition
- methods of collecting and using botanical samples for tree recognition, including:
 - photographs and images
 - fresh or dried botanical specimens
- reference materials used in the identification of tree species, including:
 - field guides
 - photographs that assist in tree recognition
- basics of plant taxonomy, including:
 - common names
 - botanical name
- trees and their social and environmental benefits, including:
 - habitat
 - aesthetic
 - functional use
 - food
- workplace procedures and processes for communicating results to client.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - 35 different trees stipulated in the performance evidence
- resources, equipment and materials:
 - live tree specimens
 - specialist tools and equipment necessary for tree observations
 - botanical reference materials, tree databases
 - camera or image capture device
- specifications:
 - workplace procedures and processes for recording tree data and preparing reports
 - workplace instructions
- relationships:

- client and supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB301 Implement a tree maintenance program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement a tree maintenance program. It also describes the skills and knowledge required to apply a range of tree maintenance techniques; and monitor and review the maintenance program over the course of a year.

The work requires application of extensive arboricultural knowledge and a broad range of arboricultural skills. This unit applies to individuals who have a range of skills to select and apply a specialised range of methods, tools, equipment and information to complete routine activities and provide and transmit solutions to predictable and sometimes unpredictable problems. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards.

Pre-requisite Unit

AHCCHM303 Prepare and apply chemicals

AHCCHM304 Transport, handle and store chemicals

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Undertake site assessments and collect specimens	1.1 Determine location of above-and-below-ground services 1.2 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk 1.3 Perform site assessment to identify conditions which may impact upon the health of trees on site 1.4 Recognise stress inducing factors in accordance with characteristics of species 1.5 Recognise a wide range of common diseases, pests and nutritional deficiencies in trees 1.6 Recognise abiotic issues affecting health of trees 1.7 Collect specimens of stressed material for testing 1.8 Record and report results of site assessment and tests 1.9 Research health characteristics of tree species
2. Prepare treatment program	2.1 Access and read treatment program and confirm activities with management 2.2 Select appropriate treatment methods 2.3 Select, prepare, and carry out pre-operational and safety checks, on tools, equipment and machinery 2.4 Select and use personal protective equipment 2.5 Identify environmental implications of undertaking treatment program, assess likely outcomes and take appropriate action 2.6 Determine annual maintenance requirements for trees 2.7 Contribute to preparing a comprehensive full-year maintenance program 2.8 Record and implement work health, safety, site, environmental and traffic control measures
3. Undertake treatment program	3.1 Prepare and use treatment equipment 3.2 Apply physical or chemical treatments with due regard for environmental implications 3.3 Maintain growing environment in accordance with species needs 3.4 Monitor and review maintenance program over the course of a season of one year
4. Complete treatment program activities	4.1 Dispose of infected plant material and chemical waste appropriately 4.2 Sterilise equipment

Element	Performance criteria
	4.3 Clean and store personal protective equipment 4.4 Follow up physical or chemical treatments to ensure effectiveness 4.5 Determine timetables for follow up treatments and communicate them to work team 4.6 Maintain records and document the report for that year

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCARB301A Implement a tree maintenance program

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB301 Implement a tree maintenance program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be observed applying physical and chemical treatments to a range of trees in accordance with a full one-year treatment program. The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- determining location of above-and-below-ground services
- undertaking a site-specific risk assessment by identifying work health and safety hazards and assessing risk
- performing a site assessment to identify conditions which may impact upon the health of trees on site
- recognising stress inducing factors in accordance with characteristics of species
- recognising a wide range of common diseases, pests and nutritional deficiencies in trees
- assessing abiotic issues affecting health of trees, or impact on growth
- researching species characteristics on tree health
- collecting specimens of stressed material
- recording and report results of site assessment and tests
- accessing and read treatment program and confirm activities with management
- selecting, using and maintaining suitable personal protective equipment
- selecting appropriate treatment methods and equipment
- identifying environmental implications of undertaking treatment program,
- assessing likely outcomes of treatment programs and taking appropriate action
- determining annual maintenance requirements for trees
- contributing to preparation of a comprehensive full-year maintenance program
- recording and implementing work health, safety, site, environmental and traffic control measures
- preparing and using equipment
- applying physical or chemical treatments with due regard for environmental implications
- maintaining growing environment in accordance with species needs

- monitoring and reviewing maintenance program over season of one year
- disposing of infected plant material and chemical waste appropriately
- sterilising equipment
- following up physical or chemical treatments to ensure effectiveness
- determining timetables for follow up treatments and communicating to work team
- maintaining records and documenting a report for that year
- use of appropriate treatment methods and equipment
- communicating within the work team
- complying with relevant Australian Standards
- use of industry standard terminology to describe arboriculture and work environment
- applying work health and safety requirements in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- site-specific risk assessment methods
- treatments and treatment methods commonly used on trees
- comprehensive full-year maintenance programs
- recognition of a wide range of common diseases, pests and nutritional deficiencies in trees
- the abiotic issues that could affect the health of tree species
- methods of recording, storing and processing data
- how to interpret a treatment program
- the appropriate personal protective equipment
- methods of collecting and storing specimens for identification
- methods of testing collected specimens of stressed material
- worksite traffic control
- stress inducing factors for a variety of tree species
- methods for treating tree pests and diseases
- methods of analysing nutritional status of trees
- health characteristics of tree species.

Assessment Conditions

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - sprayers/application equipment
 - measuring and weighing equipment
 - spill kit
 - personal protective equipment (PPE)
 - first aid and emergency kit
 - traffic management kit
 - signage - chemical use
 - signage - work zone
 - trees
- materials:
 - tree inspection form
 - tree maintenance form
 - site assessment form
 - hazard identification and risk control form
 - equipment and PPE check form
 - emergency preparation form
 - chemical and treatment application form

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB303 Perform pruning operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to perform corrective and remedial pruning operations. The application of this unit of competency can occur on the ground or in aerial locations, once the candidate is situated in position to perform work. This unit of competency is independent of where the pruning occurs and the method of accessing the work location.

This unit applies to individuals who have a range of skills to select and apply a specialised range of methods, tools, materials and information to complete routine activities and provide and transmit solutions to predictable and sometimes unpredictable problems. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable current versions of Australian Standards such as AS 4373 Pruning of amenity trees.

Pre-requisite Unit

FWPCOT2237 Maintain chainsaws

FWPCOT2239 Trim and cut felled trees

OR

FWPCOT3238 Operate a pole saw

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for pruning operations	1.1 Determine location of above-and-below-ground services 1.2 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk 1.3 Receive pruning instructions from supervisor and clarify prior to undertaking work 1.4 Confirm first aid, rescue personnel, equipment and procedures 1.5 Communicate with work team during operations using voice, hand and whistle signals
2. Determine requirements of pruning work	2.1 Identify and confirm location of tree to be pruned 2.2 Inspect trees for access and work 2.3 Determine type, extent and limit of pruning work in accordance with specifications, scope of works and client brief 2.4 Maintain awareness of power line proximity, safe approach distances and clearances
3. Select and prepare tools and equipment	3.1 Select appropriate tools and equipment for pruning 3.2 Consider access and impact value of secateurs, handsaws, chainsaws and polesaws 3.3 Carry out pre-operational and safety checks on pruning tools and equipment 3.4 Select and use personal protective equipment 3.5 Sterilise pruning equipment in between individual tree work in accordance with hygiene and biosecurity considerations 3.6 Record and implement work health, safety, site, environmental and traffic control measures
4. Determine tree part to be removed	4.1 Investigate stem bark ridge, old cuts, dead branches and occluded and occluding branches 4.2 Determine separate parts to be a branch or co-dominant stem in relation to tree anatomy and branch attachment 4.3 Determine the part requiring removal to be a branch or co-dominant stem to select the appropriate pruning procedure
5. Carry out branch pruning operations	5.1 Use sharp pruning tools to make clean cuts 5.2 Operate chainsaws and polesaws as required to implement

Element	Performance criteria
	pruning cuts to the standards required by AS 4373 5.3 Apply compartmentalisation of decay in tree (CODIT) principles 5.4 Pre-cut or undercut branches to avoid splitting or tearing 5.5 Remove remaining stub with final cut 5.6 Observe final cut procedure for branch removal cutting as close as possible to the branch collar without cutting into the branch collar or leaving a protruding stub. 5.7 Use branch bark ridge to determine angle of cut when removing a branch in the absence of a visible collar 5.8 Ensure bark at edge of all branch pruning cuts remains firmly attached
6. Carry out reduction pruning	6.1 Use branch bark ridge as guide to angle and position of final cut when making reduction cuts 6.2 Ensure lateral branch to which the final cut is made, is at least one third of diameter of branch being reduced at point of final cut.
7. Carry out stem pruning operations	7.1 Use stem bark ridge to determine angle of cut when removing a co-dominant stem 7.2 Be guided to position and angle of final cut, by positions and angles of joins between tissue of declining or dead stems and those of healthy stems elsewhere in tree 7.3 Ensure bark at edge of all stem pruning cuts remains firmly attached
8. Improve pruning quality	8.1 Inspect past pruning cuts to determine tree response 8.2 Use tree response to assess the quality of past pruning cuts 8.3 Seek feedback on pruning from other arborists 8.4 Identify and rectify incorrect pruning cuts 8.5 Modify future pruning cuts based on tree responses and feedback from others
9. Complete pruning operations	9.1 Drop pruning material into designated drop zone 9.2 Clean, maintain and store tools and equipment 9.3 Collect and dispose of, or recycle pruned material in a manner that causes minimal environmental damage 9.4 Maintain workplace records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB303 Perform pruning operations Release 2	AHCARB303 Perform pruning operations Release 1	Corrected prerequisite codes	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB303 Perform pruning operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must perform the remedial and corrective pruning operations involved in branch pruning, reduction pruning and stem pruning. The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- determining location of above-and-below-ground services
- undertaking a site-specific risk assessment by identifying work health and safety hazards and assessing risk
- receiving pruning instructions from supervisor and clarifying prior to undertaking work
- communicating with work team during operations using voice, hand and whistle signals
- confirming first aid, rescue equipment and rescue procedures applicable to tree work
- identifying location of tree to be pruned
- inspecting trees for access and work
- determining type extent and limit of pruning work in accordance with the specifications, scope of works or client brief
- maintaining awareness of power line proximity, safe approach distances and clearances
- selecting appropriate tools and equipment for pruning
- considering access and impact value of secateurs, handsaws, chainsaws and polesaws
- selecting, preparing, and carrying out pre-operational and safety checks, on tools, equipment and machinery
- selecting and using personal protective equipment
- sterilising pruning equipment in between work on individual trees in accordance with hygiene and biosecurity considerations
- recording and implementing work health, safety, site, environmental and traffic control measures

- investigating stem bark ridge, old cuts, dead branches and occluded and occluding branches
- determining the separate parts to be a branch or co-dominant stem in relation to the tree anatomy and branch attachment
- determining the part requiring removal to be a branch or a co-dominant stem
- using sharp pruning tools to make clean cuts
- operating chainsaws and polesaws
- implementing pruning cuts to the standards required by AS 4373
- applying compartmentalisation of decay in tree (CODIT) principles
- pre-cutting or undercutting branches to avoid splitting or tearing
- removing remaining stub with final cut
- observing final cut procedure for branch removal for cutting as close as possible to the branch collar without cutting into the branch collar or leaving a protruding stub.
- using branch bark ridge to determine angle of cut when removing a branch in the absence of a visible collar
- ensuring bark at edge of all branch pruning cuts remains firmly attached
- using the branch bark ridge as a guide to the angle and position of the final cut when making reduction cuts
- ensuring the lateral branch to which the final cut is made, is at least one third of the diameter of the branch being reduced at the point of the final cut.
- using the stem bark ridge to determine the angle of cut when removing a co-dominant stem
- being guided to the position and angle of the final cut, by positions and angles of joints between tissue of declining or dead stems and those of healthy stems elsewhere in tree
- ensuring bark at edge of all stem pruning cuts remains firmly attached
- inspecting past pruning cuts to determine tree response
- using tree response to assess the quality of past pruning cuts
- seeking feedback on pruning from other arborists
- identifying and rectifying incorrect pruning cuts
- modifying future pruning cuts based on tree responses and feedback from others
- dropping pruning material into designated drop zone
- cleaning, maintaining and storing tools and equipment
- collecting and disposing of, or recycling pruned material in a manner that causes minimal environmental damage
- maintaining workplace records
- use of industry-standard terminology to describe arboriculture and the work environment.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- risk assessment
- visual tree assessment
- tree health, growth habit, structure, stability and growing environment

- first aid
- operation of chainsaws and polesaws
- tree and branch anatomy and attachments: lateral branch collars, branch bark ridges, stem bark ridges
- pruning cuts to the standards required by AS 4373
- reduction cuts
- tree response to pruning
- correct and incorrect pruning cuts
- rectifying cuts
- pruning hygiene
- biosecurity
- communications using voice, hand and whistle signals
- power line proximity, safe approach distances and clearances
- rescue personnel, equipment and procedures applicable to tree work
- interpreting specifications
- maintaining workplace records
- disposal of plant debris in environmentally aware and sensitive manner
- work health and safety procedures for pruning operations.

Assessment Conditions

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment; however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - chainsaws - climbing saw
 - pole saw
 - pruning handsaws
 - high decibel whistle
 - personal protective equipment (PPE)
 - first aid and emergency kit
 - traffic management kit
 - signage - work zone
 - trees and tree parts
- materials:

- pruning operations form
- hazard identification and risk control form
- equipment and PPE check form
- emergency preparation form
- work communications form
- work site operations form
- work records form

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB305 Dismantle trees

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to dismantle trees in confined spaces and in difficult or hazardous circumstances.

This unit applies to individuals who have a range of skills to select and apply a specialised range of methods, tools, materials and information to complete routine activities and provide and transmit solutions to predictable and sometimes unpredictable problems. Discretion and judgement is required. The work requires the application of extensive arboricultural knowledge. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards.

Pre-requisite Unit

The prerequisite units of competency for this unit are:

- AHCARB310 Perform aerial rigging
- AHCARB307 Use advanced climbing techniques
- OR
- TLILIC2005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)
- FWPFGM3212 Fall trees manually (intermediate).

Note the following chain of prerequisites that also applies to this unit of competency.

Unit of competency	Prerequisite requirement
AHCARB310 Perform aerial rigging	AHCARB207 Perform ground based rigging* AHCARB307 Use advanced climbing techniques*
AHCARB207 Perform ground based rigging	AHCARB311 Tie, dress, set and finish arborist knots
AHCARB307 Use advanced climbing techniques	AHCARB312 Use standard climbing techniques to access trees*
AHCARB312 Use standard climbing techniques to access trees	AHCARB311 Tie, dress, set and finish arborist knots

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for tree removal	1.1 Determine access to site and gain approval by owner or site management 1.2 Confirm site preparations, including notification of local residents and authorities where necessary 1.3 Determine location of above-and-below-ground services 1.4 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk 1.5 Protect, relocate and secure assets, property and vegetation related to work zone activities from potential damage during tree removal 1.6 Inspect trees to determine dimensions, appropriate removal methods and to confirm appropriateness of selected risk controls 1.7 Determine drop zone and communicate to all personnel 1.8 Confirm first aid, rescue personnel, equipment and procedures applicable to tree work

Element	Performance criteria
	1.9 Carry out pre-operational and safety checks on tools, equipment and machinery 1.10 Select and use personal protective equipment 1.11 Record and implement work health, safety, site, environmental and traffic control measures
2. Implement dismantling of trees	2.1 Communicate with work team during operations, as required, verbally, using hand signals and whistles 2.2 Calculate mass of tree section, balance of load and confirm mass does not exceed safe working limit of equipment 2.3 Use dismantling techniques to ensure branches and trunk sections fall or are lowered safely into determined drop zone, with no damage to property and equipment or injury to personnel 2.4 Use and control friction devices as required 2.5 Dismantle branches and trunk sections using the 'cut and drop' method, and cut and lower by ropes and other lowering devices 2.6 Use directional felling techniques to ensure trunk of dismantled tree falls safely into determined drop zone with no damage to property and equipment or injury to personnel 2.7 Use and control elevated work platforms as required
3. Complete tree removal	3.1 Reduce dismantled tree sections to manoeuvrable lengths 3.2 Remove plant material and debris from site 3.3 Clean and check tools, equipment and machinery, and store 3.4 Clean and store personal protective equipment 3.5 Record completion of tree removal and report to owner or site manager

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCARB305 Dismantle trees Release 2	AHCARB305 Dismantle trees Release 1	Corrected prerequisite codes	Equivalent unit
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Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB305 Dismantle trees

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be observed removing a tree in a confined space using directional felling and removing a tree in a confined space using a dismantling process. The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- determining location of above-and-below-ground services
- undertaking a site-specific risk assessment by identifying work health and safety hazards and assessing risk
- inspecting trees to determine appropriate removal methods
- confirming appropriateness of selected risk controls
- determining access to site and gaining approval by owner or site management
- confirming site preparations, including notification of local residents and authorities where necessary
- recording and implementing work health, safety, site, environmental and traffic control measures
- determining drop zone and communicate to all personnel
- protecting, relocating and securing assets, property and vegetation related to work zone activities from potential damage during tree removal
- selecting, preparing, checking and using tools, equipment and machinery
- selecting and using personal protective equipment
- selecting and using safety equipment
- calculating mass of tree section
- confirming mass of tree section does not exceed the safe working limit of equipment
- dismantling branches and trunk sections using the 'cut and drop' method, and
- cutting and lowering sections by ropes and other lowering devices

- using dismantling techniques to ensure branches and trunk sections fall or are lowered safely into determined drop zone, with no damage to property and equipment or injury to personnel
- using directional felling techniques to ensure trunk of dismantled tree falls safely into determined drop zone with no damage to property and equipment or injury to personnel
- using and controlling friction devices where required
- using and controlling elevated work platforms as required
- reducing dismantled tree section to manoeuvrable lengths without injury to operator
- removing plant material and debris from site
- cleaning and checking tools, equipment and machinery, replacing if faulty or worn, and storing
- recording completion of tree removal and reporting to owner or site manager
- use of advanced rigging techniques
- calculating tree dimensions, mass of tree section and balance of load
- erecting signage, barriers, warning devices and traffic management equipment
- coordinating and sequencing work team activities
- use of industry standard terminology to describe arboriculture and work environment.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- site and tree hazards that might be encountered
- selection of low risk tree removal methods
- advanced climbing techniques and rope handling
- selecting and tying, dressing, setting and finishing arborist knots
- operation of lowering devices where required
- types of lowering devices that might be required, including friction devices, and methods for using them
- how to estimate density of tree sections
- the impact of force, breaking strength, safety factors and cycles to failure
- how to identify and evaluate structural defects in trees
- how to determine the density of tree sections
- safe working limits on all relevant rigging and lowering equipment
- methods of estimating mass and balance of load
- first aid and rescue personnel, equipment and procedures applicable to tree work
- methods of minimising environmental impact
- legislation and local regulations governing tree removal.

Assessment Conditions

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - rigging equipment
 - single rope technique (SRT) climbing kit
 - static and dynamic rope kit
 - harness
 - lowering and friction devices
 - gaffs/spurs
 - high decibel whistle
 - personal protective equipment (PPE)
 - first aid and emergency kit
 - rescue kit
 - traffic management kit
 - signage – work zone
 - trees
- materials:
 - dismantling operations form
 - chainsaw operations form
 - pruning operations form
 - knot identification form
 - hazard identification and risk control form
 - equipment and PPE check form
 - emergency preparation form
 - rescue form - aerial
 - work communications form
 - work site operations form
 - work records form

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB306 Undertake aerial rescue

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to perform an aerial rescue where an injured or unconscious person is safely brought to the ground from a tree or elevated work platform (EWP).

The unit applies to Arborists preparing and planning for the coordination and execution of rescue operations and the implementation of safety and first aid requirements.

Aerial rescue is likely to be undertaken in emergency situations with little or no supervision. It involves working closely with other members of a team to ensure the safety of all personnel and the public during a rescue operation. This unit applies to individuals who have a range of skills to select and apply a specialised range of methods, tools, materials and information to complete routine activities and provide and transmit solutions to predictable and sometimes unpredictable problems.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards.

Pre-requisite Unit

The prerequisite units of competency for this unit are:

- HLTAID003 Provide first aid

- AHCARB310 Perform aerial rigging.

Note the following chain of prerequisites that also applies to this unit of competency.

Unit of competency	Prerequisite requirement
AHCARB310 Perform aerial rigging	AHCARB207 Perform ground based rigging* AHCARB307 Use advanced climbing techniques* OR TLILIC2005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)
AHCARB207 Perform ground based rigging	AHCARB311 Tie, dress, set and finish arborist knots
AHCARB307 Use advanced climbing techniques	AHCARB312 Use standard climbing techniques to access trees*
AHCARB312 Use standard climbing techniques to access trees	AHCARB311 Tie, dress, set and finish arborist knots

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan for aerial rescue	1.1 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk 1.2 Confirm emergency communication system is working 1.3 Confirm emergency services contact numbers are documented 1.4 Select, prepare and check first aid equipment and rescue kit

Element	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Position rescue and first aid equipment for easy access 1.6 Clarify own role in rescue situations 1.7 Confirm first aid, rescue personnel, equipment and rescue plan procedures with work team prior to undertaking work 1.8 Select and use personal protective equipment 1.9 Communicate with work team during operations using voice, hand and whistle signals
2. Assess and respond to an aerial emergency situation	2.1 Attempt communication with casualty 2.2 Activate emergency plan and request assistance from work team and public in accordance with rescue plan 2.3 Identify hazards associated with rescue, assess risks and implement suitable controls 2.4 Determine presence of live electrical wires or apparatus that will interfere with ability to access casualty and take appropriate action 2.5 Apply 'Safe Approach Distance' measures to live electrical situations 2.6 Use appropriate access equipment to carry out rescue in accordance with rescue plan 2.7 Maintain communication with casualty
3. Assess nature of injury	3.1 Secure rescuer safely 3.2 Secure casualty 3.3 Assess injuries to determine whether or not to move casualty based on first aid procedures and risk assessment 3.4 Apply first aid that can be performed above ground, as required 3.5 Support, but do not move, a casualty with possible neck or spinal injuries and await expert medical treatment 3.6 Maintain communications with ground crew
4. Lower casualty to ground	4.1 Inform casualty of lowering procedure 4.2 Prepare casualty for descent in accordance with first aid, rescue plan and risk assessments 4.3 Descend tree safely in a controlled manner

Element	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.4 Lower casualty safely to ground with support of ground crew
5. Complete rescue operations	5.1 Apply first aid on ground as needed 5.2 Obtain emergency assistance as required 5.3 Isolate equipment involved in accident for potential investigation and prevent reuse until checked 5.4 Remove all equipment in a controlled manner 5.5 Clean and store equipment 5.6 Clean and store personal protective equipment 5.7 Maintain records of aerial rescue in appropriate format

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB306 Undertake aerial rescue Release 2	AHCARB306 Undertake aerial rescue Release 1	Minor typographical errors corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB306 Undertake aerial rescue

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be observed planning and implementing a rescue operation and undertaking an aerial rescue. The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- undertaking a site-specific risk assessment by identifying work health and safety hazards and assessing risk
- confirming emergency communication system is working
- confirming emergency services contact numbers are documented
- selecting, preparing and checking first aid equipment and rescue kit
- positioning rescue and first aid equipment for easy access
- clarifying own role in rescue situations
- confirming first aid, rescue personnel, equipment and rescue plan procedures with work team prior to undertaking work
- selecting and using personal protective equipment
- communicating with work team during operations using voice, hand and whistle signals
- attempting communication with casualty
- activating emergency plan and requesting assistance from work team and public in accordance with rescue plan
- identifying hazards associated with rescue, assessing risks and implementing suitable controls

- determining presence of live electrical wires or apparatus that will interfere with ability to access casualty and take appropriate action
- applying 'safe approach distance' measures to live electrical situations
- using appropriate access equipment to carry out rescue in accordance with rescue plan
- maintaining communication with casualty
- securing rescuer safely
- securing casualty
- assessing injuries to determine whether or not to move casualty based on first aid procedures and risk assessment
- applying first aid that can be performed above ground, as required
- supporting, but do not move, a casualty with possible neck or spinal injuries and awaiting expert medical treatment
- maintaining communications with ground crew
- informing casualty of lowering procedure
- preparing casualty for descent in accordance with first aid, rescue plan and risk assessments
- descending tree safely in a controlled manner
- lowering casualty safely to ground with support of ground crew
- applying first aid on ground as needed
- obtaining emergency assistance as required
- isolating equipment involved in accident for potential investigation and prevent reuse until checked
- removing all equipment in a controlled manner
- cleaning and storing equipment
- cleaning and storing personal protective equipment
- maintaining records of aerial rescue in appropriate format
- using industry standard terminology to describe aerial rescues and the work environment.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- emergency procedures to assist in ground-based rescues of EWP and climbing workers
- hazard identification methods
- risk assessment systems
- Safe Approach Distances
- recognition of live electrical wires or apparatus
- electrical wires and apparatus safety
- first aid procedures
- contents of a first aid kit
- use of a first aid kit
- emergency services communication systems
- emergency services contact numbers
- emergency plans

- appropriate placement of rescue equipment
- use of rescue kits
- rescue personnel, equipment and rescue plan procedures
- how to control risk to rescuer, victim and others
- types of reporting required after rescue
- personal protective equipment
- how to deal with an emergency
- lowering mechanisms for an aerial rescue
- work health and safety records with regards to incident reporting.

Assessment Conditions

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - rescue kit
 - rescue dummy
 - emergency communication system
 - rigging equipment
 - single rope technique (SRT) climbing kit
 - static and dynamic rope kit
 - harnesses
 - lowering and friction devices
 - high decibel whistle
 - personal protective equipment (PPE)
 - first aid and emergency kit
 - traffic management kit
 - signage – work zone
 - trees
- materials:
 - rescue form - aerial
 - hazard identification and risk control form
 - equipment and PPE check form

- emergency preparation form
- knot identification form
- work communications form
- work site operations form.

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB307 Use advanced climbing techniques

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to climb trees with ropes, harnesses and specialist equipment using advanced techniques for the purpose of mobility around the required sections of trees for work positioning.

This unit applies to individuals who have a range of cognitive, technical and communication skills to select and apply a specialised range of methods, ropes, equipment and information to complete routine activities and provide and transmit solutions to predictable and sometimes unpredictable problems. Discretion and judgement is required. The work requires the application of extensive arboricultural knowledge. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards.

Pre-requisite Unit

AHCARB312 Use standard climbing techniques to access trees*

AHCARB311 Tie, dress, set and finish arborist knots

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare site and inspect equipment	1.1 Determine appropriate method for accessing tree – climbing or using an elevated work platform (EWP) – through discussion with work team 1.2 Determine location of above-and-below-ground services 1.3 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk 1.4 Confirm first aid and rescue personnel, equipment and procedures 1.5 Ensure work team member present, capable, willing and equipped to assist or perform aerial rescue operations 1.6 Prepare and carry out pre-operational and safety checks, on ropes, harnesses, tools and equipment 1.7 Select and use personal protective equipment 1.8 Record and implement work health, safety, site, environmental and traffic control measures
2. Select climbing equipment	2.1 Select harness and appropriate equipment for climbing 2.2 Inspect tree to determine low risk access route through discussion with work team and seek feedback 2.3 Estimate tree height and load in relation to safe working limits of ropes and equipment 2.4 Determine the hold, release and grip attributes of rope 2.5 Select and use static and dynamic rope as required 2.6 Select and use triple locking carabiners 2.7 Determine limits, relative advantages and disadvantages of friction hitches
3. Prepare to access tree	3.1 Tie, dress, set and finish climbing knots and hitches 3.2 Communicate with work team during operations using voice, hand and whistle signals 3.3 Maintain awareness of power line safe approach distances and vegetation clearances 3.4 Select low risk anchor points in accordance with strength, suitability requirements and branch weight
4. Prepare climbing spurs and gaffs for dismantling operations	4.1 Prepare climbing spurs and gaffs for dismantling operations 4.2 Check all components of climbing spurs for defects and wear 4.3 Check gaff tip profile for correct dimensions using gaff gauge 4.4 Sharpen gaff tip cutting edge with file at defined angle using gaff gauge

Element	Performance criteria
	4.5 Adjust climbing spurs to provide correct operator fit 4.6 Access and perform dismantling work using climbing spurs 4.7 Maintain separation of spurs 4.8 Maintain clearance distance between spurs and ropes
5. Access and ascend tree	5.1 Access and ascend tree using low risk access route with harness and lanyard 5.2 Ascend using single rope, double rope and selected friction hitch as required 5.3 Ascend using uni-ascenders, foot and hand ascenders, and other ascension devices as required 5.4 Use micrograbs, grigris and micro-pulleys as required for mobility and work positioning 5.5 Demonstrate ability to carry out change-overs as required 5.6 Set up redirects and belays using slings and anchors as required 5.7 Select multiple lines to climb trees and tree parts as required 5.8 Select multiple lines to perform tree operations as required
6. Descend from tree	6.1 Descend tree in a controlled manner 6.2 Remove all access equipment in a controlled manner 6.3 Check, clean and store access equipment 6.4 Clean and store personal protective equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCARB307A Undertake complex tree climbing.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB307 Use advanced climbing techniques

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be observed ascending and descending trees using advanced tree climbing practices.

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts. The candidate must provide evidence for and demonstrate:

- appropriate method for accessing tree – climbing or using an EWP – through discussion with work team
- determining location of above-and-below-ground services
- undertaking a site-specific risk assessment by identifying work health and safety hazards and assessing risk
- confirming first aid and rescue personnel, equipment and procedures
- ensuring work team member present, capable, willing and equipped to assist or perform aerial rescue operations
- preparing and carrying out pre-operational and safety checks, on ropes, harnesses, tools and equipment
- selecting and using personal protective equipment and safety equipment
- recording and implementing work health, safety, site, environmental and traffic control measures
- selecting harness and appropriate equipment for climbing
- inspecting tree to determine low risk access route through discussion with work team and seek feedback
- estimating tree height and load in relation to safe working limits of ropes and equipment
- determining the hold, release and grip attributes of rope
- selecting and using static and dynamic rope as required
- selecting and using triple locking carabiners

- determine limits, relative advantages and disadvantages of friction hitches including: Tautline, Blake's, Prussik, Klemheist, Valdetain, French Prussik and specialised variations
- tying, dressing, setting and finishing climbing knots and hitches
- communicating with work team during operations using voice, hand and whistle signals
- maintaining awareness of power line safe approach distances and vegetation clearances
- selecting low risk anchor points in accordance with strength, suitability requirements and branch weight
- accessing and ascending tree using low risk access route with harness and lanyard
- ascending using single rope, double rope and selected friction hitch as required
- ascending using uni-ascenders and foot ascenders as required
- using micrograbs, grigris and micro-pulleys as required for access and tree operations
- demonstrating ability to carry out change-overs
- setting up redirects and belays using slings and anchors
- selecting multiple lines to access trees and tree parts
- selecting multiple lines to perform tree operations
- descending tree in a controlled manner
- removing all access equipment in a controlled manner
- cleaning and storing climbing equipment
- cleaning and storing personal protective equipment
- use of industry standard-terminology to describe climbing and the work environment.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- appropriate method of tree access
- selection of climbing or EWP access
- determination of location of above-and-below-ground services
- site-specific risk assessment
- first aid personnel, equipment and procedures
- rescue personnel, equipment and procedures
- work health, safety, site, environmental and traffic control measures
- pre-operational and safety checks, on ropes, harnesses, tools and equipment
- personal protective equipment
- types of climbing ropes
- dynamic and static ropes
- rope characteristics
- uses of climbing ropes
- safe working limits of ropes
- safe working limits of equipment
- defects in ropes, tools and equipment
- climbing harnesses and lanyards

- climbing equipment
- triple action carabiners
- friction hitches including:
 - Tautline, Blake's, Prussik, Klemheist, Valdetain, French Prussik and specialised variations
- arborist knots
- tying knots
- dressing knots
- setting knots
- checking knots
- finishing knots
- industry voice, hand and whistle signals
- low risk access routes
- estimation of tree height
- estimation of load
- safe working limits
- tree access techniques and equipment
- strength and suitability requirements
- single and double rope techniques
- uni-ascenders and foot ascenders
- micrograbs, grigris, micro-pulleys
- use of climbing spikes of various lengths
- change-overs
- redirects and belays using slings and anchors
- use of multiple lines to access trees and tree parts
- advanced climbing techniques
- low risk anchor points
- maintenance of awareness of power lines
- power line safe approach distances and vegetation clearances
- controlled descent operations
- controlled removal of access equipment
- cleaning of equipment
- storage of equipment.

Assessment Conditions

It is an industry requirement that delivery of training and assessment in this unit provides for the explicit conditions of work team capability for aerial rescue operations. It is an industry requirement for competency in this unit that assessment must include a log record of two hundred (200) hours of advanced climbing.

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit. Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - single rope technique (SRT) climbing kit
 - harness
 - chaps
 - climbing friction hitches
 - high decibel whistle
 - personal protective equipment (PPE)
 - first aid and emergency kit
 - rescue kit
 - traffic management kit
 - trees
- materials:
 - climbing techniques form - advanced
 - climbing log record – advanced
 - tree inspection form
 - hazard identification and risk control form
 - equipment and PPE check form
 - knot identification form
 - work communications form
 - rescue form - aerial

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB308 Install cable and bracing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to install cable and bracing hardware into the structure of a tree.

The work requires the application of extensive arboricultural knowledge. This unit applies to individuals who have a range of skills to select and apply a specialised range of methods, tools, equipment and information to complete routine activities and provide and transmit solutions to predictable and sometimes unpredictable problems.

Some discretion and judgement may be required to the extent of pruning and cable and bracing required for a particular tree. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards.

Pre-requisite Unit

Nil.

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for work	1.1 Determine cable and bracing requirements from client brief 1.2 Determine materials required for installing cable and bracing 1.3 Determine location of above-and-below-ground services 1.4 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk 1.5 Select appropriate cable and bracing tools and equipment 1.6 Select and use personal protective equipment 1.7 Confirm first aid and emergency personnel, equipment and procedures 1.8 Record and implement work health, safety, site, environmental and traffic control measures
2. Prepare trees for cable and bracing	2.1 Examine structural tree components using visual tree assessment and in accordance with Compartmentalisation of Decay in Trees (CODIT) principles in relation to tree anatomy and physiology 2.2 Examine branches to determine vitality and integrity of attachment ensuring ability to safely implement bracing 2.3 Undertake preliminary pruning in accordance with AS 4373 to aid cable and bracing installation
3. Install cable and bracing	3.1 Discuss planned approach to cable and bracing with other members of work team 3.2 Install cable and bracing 3.3 Determine the requirement for additional pruning to restore tree to its natural habit and form and sustain its growth 3.4 Check and record completed program for quality of work

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCARB308A Install cable and bracing.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB308 Install cable and bracing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be observed installing cable and bracing according to a pruning program.

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- determining location of above-and-below-ground services
- undertaking a site-specific risk assessment
- determining cable and bracing requirements from client brief
- confirming first aid and rescue procedures applicable to tree work
- examining structural tree components
- examining vitality and structural integrity of branch attachments
- identifying work health and safety hazards and assessing risk
- recording and implementing site and traffic control measures
- use of tree climbing techniques or ability to work from an elevated work platform
- installing cable and bracing
- determining requirement for additional pruning
- checking and recording completed program for quality of work
- use of industry standard terminology to describe arboriculture and work environment.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the effect of pruning on tree growth, habit and form
- tree anatomy and tree physiology
- tree pruning techniques appropriate to requirements of species

- visual tree assessment
- selection of appropriate cable and bracing tools and equipment
- selection of suitable personal protective equipment
- the principles and methods of pruning (tree anatomy and physiology)
- identification of work health and safety hazards, risk assessment and risk control application
- quality of pruning work
- cable and bracing techniques appropriate to tree species
- cable and bracing theory
- Compartmentalisation of Decay in Trees (CODIT) principles
- implications of pruning cuts and the way trees respond
- sustainable growth requirements of trees
- natural habit and form of trees
- first aid and rescue personnel, equipment and procedures applicable to tree work
- local government tree protection and preservation regulations
- Australian Standard 4373–2007 relating to tree pruning.

Assessment Conditions

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - dynamic and static cable and bracing tools and products
 - high decibel whistle
 - personal protective equipment (PPE)
 - first aid and emergency kit
 - traffic management kit
 - signage – work zone
 - trees
- materials:
 - cable and bracing operations form
 - hazard identification and risk control form
 - equipment and PPE check form
 - emergency preparation form

- work records form

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB309 Implement a tree protection program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement a tree protection program.

The work requires the application of a broad range of arboricultural and horticultural skills and knowledge. This unit applies to individuals who work under broad direction and take responsibility for their own work, including limited responsibility for the work of others. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards.

Pre-requisite Unit

Nil.

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Determine the implementation requirements of the tree protection program	1.1 Determine location of above-and-below-ground services 1.2 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk 1.3 Identify trees to be protected, reasons for protection and types of protection methods from the tree protection plan 1.4 Assess and record the environmental impacts of the program 1.5 Identify resources required to implement the program and confirm availability with relevant personnel or suppliers 1.6 Determine, schedule and allocate implementation tasks and make allowances for contingencies 1.7 Discuss information relating to the implementation of the program with appropriate personnel
2. Make site preparations	2.1 Mark the location of protection areas on the site 2.2 Select, prepare, and carry out pre-operational and safety checks, on tools, equipment and machinery 2.3 Select and use personal protective equipment 2.4 Confirm first aid equipment and emergency procedures 2.5 Record and implement work health, safety, site, environmental and traffic control measures
3. Construct protective devices	3.1 Use tools, equipment and materials appropriate to the task 3.2 Construct or assemble tree protection devices with consideration for any needs specific to the species or individual tree 3.3 Install protection devices 3.4 Inspect completed protection devices for viability and take remedial action where necessary
4. Monitor protection program	4.1 Monitor tree health during program 4.2 Take remedial action to maintain tree health 4.3 Check protection devices periodically for their effectiveness 4.4 Report and repair broken, damaged or ineffective components 4.5 Dismantle and remove protection devices 4.6 Clean, maintain and store tools and equipment 4.7 Maintain records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCARB309A Implement a tree protection program.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB309 Implement a tree protection program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be observed determining the protection requirements of a tree, setting out a site according to the requirements of the protection program and constructing protective devices appropriate to the needs of the tree.

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- determining location of above-and-below-ground services
- undertaking a site-specific risk assessment by identifying work health and safety hazards and assessing risk
- identifying trees to be protected, reasons for protection and types of protection methods
- assessing and recording environmental impacts of the program
- determining, scheduling and allocating implementation tasks
- making allowances for contingencies
- marking location of protection areas on the site
- erect safety barriers and signage to ensure public and operator safety
- carrying out pre-operational and safety checks
- recording and implementing work health, safety, site, environmental and traffic control measures
- constructing or assembling tree protection devices appropriate for needs of tree
- installing tree protection devices
- inspecting completed protection devices for viability
- monitoring tree health
- reporting and repairing broken, damaged or ineffective protection devices
- dismantling and removing protection devices
- maintaining records

- recognising healthy, stressed and damaged trees
- use of industry standard terminology to describe arboriculture and the work environment.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- methods of identifying and protecting trees
- tree protection systems, types and methods of protection
- methods of marking sites
- environmental impact assessment methods
- selection, use and maintenance of suitable personal protective equipment
- application of work health safety and environmental controls
- task scheduling and contingency management
- tree health (tree physiology)
- systems for use installation of safety barriers and signage
- tree protection plans
- techniques for assembling or constructing tree protection devices suitable to the requirements of tree species
- protection requirements of tree species
- remedial actions for tree health
- first aid and rescue personnel, equipment and procedures applicable to tree work
- specifications and construction methods for installing protection devices
- environmental factors affecting trees
- principles, regulations and practices for restricting access and traffic management.

Assessment Conditions

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - tree protection devices/equipment
 - construction tools
 - personal protective equipment (PPE)
 - first aid and emergency kit

- traffic management kit
- signage – work zone
- trees
- materials:
 - tree maintenance form
 - hazard identification and risk control form
 - equipment and PPE check form
 - emergency preparation form

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB311 Tie, dress, set and finish arborist knots

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to tie, dress, set and finish arborist knots, hitches and bends.

This unit applies to ground based workers undertake defined activities with appropriate methods, tools and information, work in a structured context, apply knowledge and skills to demonstrate limited autonomy and judgement, and provide solutions to a limited range of predictable problems. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards.

Pre-requisite Unit

Nil.

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Assist in preparation of work site	1.1 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk 1.2 Confirm first aid and emergency equipment and procedures applicable to tree work 1.3 Carry out pre-operational and safety checks on ropes and equipment 1.4 Select and use appropriate personal protective equipment 1.5 Record and implement work health, safety, site, environmental and traffic control measures
2. Tie, dress and set arborist knots	2.1 Communicate with work team during operations using voice, hand and whistle signals 2.2 Determine work application for knot for ground-based, aerial, rigging and climbing work tasks 2.3 Determine appropriate knot for locking and non-locking attributes, strength, impact on rope strength, loosening and slippage 2.4 Determine loss of rope strength in using selected knot 2.5 Determine appropriate rope for knot application 2.6 Determine requirements for secondary knots and stopper knots 2.7 Tie rope to form intended knot 2.8 Leave appropriate tail length approximately five times diameter of rope 2.9 Dress knot to align all parts of knot 2.10 Adjust knot to appropriate proportions 2.11 Set knot to 'tighten and load' knot prior to use 2.12 Finish knot with selected stopper knot, tucked tail or suitable tail length
3. Inspect and use knot	3.1 Inspect completed knot 3.2 Check knot for correctness of assembly 3.3 Confirm knot for correct work application 3.4 Maintain effective communication with work team 3.5 Install and use knot in work application 3.6 Untie knot at completion of work task
4. Complete knot operations	4.1 Clean and check ropes 4.2 Report and tag faulty or worn ropes 4.3 Clean and store personal protective equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Ground-based Rigging applications must include knowledge of:

- Alpine butterfly knot
- Bowline on the bight
- Cows hitch with better half
- Clove hitch + two half hitches
- Half hitch pre knot
- Klemheist friction knot
- Marline pre knot
- Marline spike hitch
- Riggers knot + two half hitches
- Running bowline
- Sheet bend
- Slippery sheet bend
- Timber hitch
- Zeppelin bend

Above Ground applications must include knowledge of:

- Scaffold knot
- Double Fishermans Knot/Prusik loop
- Girth Hitch
- English Prusik Knot
- Marlin Spike
- Clove Hitch
- Double Overhand Stopper Knot
- Sheet bend
- Slippery Sheet Bend
- Bowline Knot
- Running Bowline Knot

Aerial Rigging applications must include knowledge of:

- Cows hitch
- Riggers knot + two half hitches
- Clove hitch + two half hitches
- Alpine butterfly knot
- Half hitch pre knot
- Marline pre knot

- Marline spike hitch
- Zeppelin bend
- Running bowline
- Bowline on the bight
- Rolling hitch
- Timber hitch
- Sheet bend
- Slippery sheet bend

Unit Mapping Information

New unit - no equivalent.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB311 Tie, dress, set and finish arborist knots

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- undertaking a site-specific risk assessment by identifying work health and safety hazards and assessing risk
- confirming first aid and emergency equipment and procedures applicable to tree work
- selecting and using appropriate personal protective equipment
- recording and implementing work health, safety, site, environmental and traffic control measures
- communicating with work team during operations using voice, hand and whistle signals
- determining work application for:
 - ground-based knots
 - aerial knots
 - rigging knots and
 - climbing knots
- determining appropriate knot for locking and non-locking attributes, strength, impact on rope strength, loosening and slippage
- determining loss of rope strength using selected knot
- determining appropriate rope for knot application
- determining requirements for secondary knots and stopper knots
- determining appropriate rope used for knot application
- tying knot to form intended knot
- leaving appropriate tail length approximately five times diameter of rope
- dressing knot to align all parts of knot
- setting knot to 'tighten and load' knot prior to use
- finishing knot with selected stopper knot as required

- inspecting completed knot
- checking knot for correctness of assembly
- confirming knot for correct work application
- maintaining effective communication with work team
- installing and using knot in work application
- untying knot at completion of work task
- clean and check ropes
- reporting and tagging faulty or worn ropes
- cleaning and storing personal protective equipment.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- site-specific risk assessment
- first aid and emergency equipment and procedures
- personal protective equipment
- work health, safety, site, environmental and traffic control measures
- voice, hand and whistle signals
- work applications for knots
- knots for ground-based rigging tasks
- knots for aerial rigging tasks
- knots for climbing work tasks
- determination of appropriate knot by evaluation of knot attributes:
 - locking and non-locking attributes
 - impact on rope strength
 - loosening and
 - slippage
- determining loss of rope strength using selected knot
- determination of appropriate rope for knot application
- knot tying
- intended knot
- tail length
- diameter of rope
- alignment of knot parts
- knot setting
- knot tightening and loading
- stopper knot
- knot finishing
- correctness of assembly and use in application
- inspection, installation and use of knots
- effective work team communications
- tagging system

- checking and cleaning ropes.

Assessment Conditions

It is an industry requirement for the assessment of the knots appropriate to the work application as listed in the Range of Conditions section of this unit of competency.

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - static and dynamic rope kit
 - personal protective equipment (PPE)
 - first aid and emergency kit
 - traffic management kit
- materials:
 - knot identification form
 - hazard identification and risk control form
 - equipment and PPE check form
 - emergency preparation form
 - work communications form

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB312 Use standard climbing techniques to access trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to climb trees with ropes and harnesses using standard techniques for the purpose of accessing required sections of trees.

This unit applies to workers who have a range of cognitive, technical and communication skills to select and apply a specialised range of methods, ropes, equipment and information to complete routine activities and provide and transmit solutions to predictable and sometimes unpredictable problems. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards.

Pre-requisite Unit

AHCARB311 Tie, dress, set and finish arborist knots

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare site and inspect equipment	1.1 Determine appropriate method for accessing tree – climbing or using an elevated work platform (EWP) – through discussion with work team 1.2 Determine location of above-and-below-ground services 1.3 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk 1.4 Confirm first aid and rescue personnel, equipment and procedures 1.5 Ensure work team member present, capable, willing and equipped to assist or perform aerial rescue operations 1.6 Prepare and carry out pre-operational and safety checks, on ropes, harnesses, tools and equipment 1.7 Select and use personal protective equipment 1.8 Record and implement work health, safety, site, environmental and traffic control measures
2. Select climbing equipment	2.1 Select harness and appropriate equipment for climbing 2.2 Inspect tree to determine low risk access route through discussion with work team and seek feedback 2.3 Estimate tree height and load in relation to safe working limits of ropes and equipment 2.4 Determine the hold, release and grip attributes of rope 2.5 Select and use dynamic rope 2.6 Select and use triple locking carabiners
3. Prepare to access tree	3.1 Tie, dress, set and finish climbing knots and hitches 3.2 Communicate with work team during operations using voice, hand and whistle signals 3.3 Maintain awareness of power line clearances 3.4 Select low risk anchor points in accordance with strength, suitability requirements and branch weight
4. Access and ascend tree	4.1 Access and ascend tree using low risk access route with harness and lanyard 4.2 Ascend using double rope with prussik technique 4.3 Ascend using trunk walking technique and foot ascenders as required
5. Descend from tree	5.1 Descend tree in a controlled manner 5.2 Remove all access equipment in a controlled manner 5.3 Clean and store access equipment 5.4 Clean and store personal protective equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCARB204A Undertake standard climbing techniques.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB312 Use standard climbing techniques to access trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be observed climbing trees using standard climbing techniques in a safe manner. The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- appropriate method for accessing tree – climbing or using an EWP – through discussion with work team
- determining location of above-and-below-ground services
- undertaking a site-specific risk assessment by identifying work health and safety hazards and assessing risk
- confirming first aid and rescue personnel, equipment and procedures
- ensuring work team member present, capable, willing and equipped to assist or perform aerial rescue operations
- preparing and carrying out pre-operational and safety checks, on ropes, harnesses, tools and equipment
- selecting and using personal protective equipment and safety equipment
- recording and implementing work health, safety, site, environmental and traffic control measures
- selecting harness and appropriate equipment for climbing
- inspecting tree to determine low risk access route through discussion with work team and seek feedback
- estimating tree height and load in relation to safe working limits of ropes and equipment
- determining the hold, release and grip attributes of rope
- selecting and using dynamic rope
- selecting and using triple locking carabiners
- tying, dressing, setting and finishing climbing knots and hitches
- communicating with work team during operations using voice, hand and whistle signals
- maintaining awareness of power line clearances

- selecting low risk anchor points in accordance with strength, suitability requirements and branch weight
- accessing and ascending tree using low risk access route with harness and lanyard
- ascending using double rope with prussik technique
- ascending using trunk walking technique and foot ascenders as required
- descending tree in a controlled manner
- removing all access equipment in a controlled manner
- cleaning and storing climbing equipment
- cleaning and storing personal protective equipment
- use of industry standard-terminology to describe climbing and the work environment.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- appropriate method of tree access
- selection of climbing or EWP access
- determination of location of above-and-below-ground services
- site-specific risk assessment
- first aid personnel, equipment and procedures
- rescue personnel, equipment and procedures
- work health, safety, site, environmental and traffic control measures
- pre-operational and safety checks, on ropes, harnesses, tools and equipment
- personal protective equipment
- types of climbing ropes
- dynamic ropes
- rope characteristics
- uses of climbing ropes
- safe working limits of ropes
- safe working limits of equipment
- defects in ropes, tools and equipment
- climbing harnesses and lanyards
- climbing equipment
- triple locking carabiners
- arborist knots
- tying knots
- dressing knots
- setting knots
- checking knots
- finishing knots
- industry voice, hand and whistle signals
- low risk access routes
- estimation of tree height

- estimation of load
- safe working limits
- tree access techniques and equipment
- strength and suitability requirements
- double rope with prussik technique
- trunk walking and foot ascenders
- standard climbing technique
- low risk anchor points
- maintenance of awareness of power lines
- power line clearances
- controlled descent operations
- controlled removal of access equipment
- cleaning of equipment
- storage of equipment
- work health and safety measures relating to own work.

Assessment Conditions

It is an industry requirement that delivery of training and assessment in this unit provides for the explicit conditions of work team capability for aerial rescue operations. It is an industry requirement for competency in this unit that assessment must include a log record of two hundred (200) hours of standard climbing.

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - standard climbing kit
 - harness
 - high decibel whistle
 - personal protective equipment (PPE)
 - first aid and emergency kit
 - rescue kit
 - traffic management kit
 - trees

- materials:
 - climbing techniques form- standard
 - climbing log record - standard
 - hazard identification and risk control form
 - equipment and PPE check form
 - emergency preparation form
 - work communications form
 - knot identification form

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB314 Implement a tree maintenance program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to identify a tree species and assess the health and condition in order to develop, implement and schedule a tree maintenance program and treatments according to safety and environmental procedures.

The unit applies to individuals who work under broad direction in arboriculture and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

The arboriculture industry requires that all tree maintenance work is undertaken according to preferred industry practices (as outlined in the Companion Volume).

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Undertake site assessment of trees	1.1 Undertake a site-specific job safety analysis (JSA) and record and implement site-specific control measures 1.2 Perform a site assessment and liaise with client to identify

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>conditions that may impact upon the health of trees on site</p> <p>1.3 Identify genus and species of trees</p> <p>1.4 Recognise signs of stress according to the characteristics of species</p> <p>1.5 Recognise causes of stress according to characteristics of species</p> <p>1.6 Assess abiotic factors affecting health of trees and impact on growth</p> <p>1.7 Assess biotic factors affecting health of trees and impact on growth</p> <p>1.8 Record and report results of site assessment according to workplace procedures</p>
2. Prepare tree maintenance program	<p>2.1 Identify maintenance requirements for trees according to identified health issues</p> <p>2.2 Select treatments for identified maintenance requirements</p> <p>2.3 Identify environmental implications for identified treatments</p> <p>2.4 Document a maintenance program using requirements, treatments and environmental implications</p>
3. Undertake treatment program	<p>3.1 Select tools, equipment and machinery required for treatment</p> <p>3.2 Conduct pre-operational checks and calibrate equipment and machinery according to manufacturer instructions</p> <p>3.3 Select, check and use personal protective equipment</p> <p>3.4 Implement workplace health, safety, environmental and traffic control procedures according to JSA</p> <p>3.5 Apply treatments according to maintenance plan and environmental procedures and industry best practice</p> <p>3.6 Maintain growing environment according to species cultural requirements</p>
4. Complete treatment program activities	<p>4.1 Dispose of waste according to workplace and environmental procedures</p> <p>4.2 Clean and sanitise equipment according to biosecurity procedures</p> <p>4.3 Clean and store personal protective equipment</p> <p>4.4 Determine schedule for follow-up treatments and communicate to work team</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.5 Maintain records and report work outcomes according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language and correct concepts and terminology to ensure clarity of meaning when reporting and recording work outcomes
Numeracy	<ul style="list-style-type: none"> Calculate volume, weight and ratio for determining and applying treatments to trees

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB314 Implement a tree maintenance program	AHCARB301 Implement a tree maintenance program	Prerequisite units removed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB314 Implement a tree maintenance program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared, documented and implemented a tree maintenance program for at least three trees for a period of not less than 3 months in the following situations:

- a tree requiring tree treatments and reduction pruning
- a tree with structural defects and site targets
- a tree requiring health and soil based remediation.

There must also be evidence that the individual has:

- identified site-specific health and safety issues including personal protective equipment required
- assessed abiotic and biotic conditions affecting health of trees and discussed the conditions and factors with client
- documented a tree maintenance program and included in the program the following:
 - tree maintenance requirements
 - treatment methods and equipment
 - environmental implications of treatments
- maintained growing environment of tree in accordance with species needs and scheduled follow-up treatments
- cleaned and sanitised equipment and disposed of waste
- maintained records and reported work outcomes on completion of activities.

All tree maintenance work is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- preferred industry practices (as outlined in the Companion Volume) for tree maintenance work
- purpose and process for completing job safety analysis (JSA)
- treatments and treatment methods commonly used on trees, including:
 - physical treatments
 - chemical treatments and materials safety data
 - environmental implications of different types of treatments
 - solutions to conflicting treatment options
 - calculations for measuring treatment applications
- structure and development of tree maintenance programs, scheduling and planning
- site assessment to identify conditions impacting the health of trees on site
- recognition and treatment of common tree disorders above and below ground, including:
 - pests and diseases
 - nutritional disorders, deficiencies and toxicities
 - stress-inducing factors for a variety of tree species
 - signs of stress characteristics
 - causes of stress in tree species
 - common structural faults and defects of trees
 - soil-based problems, including compaction
 - sampling procedures identifying pests, diseases and soil conditions
- abiotic issues that could affect the health of tree species, including:
 - temperature extremes
 - frost and sunburn
 - light intensity and duration
 - water, natural rainfall, hail, snow, including volume and distribution
 - wind direction and intensity
 - lightning
 - topography and aspect
 - compaction and drainage
 - pH, salinity and contamination
- biotic issues that could affect the health of tree species, including:
 - soil ecosystem; beneficial and pathogenic organisms
 - humans
 - animals
 - other plants, including vines and mistletoe
- identification and culture of trees, including:
 - techniques for identifying trees

- recognising and maintaining tree cultural requirements
- tree structure and function
- physiological processes affecting tree growth
- compartmentalisation of decay in trees (CODIT)
- tree growth and structure resulting from CODIT responses
- safety while undertaking tree treatments, including:
 - hazards associated with chemical treatments
 - personal protective equipment
 - traffic control
- effect of treatment materials on off-target species
- methods for identification and analysing for tree health, including:
 - methods of testing collected specimens of affected material
 - methods of analysing nutritional status of trees
 - health characteristics of tree species
- tree establishment and tree maintenance, including:
 - standards for selection of tree stock for landscape use - AS2303
 - standards for pruning of amenity trees – AS4373
 - planting and establishment requirements of tree stock
- waste disposal, including:
 - protection of the environment
 - biosecurity and hygiene practices
- safe operation, maintenance, cleaning and sanitation of tree treatment equipment
- record keeping and data management for tree maintenance.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - the trees growing in the conditions stipulated in the performance evidence
- resources, equipment and materials:
 - tree treatment application equipment
 - measuring and weighing equipment
 - chemical spill kit
 - personal protective equipment
 - first aid and emergency kit
- specifications:
 - preferred industry practices (as outlined in the Companion Volume) for tree maintenance work
 - workplace and manufacturer instructions for safe operation, cleaning and storing of treatment equipment

- procedures for application of treatments
- materials safety data sheets
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB315 Inspect trees for access and work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to inspect a tree from the ground for the selection of access and tree work methods, and advise client of outcome.

The unit applies to individuals who work in arboriculture under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

The arboriculture industry requires that all tree inspection work is undertaken according to preferred industry practices (as outlined in the Companion Volume).

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare tree inspection requirements	1.1 Confirm access to site and location of tree 1.2 Determine the scope of tree works required in consultation with client 1.3 Undertake a site-specific job safety analysis and record and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	implement site-specific control measures according to workplace safety procedures 1.4 Identify above and below ground services and determine limits of approach 1.5 Confirm accessibility of first aid and emergency personnel, equipment and procedures 1.6 Select, check and use personal protective equipment
2. Inspect tree and surrounds	2.1 Inspect tree for access and tree work methods 2.2 Identify tree species and assess impact of tree characteristics on selection of access and work method 2.3 Conduct a hazard evaluation of the tree and surrounds 2.4 Conduct tests on tree components to determine integrity when visual inspection is insufficient 2.5 Identify and assess presence of fauna habitat and other ecological impediments to tree access
3. Determine method of access and work method	3.1 Select tree access and tree work methods according to tree inspection results 3.2 Review workplace health and safety hazards, risk assessment and planned controls for selected method of access and tree work method 3.3 Implement additional control measures and adjust tree access and work methods according to site requirements 3.4 Advise site work team of identified hazards and control measures to implement
4. Maintain records and advise stakeholders	4.1 Document control measures, tree access and work method according to workplace procedures 4.2 Advise stakeholders where tree work is altered or rescheduled according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language and correct concepts and terminology to ensure clarity of meaning when reporting and recording work outcomes
Oral communication	<ul style="list-style-type: none"> Use open and closed questions logically to clarify work instructions Use industry terminology to communicate with team members Accurately interpret verbal and nonverbal communication

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB315 Inspect trees for access and work	AHCARB302 Inspect trees for access and work	Prerequisite unit removed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB315 Inspect trees for access and work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has inspected at least six trees, each with a client specified scope of works for access and tree work, and where:

- at least 1 tree is inside the safe approach distance of power lines
- at least 2 trees have defects and hazards that will require additional controls specified in the scope of works
- at least 2 trees have defects and hazards that require a change in the work method specified in the scope of works
- at least 1 tree is within the specifications for the scope of works.

There must also be evidence that the individual has for each of the six trees:

- confirmed access to site and identified tree and scope of works
- completed a job safety analysis documenting site-specific items including:
 - work health, safety and environmental hazards
 - risks that were not controlled by the organisational Safe Work Method Statement (SWMS)
 - risk control measures
 - identification of overhead and underground services and approach distances
 - use of personal protective equipment
- inspected tree for structural defects, disease, insects, fauna and other considerations in trunk, roots and branches that may impact tree access or work
- selected an appropriate tree access or tree work method, considering:
 - the scope of works required
 - site and tree hazards identified
 - limitations imposed by crew skill level and resources available
- informed work team of hazards and control measures to implement during access and tree work

- documented control measures, and tree access and work method according to workplace procedures
- advised stakeholders where tree works were altered or rescheduled according to workplace procedures.

All tree inspection work is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- preferred industry practices (as outlined in the Companion Volume) for tree inspection work
- the use of organisational policies, procedures and documents to conduct a site-specific job safety analysis
- personal protective equipment when conducting tree inspections
- workplace health, safety, site, environmental and traffic control measures
- tree inspection methods and principles, including:
 - locating and identifying trees
 - tree inspection methodology
 - determination of location of above and below ground services
- methods of identifying tree species
- tree species and characteristics that impact on the selection of access to trees and undertaking tree works
- selection of tree access and tree work methods that are appropriate for:
 - the scope of works required
 - site and tree hazards identified
 - limitations imposed by crew skill level and resources available
- recognising limitations and identifying where risks will affect tree access and work methods, and prevent work
- preparation and use of job safety analysis and/or safe work method statement (SWMS) when managing safety risk and local traffic
- safety considerations and procedures when working near overhead power lines, including:
 - basics of electrocution
 - power line types and insulation
 - approach distances and safety zones, voltage and arching
 - authorisations to work near power lines
 - tools, equipment, tree loads, personnel and power line contact
 - legal liability
- safety considerations and procedures when working near underground services, including:
 - underground power
 - gas lines

- wire and optical fibre
- water
- damage and legal liabilities
- safe work practices
- conducting a hazard evaluation of trees and their surrounds
- risk due to work site environment, including wind and weather conditions
- risk due to condition of tree surrounds, including:
 - soil disturbance
 - trip hazards
 - excavations
 - other trees
 - foot and vehicle traffic
- risk due to roots and trunk flare hazards, including:
 - movement
 - decay
 - mechanical damage
 - compromised structure
- risk due to tree trunk and canopy hazards, including:
 - structural defects
 - decay
 - disease
 - cavities
 - swellings
 - aggressive insects and wildlife
 - integrity of attachment of limbs
 - hangers
 - presence of allergic plants or vines
- ecological impediments to accessing trees, including:
 - insects and other fauna
 - habitat and hollows
- field tests on trees to investigate extent of hazards, including:
 - load testing
 - probing cavities
 - testing hollows by sounding
- documentation and reporting requirements relevant to tree inspections and communicating with clients.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - six trees as stipulated in the performance evidence
- resources, equipment and materials:
 - personal protective equipment used for tree inspections
- specifications:
 - legislation, regulations, codes of practice and standards relating to working near services and power lines
 - preferred industry practices (as outlined in the Companion Volume) for tree inspection work
 - documentation for planning and reporting tree inspection work
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB316 Perform pruning operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to perform corrective and remedial pruning operations to trees either from the ground or whilst working at height.

The unit applies to individuals who work in arboriculture under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

The arboriculture industry requires that all pruning operations work is undertaken according to preferred industry practices (as outlined in the Companion Volume).

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for pruning operations	1.1 Receive and confirm instructions with supervisor 1.2 Confirm access to site and location of trees and work zones 1.3 Determine type, extent and limit of pruning work in accordance with specifications, scope of works and client brief

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Undertake a site-specific job safety analysis (JSA) and record and implement site-specific control measures</p> <p>1.5 Communicate with work team using agreed methods according to works undertaken and site and environmental conditions</p>
2. Prepare tools, equipment and work environment	<p>2.1 Select tools and equipment for pruning work</p> <p>2.2 Consider access and impact of selected pruning tools and equipment on tree</p> <p>2.3 Carry out pre-operational and safety checks on pruning tools and equipment</p> <p>2.4 Select, check and use personal protective equipment</p> <p>2.5 Disinfect pruning equipment during tree work according to hygiene and biosecurity procedures and tree assessment outcomes</p> <p>2.6 Implement workplace health, safety, site, environmental and traffic control measures according to JSA</p>
3. Determine tree parts to be removed and plan pruning operations	<p>3.1 Investigate tree canopy shape, structure and defects to determine pruning plan</p> <p>3.2 Assess tree structure for stem co-dominance and branch attachment to determine options for pruning cut procedure</p> <p>3.3 Identify tree part requiring removal and select pruning procedure and location of cut from identified pruning cut options</p>
4. Perform pruning operations	<p>4.1 Prepare pruning equipment to ensure cuts are clean</p> <p>4.2 Use pruning tools to make pruning cuts according to industry standards and manufacturer operating instructions</p> <p>4.3 Make cuts from a secure body position with awareness of extant tree hazards</p> <p>4.4 Maintain awareness of power line proximity, safe approach distances and clearances</p> <p>4.5 Select pruning cuts for crown maintenance or crown modification according to scope of works</p> <p>4.6 Perform pre-cutting techniques to avoid splitting or tearing of the stem and bark</p> <p>4.7 Perform final cut according to the principles of compartmentalisation of decay in trees (CODIT) and current industry standards</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.8 Ensure bark at edge of all pruning cuts remains firmly attached
5. Improve pruning quality	5.1 Review previous pruning cuts to determine tree response to pruning activities 5.2 Assess tree response to previous pruning methods and compare with current work practice 5.3 Seek advice from consulting arborists on quality of current pruning work practice 5.4 Identify substandard current pruning cuts and rectify according to advice
6. Complete pruning operations	6.1 Drop or lower pruned material into designated drop zone 6.2 Clean, maintain and store tools and equipment 6.3 Collect and dispose of pruned material according to environmental procedures 6.4 Maintain pruning records according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately complete organisational documents, including job safety analysis, using clear language, correct spelling, grammar and industry terminology

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB316 Perform pruning	AHCARB303 Perform pruning	Prerequisite units removed Elements and performance	Equivalent

operations	operations	criteria clarified Foundation skills added Assessment requirements updated	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB316 Perform pruning operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has demonstrated pruning operations according to given specifications for at least 4 trees, including:

- 1 tree with a minimum height of at least 10 metres and a minimum 5 metre spread for which the pruning specifications must include:
 - removal of hazardous dead wood or branches from the tree canopy
 - reduction of the extent of the crown
 - selective pruning to remove branches to resolve specific problems
- 1 tree of less than 4 metres in height to be formatively pruned
- 2 mature trees of at least 10 metres in height, for which the predetermined specifications must include at least 3 of the following maintenance or modification activities:
 - reduced the extent of the crown
 - lifted the height of the crown
 - pruned trees for low voltage line clearance on a residential property
 - performed remedial pruning including removal of dead wood
 - removed dead fronds and fruit from palm trees
 - pollarded a tree.

There must also be evidence that the individual has:

- communicated with work team during operations using communication method agreed with work team
- determined type, extent and limit of pruning work according to the specifications, scope of works, relevant standards and client brief
- operated safely while undertaking work, including:
 - conducted a job safety analysis for the site before work
 - maintained safe approach distances and clearances to power lines
 - selected and used personal protective equipment

- inspected tree for safe access and work
- conducted tree pruning from a secure and safe position
- selected, prepared and checked and safely used tools and equipment and cleaned and maintained for all pruning operations
- determined crown maintenance and modifications required and identified pruning cut options according to Australian Standards AS 4373 including:
 - stem co-dominance
 - stem bark ridge
 - old cuts
 - dead branches
 - occluded and occluding branches
 - used pre-cuts and undercuts of branches to avoid splitting or tearing and ensured bark remained firmly attached
- performed final cuts that complied with principles of compartmentalisation of decay in trees (CODIT), including:
 - cut to the branch collar without leaving a protruding stub
 - used branch bark ridge to determine angle of cut where visible collar is absent
 - ensured lateral branch to which the final cut is made is the correct diameter for the branch being reduced
 - used stem bark ridge to determine the angle of cut when removing a co-dominant stem
 - positioned the final cut guided by positions and angles of joins between tissue of declining or dead stems and those of healthy stems elsewhere in tree
 - ensured bark at edge of cuts remained firmly attached
- conducted a review of pruning practices for tree response to pruning and advice from arborist and modified pruning methods to improve pruning quality
- dropped or lowered pruned material into designated drop zone and collected and removed pruned material according to workplace and environmental procedures
- maintained pruning records according to workplace procedures.

All pruning operations work is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose of pruning trees and the standards expected, including:
 - canopy maintenance and the principles of dead wooding, crown thinning, selective pruning, formative pruning
 - canopy modification and the principles of reduction pruning, crown lifting, pollarding, remedial pruning, line clearance
- work health and safety procedures for pruning operations

- work site procedures for job safety analysis (JSA) for pruning and activities and control measures, including:
 - recognition of hazards
 - assessing the risks
 - identifying controls
 - documenting a JSA
 - personal protection
 - first aid
 - rescue procedures
- visual tree assessment, including health, growth habit, structure, stability and growing environment
- pruning equipment; advantages and disadvantages and use, including:
 - secateurs
 - chainsaws
 - pole saws
 - handsaws
 - equipment pre-start checks
- tree and branch anatomy and attachments related to pruning, including:
 - lateral branch collars
 - branch bark ridges
 - stem bark ridges
 - occluded and occluding branches
 - dominant and co-dominant stems
- preferred industry practices (as outlined in the Companion Volume) for pruning operations and Australian Standard AS 4373
- gauging the quality of pruning by assessing tree responses to pruning, including:
 - recognising correct and incorrect pruning cuts
 - rectifying poor pruning cuts
- hygiene and biosecurity procedures to minimise cross-infections from pruning activity
- safe communication during tree pruning work, including the impact of noise, environmental conditions, communications resources, and visibility
- communications strategies used in the arboriculture industry, including:
 - voice
 - hand
 - whistle signals
 - electronic communications
- safety considerations and procedures when working near overhead power lines, including:
 - basics of electrocution
 - power line types and insulation
 - approach distances and safety zones, voltage and arcing
 - authorisations to work near power lines

- tools, equipment, tree loads, personnel and power line contact
- legal liability
- workplace records for pruning operations
- environmental procedures and site management and clean-up.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - the trees stipulated to be pruned in the performance evidence
- resources, equipment and materials:
 - chainsaws, including a climbing saw
 - pole saw
 - pruning handsaws
 - personal protective equipment
 - first aid and emergency kit
 - traffic management kit
 - signage – work zone
 - trees and tree parts
- specifications:
 - workplace procedures and instructions related to pruning trees
 - legislation, regulations, codes of practice, Australian Standard AS 4373 related to pruning trees
 - preferred industry practices (as outlined in the Companion Volume) for pruning operations
 - documentation for planning, obtaining permits
- relationships:
 - client and work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

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AHCARB317 Dismantle trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to dismantle trees in close proximity to structures and other assets and in difficult or hazardous circumstances using a specialised range of methods, tools, equipment and materials and requiring the application of extensive arboricultural knowledge.

The unit applies to individuals who work in arboriculture under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

The arboriculture industry requires that all tree dismantling work is undertaken according to preferred industry practices (as outlined in the Companion Volume).

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for tree removal	1.1 Determine access to site and confirm approval for works to commence 1.2 Confirm site preparations, including notification of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>stakeholders</p> <p>1.3 Undertake a site-specific job safety analysis (JSA), and record and implement site-specific control measures according to workplace safety procedures</p> <p>1.4 Inspect tree to identify structural defects and appropriate removal methods</p> <p>1.5 Determine a dismantling strategy identifying potential drop or lowering zones and providing safety zones for load, tools and equipment</p> <p>1.6 Review dismantling strategy with work crew and adjust according to feedback</p> <p>1.7 Protect property and vegetation assets in the work zone from potential damage</p> <p>1.8 Confirm availability of emergency response resources and safety procedures</p> <p>1.9 Select and prepare tools, equipment and machinery and conduct pre-operation and safety checks</p> <p>1.10 Select, check and use personal protective equipment</p>
2. Design and prepare rigging system	<p>2.1 Design rigging system according to dismantling strategy</p> <p>2.2 Select appropriate anchor and attachment points</p> <p>2.3 Estimate force applied to tree structure and to rigging equipment during planned rigging operations</p> <p>2.4 Design rigging system to allow for load, impact of force and structural integrity of tree</p> <p>2.5 Consider breaking strength, working load limits and safety factor of equipment in use</p> <p>2.6 Discuss and confirm rigging system with work team</p> <p>2.7 Select rigging equipment, inspect for defects, and repair, replace or remove from service damaged components according to workplace safety procedures</p> <p>2.8 Assemble and configure rigging equipment into selected rigging system and install at anchor point</p>
3. Implement dismantling of trees	3.1 Coordinate and sequence work with work team during operations using communication methods agreed with work team for site environment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.2 Access tree crown safely according to dismantling strategy and workplace safety procedures</p> <p>3.3 Select and apply rigging or dismantling techniques in correct sequence to dismantle tree according to determined dismantling strategy</p> <p>3.4 Plan each cut and install rigging equipment according to rigging system design and manufacturer instructions</p> <p>3.5 Check rigging assembly is correctly installed and safe to use prior to performing cut</p> <p>3.6 Accurately apply a selection of cuts to achieve directional felling and controlled rigging and dismantling of the tree crown and trunk</p> <p>3.7 Perform cuts from a safe and secure work position using industry standard cutting techniques</p> <p>3.8 Monitor and adjust dismantling process as required to maintain a safe and efficient workflow</p> <p>3.9 Dismantle tree by sections into drop zone according to industry standards</p>
4. Complete tree removal activities	<p>4.1 Clean, check, maintain and store tools and equipment according to workplace procedures</p> <p>4.2 Maintain records according to workplace procedures</p> <p>4.3 Report completion of tree removal to stakeholder</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately complete organisational documents, including job safety analysis and records, using clear language, grammar and industry terminology
Oral communication	<ul style="list-style-type: none"> Clearly explain detailed information using language, tone and pace appropriate to work team when discussing rigging systems and

Skill	Description
	communicating during dismantling work
Numeracy	<ul style="list-style-type: none"> Interpret numerical information and calculate volume, weight and dimension of tree components when estimating the forces on rigging equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB317 Dismantle trees	AHCARB305 Dismantle trees	Prerequisite units removed Element added Performance criteria added, clarified or removed Foundation skills added Assessment requirements updated	Not equivalent
AHCARB317 Dismantle trees	AHCARB310 Perform aerial rigging	Some content is covered in this redesigned unit	Not equivalent
AHCARB317 Dismantle trees	AHCARB311 Tie, dress, set and finish arborist knots	Some content is covered in this redesigned unit	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB317 Dismantle trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has completely dismantled at least 2 trees in close proximity to structures or other assets. For each tree, the individual must have planned, communicated, prepared, conducted and completed each step of the dismantling process in the correct sequence within a timeframe expected by industry.

Each tree must be a minimum of 15 metres in height and have a minimum canopy spread of 10 metres. There must be a drop zone of no more than 4 square metres available with no access within the remaining drip line of the tree representing structures or other assets to be protected.

There must also be evidence that for each tree the individual has:

- controlled the process from start to finish
- devised a plan, communicated the plan and executed the plan
- selected and implemented an appropriate rigging strategy and sequence including:
 - balancing and lifting of lateral branches
 - negative rigging of timber and heads
- dismantled the tree safely and without damage to assets including:
 - selected appropriate tree components and attached rope correctly
 - made accurate and appropriate cuts from safe working positions
 - maintained constant communication with work team

There must also be evidence that the individual has:

- identified workplace health, safety and environmental hazard and risks and implemented controls for the site, including:
 - conducted and completed a job safety analysis (JSA) or safe work method statement (SWMS)
 - prepared and used personal protective equipment
 - protected site and environmental assets

- controlled vehicular and foot traffic, including erected signage, barriers, and warning devices
- identified above and below ground services
- identified site and tree hazards and risks, and adjusted work method or implemented control measures
- assessed size, characteristics and defects of tree and determined dismantling strategy
- confirmed access to emergency response resources and procedures
- selected, prepared, checked and used tools and equipment for rigging and dismantling work, including:
 - identified working load limits of equipment components
 - configured compatible equipment components into appropriate rigging systems
 - identified force that will be applied to components in configured system during planned rigging operations
 - estimated mass of load and ensured force applied during rigging operations did not exceed working load limit of equipment
 - adjusted rigging systems as required to limit force applied to rigging system and tree structure
 - cleaned, inspected, maintained and stored tools and equipment according to workplace procedures
- installed rigging equipment to industry standards including selected and tied the following knots:
 - bowline
 - bowline on a bight
 - clove hitch and two half hitches
 - cows hitch
 - Flemish bend
 - girth hitch
 - half hitch pre knot
 - marlinspike hitch
 - round turn and two half hitches
 - rolling hitch
 - running bowline
 - sheet bend
 - slippery sheet bend
 - timber hitch
 - twin bowline bend
 - zeppelin bend
- used at least one of the following methods to safely access the tree according to dismantling method and strategy:
 - climbing technique
 - elevated work platform (EWP)

- dismantled trees using rigging techniques to ensure no damage to assets, using all of the following methods:
 - cut and drop into designated drop zone
 - cut and lower using rigging and devices
 - step cut, hold and throw
 - directional felling techniques
 - tip lowering, butt lowering, lifting and balancing
 - negative rigging techniques for leaders and vertical timber
 - the use of multiple anchor points
 - floating anchor rigging (simple floating anchor or highline)
 - running anchor rigging ('cradle' rigging or speed line)
- made accurate cuts according to industry standards, including:
 - making cuts from a safe and secure work position
 - selecting appropriate cuts for the desired outcome
 - accurately cutting scarfs, step cuts and back cuts.

All tree dismantling work is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- anatomy and physiology of tree species and tree removal strategies
- weather conditions and impact on planning and dismantling procedures, including the effect of wind direction and speed
- site and tree hazards that might be encountered, including:
 - identification and evaluation of structural defects in trees
 - above and below ground services and effect on tree removal procedures
- selection of tree removal methods for trees in close proximity to structures and other assets
- methods for accessing trees for dismantling, including:
 - climbing techniques
 - elevated work platform (EWP) for tree removal
- handling and using ropes for rigging and dismantling trees, including:
 - selecting, tying, dressing, setting and finishing arborist knots for rigging and dismantling trees
- common problems and hazards with rigging and their potential consequences and solutions
- dismantling techniques, including:
 - cut and drop
 - cut and lower

- step cuts
- directional felling
- rigging techniques, including:
 - butt lowering, tip lowering and balancing
 - negative rigging techniques for leaders and trunk sections
 - floating anchor techniques (highlines and floating anchors)
 - running anchor techniques (cradle rigging and speed lines)
 - applying friction at the point of cut
- rigging equipment selection configuration and use for tree dismantling work, including:
 - friction devices
 - pulleys, blocks, connectors and other hardware
 - dead-eye slings, loopie slings and whoopie slings
 - ropes for rigging and dismantling (tag or pulling lines)
 - configuration of equipment into rigging systems
 - impact of force, breaking strength, safety factors and cycles to failure
 - safe working limits on rigging and lowering equipment
- calculation and estimation of tree dimensions and forces in rigging, including:
 - density of tree sections
 - methods of estimating mass of tree sections
 - estimation of force magnitude and direction applied during rigging operations
 - tree structural limitations and defects and impact on rigging and dismantling operations
 - ensuring force applied does not exceed working load limit of equipment components
 - mass dampening effect of rigging systems
- methods of minimising environmental impact
- preferred industry practices (as outlined in the Companion Volume) relating to dismantling of trees
- legislation, regulations and local government laws governing tree removal, including:
 - permits and approvals
 - stakeholder notifications
- site safety controls, including:
 - first aid and rescue personnel
 - equipment and procedures applicable to tree work
 - barriers and traffic control
 - signage and warning devices
 - responsibility for protecting property and assets in work areas and methods to prevent damage
- considerations in developing a tree dismantling process, including:
 - drop zones
 - lowering zones

- locating tools and equipment
- communication requirements for tree dismantling work, including:
 - communicating with clients, residents and authorities
 - communicating with team members
 - coordinating and scheduling work teams
- effective communication strategies during tree removal work, including the impact of:
 - noise
 - environmental conditions
 - communications resources
 - visibility
- tools, equipment and resources required for dismantling trees, including:
 - safe use and operation
 - care and maintenance
 - cleaning and storing
- inspecting equipment for signs of defects, including:
 - defective ropes and equipment
 - legal responsibility for maintaining equipment
 - tagging, replacing and reporting defective equipment
- workplace record keeping and reporting procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - the two trees to be dismantled as stipulated in the performance evidence requirements
- resources, equipment and materials:
 - rigging equipment
 - height access equipment (climbing equipment or EWP)
 - personal protective equipment
 - chainsaws
 - first aid and emergency response equipment
 - traffic management kit and signage
- specifications:
 - workplace procedures and instructions related to dismantling trees
 - legislation, regulations, codes of practice and preferred industry practices (as outlined in the Companion Volume) relating to dismantling work
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

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AHCARB318 Undertake aerial rescue

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to perform an aerial rescue where an injured or trapped climber is safely brought to ground from the tree. It is likely to be undertaken in an emergency situation.

The unit applies to individuals who work in arboriculture under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

The arboriculture industry requires that tree rescue work is undertaken according to preferred industry practices (as outlined in the Companion Volume).

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

The prerequisite units of competency for this unit are:

- HLTAID011 Provide First Aid
- AHCARB319 Use arborist climbing techniques.

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan for aerial rescue	<p>1.1 Confirm emergency communication system is working</p> <p>1.2 Confirm emergency services contact numbers are documented</p> <p>1.3 Select, prepare and check first aid equipment and rescue kit</p> <p>1.4 Position rescue and first aid equipment for easy access</p> <p>1.5 Clarify own role in rescue situations</p> <p>1.6 Confirm first aid, rescue personnel and equipment with work team prior to undertaking rescue</p> <p>1.7 Select, check and use personal protective equipment</p> <p>1.8 Communicate with work team during operations using agreed communication method for the site and activity being undertaken</p>
2. Assess and respond to an aerial emergency situation	<p>2.1 Follow emergency response protocol according to workplace and industry procedures</p> <p>2.2 Stop all work activity and ensure other workers are aware of the incident</p> <p>2.3 Attempt communication with casualty</p> <p>2.4 Activate emergency plan and request assistance from work team and public in accordance with rescue plan</p> <p>2.5 Obtain emergency assistance according to rescue plan</p> <p>2.6 Inspect site and tree for hazards associated with rescue, assess risks and implement controls</p> <p>2.7 Assess if rescue can be conducted safely within work team capability</p> <p>2.8 Seek assistance from emergency rescue services when safe rescue is not possible</p>
3. Access tree to undertake rescue	<p>3.1 Select low-risk access methods to access tree and undertake rescue</p> <p>3.2 Maintain inspection of tree for above-ground hazards during ascent and throughout the rescue</p> <p>3.3 Maintain communication with casualty and ground crew</p> <p>3.4 Select and install suitable anchor points before reaching casualty</p> <p>3.5 Install redirects to ensure good rope angle when reaching casualty</p>
4. Assess casualty condition and system integrity	<p>4.1 Ensure rescuer is secure before approaching casualty</p> <p>4.2 Assess the security of casualty attachment in tree and secure if deemed unstable</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.3 Assess seriousness of condition of casualty according to first aid procedures and risk assessment</p> <p>4.4 Assess integrity of casualty climbing system to determine its suitability for lowering the casualty</p> <p>4.5 Administer first aid above ground according to first aid procedures and risk assessment</p> <p>4.6 Apply first aid protocols for casualties with possible neck or spinal injuries and await expert medical attention</p> <p>4.7 Maintain communications with ground crew</p>
5. Lower casualty to ground	<p>5.1 Inform casualty of lowering procedure</p> <p>5.2 Prepare casualty for descent in accordance with first aid, rescue plan and risk assessments</p> <p>5.3 Select and implement rescue technique relative to rescue and emergency situation and casualty condition</p> <p>5.4 Descend tree safely in a controlled manner</p> <p>5.5 Lower casualty safely to ground with support of ground crew according to emergency conditions</p>
6. Complete rescue operations	<p>6.1 Administer first aid on ground according to casualty condition until emergency services arrive</p> <p>6.2 Transfer responsibility of casualty to emergency services on their arrival</p> <p>6.3 Isolate equipment involved in incident for potential investigation and prevent reuse until checked</p> <p>6.4 Complete incident report and notify affected parties according to organisational procedures and regulatory requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately record and complete incident reports and workplace records
Oral communication	<ul style="list-style-type: none"> Explain detailed information to emergency services and rescue team Communicate effectively with casualty and with other crew members involved in rescue
Get the work done	<ul style="list-style-type: none"> Accept responsibility and ownership for conducting the rescue, and make decisions on rescue parameters and coordination of others

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB318 Undertake aerial rescue Release 2	AHCARB318 Undertake aerial rescue Release 1	Unit updated to replace superseded first aid unit, as approved by the AISC in consultation with ASQA	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB318 Undertake aerial rescue

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted an aerial rescue for each of the following scenarios in a tree that is a minimum of 5 metres in height:

- a pole top rescue, where the casualty must be safely lowered to the ground without the assistance of other crew members and:
 - is attached within 0.5 metres of the top of the pole
 - is at least 5 metres from the ground
- a pick-off rescue without the assistance of other crew members in which the casualty must:
 - be lifted out of their compromised or non-functioning climbing system
 - be transferred to be lowered down on the rescuer's system or on another climbing system
 - be at least 8 metres from the ground
 - be lifted at least 1 metre prior to beginning descent
- a rescue where:
 - the casualty is away from the main trunk of the tree, toward the end of a branch or in a different stem from the primary anchor point
 - the rope angle between the casualty and the primary anchor point must be at least 30°
 - the rescuer must either control the movement of the casualty back under the primary anchor point, or redirect the casualty's line to bring the casualty directly to the ground.

There must also be evidence that the individual has:

- confirmed resources for emergency rescue, including:
 - communications for emergency services and work team
 - first aid equipment, personnel, equipment and procedures
 - emergency rescue and first aid equipment, protocols and procedures
- conducted a pre assessment of the rescue including:

- attempted communication with casualty
- assessed the tree and situation for hazards and risks and determined rescue plan
- sought assistance from emergency services where safe rescue could not be performed
- used tree climbing equipment to carry out rescue, including:
 - accessed tree safely
 - selected and installed anchor points
 - installed redirects to achieve safe rope angle according to rescue requirements
 - secured rescuer and casualty
- demonstrated the procedure for securing and assessing a severe casualty situation, including:
 - assessed casualty injuries
 - administered first aid above ground according to casualty condition
 - arranged for emergency services
- demonstrated the procedure for rescuing a casualty, including:
 - informed and prepared casualty descent
 - descended tree safely in a controlled manner
 - applied first aid on ground
- removed equipment used in rescue in a controlled manner and isolated and secured equipment for potential investigation
- cleaned and stored all equipment
- updated and maintained records of aerial rescue according to workplace and regulatory requirements.

Aerial rescue is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- preferred industry practices (as outlined in the Companion Volume) for aerial rescue
- emergency procedures for aerial rescues, including:
 - planning for the event of an emergency
 - dealing with emergencies
 - emergency protocol, including stop work, activate rescue plan, inspect site for tree hazards, delegate crew roles, access tree, install anchor points, reach casualty, lower casualty, and transfer to emergency services
 - accessing trees in emergency situations
 - accessing and utilising emergency services
- assessing site-specific safety in emergency situations, including:
 - methods for identifying risks
 - risk control measures

- safety and procedures when conducting a rescue near overhead power lines, including:
 - basics of electrocution
 - power line types and insulation
 - approach distances and safety zones, voltage and arcing
 - tools, equipment, personnel and power line contact
 - personal protective equipment
- administering first aid in an aerial rescue environment, including:
 - first aid procedures
 - contents and use of a first aid kit
 - first aid in an aerial environment
 - assessing neck and back injuries and procedures
 - first aid on the ground following rescue
 - importance of communication and reassurance of casualty
- communications in a rescue situation, including:
 - emergency services communication systems
 - emergency services contact numbers
 - work team communication methods
- tools, equipment and other resources required for aerial rescue, including:
 - appropriate placement of rescue equipment
 - components of and use of rescue kits
 - rescue personnel, equipment and rescue plan procedures
- controlling risk to rescuer, victim and others during an aerial rescue
- climbing and rigging systems for aerial rescue, including:
 - pole top rescue
 - pick-off rescue
 - lifting moving or transferring casualties to alternate climbing systems
 - ropes, knots and equipment for rescue climbing and rigging systems
 - lifting and lowering systems
 - cleaning, storing and maintaining safety kits and equipment
- workplace health and safety reporting procedures for accidents, incidents and rescue operations, including:
 - site and equipment security for investigations
 - mandatory records
 - workplace records
 - legislative responsibilities.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - the trees in which the types of rescue required for assessment can be demonstrated as stipulated in the performance evidence
- resources, equipment and materials:
 - full arborist climbing kit
 - emergency communications equipment
 - personal protective equipment
 - first aid and emergency response equipment
- specifications:
 - workplace and manufacturer instructions for safe operation, cleaning and storing of rescue equipment
 - preferred industry practices (as outlined in the Companion Volume) for aerial rescue
- relationships:
 - work team
 - worker or rescue dummy as stipulated in the performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have: In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB319 Use arborist climbing techniques

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to climb trees with ropes, harnesses and specialist equipment using climbing techniques for the purpose of mobility in the canopy of trees to acquire a safe work position.

The unit applies to individuals who work in arboriculture under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

The arboriculture industry requires that all climbing work is undertaken according to preferred industry practices (as outlined in the Companion Volume).

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare site and inspect equipment	1.1 Confirm access to site and scope of works according to workplace procedures 1.2 Undertake a site-specific job safety analysis (JSA), record and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>implement control measures according to workplace safety procedures</p> <p>1.3 Confirm availability of first aid and rescue personnel, equipment and procedures</p> <p>1.4 Conduct pre-operational preparations and safety checks, on ropes, harnesses, tools and equipment</p> <p>1.5 Select, check and use personal protective equipment</p>
2. Prepare to access tree	<p>2.1 Inspect tree to determine efficient safe access route and method through discussion with work team</p> <p>2.2 Select and prepare climbing equipment according to manufacturer instructions, work health and safety regulations and industry standards</p> <p>2.3 Configure climbing equipment components to form functional tree climbing system appropriate to the access method selected</p> <p>2.4 Tie, dress, set and finish climbing knots and hitches according to climbing system requirements</p> <p>2.5 Sharpen, prepare and fit climbing spurs and gaffs for dismantling work</p> <p>2.6 Conduct pre-climb checks of configured systems to ensure compatibility, safety and function according to climbing system, industry standards and manufacturer instructions</p>
3. Access and work position within tree	<p>3.1 Select suitable anchor points according to load bearing and access requirements</p> <p>3.2 Install low-risk anchor points using throw lines</p> <p>3.3 Inspect and test remotely installed anchor points are secure before use</p> <p>3.4 Ascend tree and access work positions within tree crown using climbing systems appropriate for work task and tree structure</p> <p>3.5 Configure and use components within functional climbing systems for ascending trees and work positioning</p> <p>3.6 Access work positions within tree crown by using climbing techniques for both pruning and dismantling work tasks</p> <p>3.7 Communicate with work team during operations according to work site and environmental conditions using methods agreed with work team</p> <p>3.8 Observe and maintain safe clearance from hazards and climbing and rigging equipment</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.9 Maintain awareness and clearances for avoiding electrical power lines according to workplace safety procedures
4. Descend from tree	4.1 Descend tree using climbing equipment in a controlled manner 4.2 Remove all climbing equipment safely in a controlled manner according to manufacturer instructions 4.3 Inspect, clean, maintain and store climbing and safety equipment according to manufacturer instructions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately complete organisational documents, including job safety analysis and records

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB319 Use arborist climbing techniques	AHCARB307 Undertake advanced tree climbing	Title changed Prerequisite units removed Elements and performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent
AHCARB319 User arborist climbing techniques	AHCARB311 Tie, dress, set and finish arborist knots	Some content is covered in this redesigned unit	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB319 Use arborist climbing techniques

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence the individual has safely and efficiently climbed a tree of at least 18 metres in height and at least 10 metres in canopy spread using rope climbing equipment, without the aid of climbing spurs. The individual must have:

- reached at least five different designated outer extremities of the tree structure
- selected and performed a suitable, safe and efficient access method consistent with the tree structure and the designated working positions
- selected and used suitable, safe and efficient work positioning methods to reach each target, including the use of multiple lines, redirects and advanced climbing methods
- descended the tree safely and retrieved all climbing equipment.

The timeframe allowed to reach the designated targets must meet industry expectations for the size and shape of the tree being climbed.

There must be evidence the individual has safely and efficiently climbed to a height of 15 metres above the ground using climbing spurs in a tree to be removed. The tree must have at least five metres of clear trunk below the lowest branch. The individual must:

- ascend and descend a trunk by spur climbing the trunk without setting a line at the top
- transition around obstacles safely
- perform a self-arrest
- use branch walking techniques to access designated working positions
- descend the tree safely and retrieve all climbing equipment.

The timeframe allowed to reach the designated targets must meet industry expectations for the size and shape of the tree climbed.

There must also be evidence that the individual has:

- installed a throw line in a tree in a predetermined union representing a target of no larger than 600 mm in diameter and at least 20 metres above the throwing position within a timeframe of 15 minutes

- selected, checked and configured climbing equipment components to form safe and functional climbing systems appropriate for climbing tasks
- identified unsafe equipment, climbing system configuration and climbing techniques.

There must also be evidence that the individual has prepared to conduct climbing work, including:

- undertaken a job safety analysis (JSA) for the specific site and work activities and implemented control measures including:
 - confirmed availability of first aid and rescue personnel, equipment and procedures
 - conducted pre-operational and other safety checks, on ropes, harnesses, tools and equipment
 - selected and used personal protective equipment (PPE) and safety equipment
- performed a pre-climb inspection and identified climbing hazards and controlled risks, including:
 - correctly identified tree species
 - assessed tree for stability and tree defects
 - adjusted climbing plan and implemented control measures
- selected, prepared and fitted climbing equipment.

There must also be evidence that the individual has:

- selected an access system and method that is safe, efficient and suitable for the tree structure and work task
- installed climbing and access ropes to suitable tree anchor points within the tree structure, and used throwlines to install:
 - anchor points near the top of the tree
 - a stationary rope technique (SRT) canopy anchor
 - a SRT basal anchor
 - a moving rope technique (MRT) anchor point including the installation of a cambium saver
- safely ascended and descended tree, transitioned between points of attachment and used work positioning methods, including:
 - used MRT and trunk-walking, foot ascenders or footlocking
 - used SRT
 - installed a second point of attachment when in a working position
 - used multiple lines for climbing and tree operations for both MRT and SRT
 - used natural and artificial redirects
 - used climbing spurs for work positioning
- safely retrieving climbing equipment according to industry standards and manufacturer instructions
- tied, dressed, set and finished the following 19 climbing knots and hitches for rigging and climbing applications according to industry standards:
 - scaffold knot
 - double fisherman's bend/prusik loop

- girth hitch
- prusik hitch (English prusik)
- Blake's hitch
- marlinspike hitch
- clove hitch
- double-overhand stopper knot
- sheet bend
- slippery sheet bend
- bowline knot (with a tie-off or stopper knot)
- running bowline knot
- bowline on a bight
- alpine butterfly
- klemheist
- figure-8 loop
- munter hitch
- Flemish bend
- Zeppelin bend
- tied at least one of the following advanced climbing hitches:
 - Distel hitch
 - Valdôtain tresse (French prusik)
 - Schwabisch hitch
 - Knut
- communicated with work team during operations using agreed communication procedures.

All arborist tree climbing work is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- preferred industry practices (as outlined in the Companion Volume) for arborist tree climbing work
- assessing and selecting methods for climbing trees and methods of tree access, including:
 - selecting a climb plan or work strategy to achieve a scope of works
 - selecting climbing systems that are safe, simple, efficient and ergonomic
 - identifying tree hazards and selecting low-risk work methods
- assessing work health, safety, site, environmental and traffic control measures, including:
 - completing JSAs for site-specific risks
 - purpose of first aid and rescue personnel, equipment and procedures

- pre-operational and safety checks, on ropes, harnesses, tools and equipment
- PPE used when climbing
- arborist climbing equipment, use and maintenance, including:
 - ropes and their materials, construction and characteristics
 - uses of climbing ropes and lanyards
 - types of climbing ropes
 - harnesses
 - triple locking carabiners and other connectors
 - climbing hardware, including ascenders, descenders, mechanical friction devices, false crotches and artificial redirects
 - climbing spurs and gaffs, their preparation and use for climbing trees
 - maintaining separation between spurs, rigging equipment and ropes
- purpose, function, selection, tying, dressing, setting and finishing of arborist knots used for climbing techniques
- safety when climbing trees, including:
 - safe working limits, ropes and equipment
 - defects in ropes, tools and equipment
 - controlled descent operations
 - controlled removal of access equipment
 - forces applied to anchor points during access and work positioning using MRT and SRT
 - forces applied at primary anchor points and at redirects
- hazards to avoid when climbing within the tree canopy, including:
 - power line safe approach distances and vegetation clearances
 - tree structural defects
 - animals or insects
 - hangers or suspended loads
 - deciding on low-risk access routes
- limits, advantages and disadvantages of friction hitches, including:
 - Blake's hitch
 - Prusik hitch (English prusik)
 - klemheist
 - specialised variations, including Distel hitch, Valdôtain tresse (French prusik), Schwabisch hitch, Knut
- selecting appropriate knots suited for rigging or climbing applications and equipment, including:
 - loss of rope strength
 - appropriate knot for application
 - requirements for secondary knots and stopper knots
- arborist knots, including:
 - knot type and tying procedure

- dressing
- setting
- finishing
- communications strategies used in arboriculture, including:
 - voice
 - hand
 - whistle signals
 - electronic communications
- assessing tree access routes, techniques and equipment and evaluating risk, including:
 - moving rope technique (MRT) and stationary rope technique (SRT)
 - use of climbing spikes of various lengths
 - transitions between points of attachment
 - natural and artificial redirects
 - use of multiple lines to access trees and tree parts
 - low-risk anchor points
- inspecting, cleaning, maintaining and storing climbing equipment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - trees as stipulated in performance evidence
- resources, equipment and materials:
 - full arborists climbing kit
 - climbing spikes
 - communications equipment agreed by work crew
 - PPE
 - first aid and emergency response equipment
- specifications:
 - workplace and manufacturer instructions for safe operation, cleaning and storage of the equipment specified in the assessment conditions
 - preferred industry practices (as outlined in the Companion Volume) for arborist tree climbing work
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed

- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB320 Install tree support systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to install tree support systems including cable and bracing hardware into the structure of a tree.

The unit applies to individuals who work in arboriculture under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

The arboriculture industry requires that all tree support systems work is undertaken according to preferred industry practices (as outlined in the Companion Volume).

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Read and interpret arborist plans and specifications for tree support system for specified tree 1.2 Determine and obtain materials required for installing tree support system

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Undertake a site-specific job safety analysis (JSA), record and implement control measures according to workplace safety procedures 1.4 Select tree support system tools and equipment for tree support system activity 1.5 Select, check and use personal protective equipment 1.6 Confirm availability of first aid and emergency personnel, equipment and procedures 1.7 Assemble and position tools, equipment and materials for ease of access during installation
2. Prepare trees for tree support system	2.1 Locate tree stems and position of tree support system according to specifications 2.2 Assess structural integrity of tree and select low-risk access method for tree support system installation 2.3 Determine a safe procedure for installation and confirm approach with work team 2.4 Access tree safely and attain secure work positions to conduct installation 2.5 Maintain inspection of tree for above-ground hazards throughout installation activities 2.6 Examine stems to be braced for defects to ensure tree support system will comply with specifications 2.7 Undertake pruning activities prior to tree support system installation according to current industry standards
3. Install tree support system	3.1 Select and prepare tree support system materials according to specifications 3.2 Prepare the stems to be braced according to tree support system design 3.3 Install tree support system components according to arborist specifications and manufacturer instructions 3.4 Adjust cables and braces to specified tension 3.5 Dress tree support system components for neat finish 3.6 Remove tools, equipment and waste from canopy 3.7 Descend and remove equipment
4. Finalise tree support	4.1 Clean and sanitise tools and equipment according to workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
system activity	and biosecurity procedures 4.2 Check, maintain and store tools and equipment according to workplace procedures and manufacturer instructions 4.3 Record and report completed works according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and consolidate information from plans and specifications for design requirements and prepare for the installation of tree support systems
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational documents, including job safety analysis (JSA) and records, using clear language and correct spelling, grammar and industry terminology
Numeracy	<ul style="list-style-type: none"> Interpret and calculate numerical information from specifications to determine the size and dimensions of materials required to construct tree support systems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB320 Install tree support systems	AHCARB308 Install cable and bracing	Title changed Element added Performance criteria clarified Foundation skills added Assessment requirements	Equivalent

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Links

Companion Volumes, including Implementation Guides, are available at VETNet:Companion Volumes, including Implementation Guides, are available at VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB320 Install tree support systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has installed three different types of tree support systems according to a specification, including:

- steel cable
- textile or synthetic cable
- bracing.

There must also be evidence that the individual has:

- interpreted plans and specifications and determined the materials, tools and equipment required for tree support system work
- identified health, safety and environmental hazard and risks and implemented controls for the installation, including:
 - conducted and completed a job safety analysis (JSA)
 - prepared and used personal protective equipment (PPE)
 - maintained awareness of above-ground hazards while performing work
- assembled tree support system ready for installation
- examined structural integrity of the tree
- determined and confirmed the safest access to location of the tree support system
- pruned tree to aid tree support system installation
- accessed the tree safely and secured into work position
- removed, checked, maintained, cleaned, sanitised and stored tools and equipment according to biosecurity procedures
- recorded and reported completed works.

All tree support systems work is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- preferred industry practices (as outlined in the Companion Volume) for tree support systems
- the effect of pruning on tree growth, habit and form
- tree anatomy and tree physiology related to tree support systems, including:
 - pruning techniques appropriate to tree species and their response
 - natural habit and form of trees
 - visual tree assessment
 - tree defects and tree support system solutions
- tree support systems principles and techniques suited to tree species, including:
 - steel cabling
 - synthetic cabling
 - bracing
- impact of tree support system on trees, including:
 - the impact on the tree's natural range of movement
 - the impact on the tree's strategy of flexibility
 - the impact on the tree's formation of reactive growth
- tree support system materials, tools and equipment, including:
 - preparation of steel cabling systems and terminations, including eyes, swaging, wire whipping
 - components and preparation of synthetic cabling systems
 - hardware, including installation requirements for eye bolts, lag hooks, wire stops and grips
 - cable types and sizes, tensile strength and selection criteria as related to arborist specifications
 - preparation of bracing components, including types of rod, threading, terminations and tensile strength
 - cable tension and tensioning methods
 - finishing techniques of cables for aesthetics and function
 - finishing techniques of bracing for safety, aesthetics and function
 - checks and adjustments to installed systems over time
- identification of workplace health and safety hazards, risk assessment and risk control application
 - selection of suitable PPE
 - completing a job safety analysis (JSA)
 - first aid and rescue personnel, equipment and procedures applicable to tree work
 - monitoring and managing above-ground hazards
 - electrical safety

- principles of compartmentalisation of decay in trees (CODIT) in relation to the installation of cables and bracing
- hygiene practices and biosecurity when cable bracing, including:
 - reasons for managing hygiene
 - biosecurity principles and procedures
- record keeping and reporting procedures for cable bracing.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - trees with defects requiring cabling and bracing as stipulated in the performance evidence
- resources, equipment and materials:
 - equipment to access a working position for installation of cables and bracing
 - PPE
 - safety equipment, including first aid and emergency response equipment
 - tools and equipment for preparing wire and synthetic ropes, attaching cables to trees and installation of braces
- specifications:
 - workplace and manufacturer documentation for safe operation, cleaning and storage of tree support system equipment
 - preferred industry practices (as outlined in the Companion Volume) for tree support systems
 - arboriculture hygiene and biosecurity standards
 - specifications for the installation of tree support system for specific tree defects
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB321 Implement a tree protection program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to identify trees in need of temporary protection and implement a protection program according to specifications.

The unit applies to individuals who work in arboriculture under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

The arboriculture industry requires that all tree protection work is undertaken according to preferred industry practices (as outlined in the Companion Volume), including Australian Standard AS4970.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine implementation requirements of the tree protection program	1.1 Receive and interpret tree protection plan and specifications 1.2 Undertake a site-specific job safety analysis (JSA), record and implement control measures according to workplace safety procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Confirm availability of first aid equipment and emergency procedures 1.4 Identify and access tools, equipment and materials required to implement program 1.5 Determine, schedule and allocate tasks to work team, allowing for contingencies
2. Prepare site for tree protection	2.1 Identify location of tree protection zone from site plan 2.2 Select, prepare, and carry out pre-operational and safety checks, on tools, equipment and machinery 2.3 Select, check and use personal protective equipment 2.4 Survey the tree protection zone and delineate specified boundaries according to workplace procedures 2.5 Install protective barriers and signage according to tree protection plan
3. Install tree protection measures	3.1 Identify requirements for trunk, branch and root protection from tree protection plan 3.2 Select and assemble materials and equipment required to install tree protection measures 3.3 Construct and install protection measures specified in the program 3.4 Inspect completed protection measures and take remedial action where out-of-specification
4. Monitor protection program	4.1 Monitor tree health during scheduled program period 4.2 Assess effectiveness of protection measures during the scheduled period 4.3 Implement remedial action where tree health has been compromised 4.4 Dismantle and remove protection measures and fencing at conclusion of scheduled period 4.5 Clean, maintain and store tools and equipment according to workplace procedures 4.6 Update records and report tree protection outcomes according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and consolidate information from plans and specifications for design requirements to prepare for the installation of tree support systems
Writing	<ul style="list-style-type: none"> Accurately complete organisational documents, including job safety analysis (JSA), using clear language, correct spelling and grammar, and industry terminology
Numeracy	<ul style="list-style-type: none"> Interpret and calculate numerical information from specifications to determine the size and dimensions of materials required to construct tree protection systems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB321 Implement a tree protection program	AHCARB309 Implement a tree protection program	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB321 Implement a tree protection program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has demonstrated the ability to implement a tree protection program for at least two trees, including:

- received and interpreted a tree protection program and identified:
 - trees to be protected
 - protection methods to use
 - schedule required
 - equipment necessary to perform work
- assessed site-specific health and safety issues and completed a job safety analysis (JSA) and ensured first aid resources and emergency procedures were available
- scheduled and allocated tasks to work team
- surveyed and marked out the tree protection zone
- erected barriers and signage
- selected materials and equipment required for tree protection measures
- conducted pre-operational safety checks and post-operational maintenance of equipment and tools
- installed tree protection measures following specifications in plan
- inspected completed protection installations and rectified where out-of-specification
- monitored tree health during protection scheduled period and implemented remedial action where protection has been compromised
- dismantled and removed protection measures
- maintained records and reports of tree protection outcomes.

All tree protection work is required to be performed according to preferred industry practices (as outlined in the Companion Volume), including Australian Standard AS4970.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- preferred industry practices (as outlined in the Companion Volume) for tree protection work, including Australian Standard AS4970
- use and interpretation of tree protection plans and specifications, including:
 - tree protection systems, types and methods of protection
 - surveying and marking out tree protection zones (TPZ)
- application of workplace health, safety and environmental controls, including job safety analysis and personal protective equipment (PPE)
- first aid and rescue personnel, equipment and procedures applicable to tree work
- task scheduling and contingency planning for tree protection
- possible damage to tree physiology, and prevention requirements on development and construction sites, including:
 - barriers and signage
 - techniques for assembling or constructing tree protection measures suitable to the requirements of tree species
 - protection requirements of tree species
 - specifications and construction methods for installing protection measures
- environmental factors affecting trees on development and construction sites, including:
 - soil compaction and contamination
 - shading
 - impact on scaffolding
 - excavations and root damage
- principles, regulations, codes of practice and Australian standards for the protection of trees on development and construction sites
- methods used to protect trees on development sites, including:
 - fencing tree protection zones (TPZ) and signage
 - trunk and branch protection
 - soil within the TPZ and root zone protection
- tools, equipment and materials used in tree protection, including preparation, maintenance and biosecurity procedures
- record keeping and reporting procedures for tree protection.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - trees growing on development and construction sites or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - tree protection materials and equipment
 - tools to construct or assemble tree protection measures
 - PPE
 - first aid and emergency response equipment
 - signage for tree protection zones
- specifications:
 - workplace and manufacturer instructions for safe operation, cleaning and storage of equipment used for tree protection work
 - tree protection plans and specifications
 - preferred industry practices (as outlined in the Companion Volume) for tree protection work, including Australian Standard AS4970
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB322 Access trees for inspection

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to access trees for inspection. It does not describe the skills and knowledge required to access trees to conduct arboricultural work, tree pruning or removal.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare site and inspect equipment	1.1 Confirm access to site and scope of works according to workplace procedures 1.2 Undertake a site-specific job safety analysis (JSA), record and implement control measures according to workplace safety procedures 1.3 Confirm availability of first aid and rescue personnel, equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>and procedures</p> <p>1.4 Conduct pre-operational preparations and safety checks, on ropes, harnesses, tools and climbing equipment</p> <p>1.5 Select, check and use personal protective equipment</p>
2. Prepare to access tree	<p>2.1 Inspect tree to determine efficient low-risk access route and climbing method through discussion with work team</p> <p>2.2 Select and prepare climbing equipment according to manufacturer instructions, workplace health and safety regulations and industry standards</p> <p>2.3 Configure climbing equipment components to form functional tree climbing system appropriate to the access method selected</p> <p>2.4 Tie, dress, set and finish climbing knots and hitches according to climbing system</p> <p>2.5 Conduct pre-climb checks of configured systems to ensure compatibility, safety and function according to selected climbing system, industry standards and manufacturer instructions</p>
3. Access tree safely to work position	<p>3.1 Select and install suitable anchor points according to access method selected</p> <p>3.2 Use climbing equipment to ascend tree to suitable work positions within crown using safe access route</p> <p>3.3 Undertake transitions between attachment points safely to reach suitable work positions</p> <p>3.4 Communicate with work team during operations according to work site and environmental conditions using methods agreed with work team</p> <p>3.5 Maintain awareness and clearances to avoid power lines according to workplace safety procedures</p>
4. Descend from tree	<p>4.1 Descend tree using climbing equipment in a controlled manner</p> <p>4.2 Remove all climbing equipment safely in a controlled manner according to manufacturer instructions</p> <p>4.3 Inspect, clean, maintain and store climbing and safety equipment according to manufacturer instructions</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately record and complete workplace job safety analysis using clear language, grammar and industry terminology

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB322 Access trees for inspection	AHCARB312 Use standard climbing techniques to access trees	Title changed Prerequisite unit removed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB322 Access trees for inspection

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has used climbing techniques to access at least 2 structurally different trees, including:

- confirmed access to site and scope of works
- identified workplace health, safety and environmental hazards and completed a job safety analysis (JSA) or safe work method statement (SWMS) for the site and activities
- confirmed availability of first aid and rescue personnel, equipment and procedures
- conducted pre-operational safety checks, on ropes, harnesses, tools and equipment
- selected and used personal protective equipment (PPE) and safety equipment during works
- inspected tree and discussed with work team to determine a safe and efficient access route
- selected and prepared climbing equipment for accessing tree
- ascended, navigated through and descended tree canopy using harness and lanyard and safe anchor points, following safe climbing techniques, including:
 - moving rope with prusik technique
 - trunk walking technique
 - use of foot ascenders
- tied, dressed, set and finished the following climbing knots and hitches, including:
 - alpine butterfly
 - blake's hitch
 - scaffold knot
 - double fisherman's bend/prusik loop
 - girth hitch
 - English prusik hitch
 - marlinspike hitch
 - munter hitch

- clove hitch
- double-overhand stopper knot
- bowline
- running bowline
- communicated with work team during operations using agreed communication procedures
- maintained safe clearances from power lines
- removed all access equipment in a controlled manner on descend from tree
- inspected, cleaned, maintained and stored climbing and personal protective equipment according to manufacturer instructions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- assessing and selecting different methods for climbing trees
- workplace health, safety, site, environmental and traffic control measures, including:
 - completing JSAs and SWMS for site-specific risks
 - purpose of first aid and rescue personnel, equipment and procedures
 - pre-operational and safety checks, on ropes, harnesses, tools and equipment
 - PPE used when climbing
- inspection, use and maintenance of arborist climbing equipment, including:
 - ropes and their characteristics
 - rope type, construction and materials
 - rope inspection and failure conditions
 - uses of climbing ropes
 - triple-locking carabiners
 - climbing hardware
- purpose, function, selection, tying, dressing, setting, checking and finishing of arborist knots used for climbing techniques
- safety when climbing trees, including:
 - safe working limits of ropes and equipment
 - defects in ropes, tools and equipment
 - climbing harnesses and lanyards
- hazards to avoid when climbing within the tree canopy, including:
 - safe distances from electrical power lines
 - tree structural defects
 - the presence of insects or other animals
 - deciding on low-risk access routes
- environmental impacts of tree access methods, including:
 - potential impact on tree of various climbing methods
 - impact on animal habitat or food source

- communications strategies used when climbing with a work team, including:
 - voice
 - hand
 - electronic communications
- climbing techniques using ropes and harnesses, including:
 - moving rope with prusik technique
 - trunk walking
 - foot ascenders
 - safe transitions between points of attachment
 - low-risk anchor points
 - controlled descent operations
- controlled removal of access equipment
- procedures for inspecting, cleaning, maintaining and storing climbing equipment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - two trees with different canopy structures as stipulated in the performance evidence
- resources, equipment and materials:
 - standard climbing kit
 - harness
 - arborist communications equipment
 - personal protective equipment
 - first aid and emergency response equipment
- specifications:
 - workplace and manufacturer instructions for safe operation, cleaning and storage of the equipment specified in the assessment conditions
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB323 Identify trees

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.2
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to identify trees and their environmental and social benefits to clients and community.

The unit applies to individuals who work in arboriculture under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Inspect tree features	1.1 Observe morphological characteristics of tree specimens 1.2 Observe tactile and sensory characteristics of tree specimens 1.3 Record observations and characteristics according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Inspect tree condition	2.1 Observe tree general health and structural condition 2.2 Inspect tree specimens for signs and symptoms of pests, diseases and deficiencies that affect tree characteristics 2.3 Record inspections of tree condition
3. Identify tree	3.1 Source and use reference material to assist identification 3.2 Compare possible tree identification using images, samples and other plant identification resources 3.3 Use characteristics of plant specimens to classify tree to family level and lowest taxonomic ranking
4. Assess environmental and social benefits of tree	4.1 Examine tree for ecological habitat of localised biota 4.2 Identify localised ecological and environmental benefits provided by tree 4.3 Evaluate environmental and social benefits of tree 4.4 Assess the environmental and social value of tree to key stakeholders
5. Report on results	5.1 Record identification achieved 5.2 Highlight key identifying features observed in the process 5.3 Inform client of the results of the identification and benefits to stakeholders

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Record plant information and identity using correct spelling and industry terminology, including accurate botanical taxonomic language and naming conventions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB323 Identify trees Release 2	AHCARB323 Identify trees Release 1	Updated mapping to correctly reflect AHCARB323 Identify trees supersedes and is equivalent to AHCARB313 Identify trees	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB323 Identify trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has correctly identified at least 80 botanically different trees relevant to the individual's work environment, including the following for each tree:

- identified and recorded key characteristics of tree morphology
- inspected tree for health and assessed effect on characteristics indicative to identification
- used reference materials to compare characteristics with taxonomic classification
- compiled identification data and recorded the identification process according to workplace procedures
- examined tree as habitat for local biota
- identified, evaluated and documented the environmental and social benefits of tree
- recorded and reported outcomes of identification and social and environmental benefits to client and stakeholders according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- methods of identifying trees
- morphological and sensory characteristics in botanical terms, including:
 - leaf arrangement, shape, colour and size
 - tree shape and structure branchlets, branches and bark
 - flower, inflorescence and bud characteristics
 - fruit type and characteristics
 - smell, taste and touch
- local environment of trees and the characteristics of endemic environment that represent tree's ideal growth conditions

- general health and structural condition of trees and their indicative features for identification, including signs and symptoms of diseases, pests or deficiencies and growth form of trees
- collecting and recording of information and data relevant to tree identification
- botanical samples for tree identification, including:
 - photographs and images
 - fresh or dried botanical specimens
- plant taxonomic classification to the level of genus and species
- plant taxonomic features of tree families common to the local area
- research and reference materials used in the identification of tree species, including:
 - field guides
 - basic taxonomic keys
 - journals and botanical references
- benefits and value of trees, including:
 - cultural or social
 - economic
 - conservation or environmental
 - aesthetic
- documenting and reporting procedures for identification and value of trees to key stakeholders, clients and community
- communications strategies for informing client and organisations of tree identification and value
- trees as a biological habitat for plants animals, insects, fungi and vegetation, including:
 - food source and supply
 - microclimate
 - hollows and nesting sites
 - modifier of the soil environment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - 80 botanically different trees stipulated in the performance evidence
- resources, equipment and materials:
 - live tree specimens
 - tools and equipment necessary for tree observations
 - botanical reference materials, tree databases and taxonomic keys
 - camera or image capture devices
- specifications:

- workplace procedures, processes and documents for recording data and preparing reports related to tree identification
- workplace instructions, specifications or client briefs related to tree identification
- relationships:
 - client and stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- vocational competencies at least to the level being assessed
- current industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB324 Use cranes to access and dismantle trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to use cranes to access and dismantle trees in close proximity to assets and in difficult or hazardous circumstances.

The unit applies to individuals who work in arboriculture under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems

The arboriculture industry requires that all tree work with a crane is undertaken according to preferred industry practices (as outlined in the Companion Volume).

Legislation, regulations and by-laws relating to the treatment and removal of trees, and the use of cranes, apply in some states and territories.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- CPCCDO3011A Perform dogging.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
CPCCDO3011A Perform dogging	CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan for the use of cranes for tree access and dismantling	1.1 Identify requirements for crane assisted tree work 1.2 Determine the requirements for crane access 1.3 Inspect site to identify site conditions, features and hazards that may affect crane set-up and operation 1.4 Determine crane type and size, and develop plan for crane assisted tree work 1.5 Communicate requirements to crane operator to confirm plan 1.6 Confirm availability of emergency procedures, rescue personnel and equipment
2. Prepare to conduct crane work	2.1 Determine access to site and gain approval from stakeholders 2.2 Confirm site preparations and notification of local residents and authorities according to dismantling plan 2.3 Liaise with crane operator and crane crew to confirm set-up, clearances from electrical services and working area 2.4 Undertake a site-specific job safety analysis (JSA) and record and implement control measures according to workplace safety procedures 2.5 Liaise with crane operator to determine load limit at working radius
3. Prepare arborist equipment ready for dismantling operations	3.1 Inspect trees for defects to inform planned tree access and dismantling strategy 3.2 Discuss strategy with crane operator and crew to confirm site, environment and crane working limitations 3.3 Determine lowering and processing zones and communicate to work team 3.4 Carry out pre-operational and safety checks on arboriculture tools and equipment required for dismantling 3.5 Select, check and use personal protective equipment
4. Access trees to conduct work	4.1 Select and use safe access methods to conduct crane dismantling work 4.2 Use climbing techniques to access trees to conduct crane work 4.3 Use crane to access trees using an approved crane access method according to industry codes, procedures and legislative and regulatory

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 4.4 Communicate with crane operator and observer using agreed communication methods 4.5 Use climbing techniques to access work positions and perform dismantling operations
5. Prepare for crane dismantling and attach crane to tree sections	5.1 Maintain communication with crane operator and work team during operations using agreed communication methods 5.2 Use hand and whistle signals to communicate with crane operator according to industry standards 5.3 Select and apply crane lifting methods and sequence according to dismantling strategy and safety procedures 5.4 Determine weight of each tree section and communicate to crane operator 5.5 Attach crane with lifting gear to each tree section according to load limits, centre of gravity and planned lifting operation 5.6 Communicate pre-tension requirements to crane operator
6. Use crane to dismantle tree	6.1 Perform cuts to remove tree sections according to desired lifting operation 6.2 Control and monitor tree section removal and direct crane operator throughout lifting operations 6.3 Communicate with crane operator regarding lifting operation and adjust dismantling strategy 6.4 Apply arborist rigging and felling techniques when crane support is not required 6.5 Adjust work pace and methods to match processing capacity of ground crew and environmental conditions 6.6 Perform final dismantling and lifting operations for tree removal work according to specifications
7. Complete tree dismantling procedures	7.1 Confirm completion of tree dismantling work with crane operator according to workplace procedures 7.2 Clean, check and store tools and equipment according to workplace procedures 7.3 Record completion of tree removal, and report to stakeholders according to workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB324 Use cranes to access and dismantle trees	Not applicable	New unit	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB324 Use cranes to access and dismantle trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has fully dismantled at least one tree of a minimum 15 metres in height and with a canopy spread of 10 metres or greater using a crane. The tree must be in close proximity to structures or other assets. The individual must take charge of the process from planning to completion, including the safeguarding of assets.

There must also be evidence that in dismantling the tree, the individual has:

- controlled the process from start to finish
- devised a plan, communicated the plan to work team and crane operator, and executed the plan
- selected and implemented appropriate rigging strategy and sequence for crane work
- planned and dismantled the tree without damage to the assets
- selected appropriate tree components and attached rigging to crane correctly
- performed accurate cuts appropriate to safe crane lifting operations
- maintained constant communication with work team and crane operator
- completed the work safely.

There must also be evidence that the individual has:

- identified work requirements and obtained relevant compliance approvals
- determined the site access, inspected site for safety hazards for crane set-up and dismantling works and confirmed working areas and set-up with crane operator and crew
- undertaken a site-specific job safety analysis and recorded and implemented control measures including:
 - confirmed the availability of emergency procedures, rescue personnel and equipment
 - appointed a spotter to ensure crane clearances from overhead services and obstructions
 - selected, checked and used personal protective equipment
 - selected and used safe access methods for crane dismantling work
- carried out pre-operational and safety checks on arborist tools and equipment

- accessed tree and safe working positions and communicated with work team throughout dismantling operations
- performed dismantling operations including:
 - determined weight of tree section and communicated requirements to crane operator
 - attached tree section to crane with lifting gear according to load limits, centre of gravity and lifting operations
 - controlled and monitored tree section removal and directed crane operator throughout operation
 - applied arborist rigging and felling techniques
- adjusted work pace and methods to match ground crew processing operations
- confirmed completion of dismantling work with crane operator
- cleaned, checked and stored tools and equipment according to workplace procedures
- recorded completion of works and reported to stakeholders.

All tree dismantling work with a crane is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- requirements for crane access and safe operation and limitations when deciding on dismantling operations with cranes, including:
 - sizes and weight of cranes for purpose
 - types and methods for stabilising and impact on surfaces
 - surface structures, including: fill, storm water pipes, retention tanks, driveways
 - soil and ground stability and slope
 - clearances from buildings and structures
 - no-go zones above and near electrical conductors
 - clearances from other trees and potential root zone damage
 - distance of reach to weight
- regulatory requirements for use of cranes on sites, including:
 - local government roadside permits
 - energy authority permits
 - preferred industry practices (as outlined in the Companion Volume) for tree dismantling work
- selection criteria for using cranes for arboriculture work
- arborist requirements for crane set-up, including:
 - crane footprint and set-up area
 - working area
 - working radius
 - largest estimated lift

- order of dismantle
- workplace health, safety, site, environmental and traffic control measures, including:
 - completing JSAs for site-specific risks
 - purpose of first aid and rescue personnel, equipment and procedures
 - pre-operational and safety checks, on ropes, harnesses, tools and equipment
 - personal protective equipment used when climbing
- work planning procedures and collaboration when working with crane operator, including:
 - preparing a dismantling strategy
 - tree access procedures and resources
- arborist climbing equipment and techniques to access and work in trees
- purpose, function, selection, tying, dressing, setting and finishing of arborist knots used for climbing techniques
- safety when climbing trees, including:
 - safe working limits, ropes and equipment
 - defects in ropes, tools and equipment
 - controlled descent operations
 - controlled removal of access equipment
 - forces applied to anchor points during access and work positioning using MRT and SRT
 - forces applied at primary anchor points and at redirects
- hazards to avoid when working within the tree canopy near cranes, including:
 - spatial awareness for crane and cabling components
 - power line, no-go zones, safe approach distances and vegetation clearances
 - tree structural defects
 - animals or insects
 - deciding on low-risk access routes
- access to tree canopy using cranes, including:
 - local state or territory legislation and regulations
 - attaching to the crane hook
 - safety implications
- communications strategies between ground crews, crane operators or crane crew, including:
 - hand and whistle signals
 - UHF or Bluetooth communications
 - crane industry standards for communication
- attaching tree components and loads to crane hooks, including:
 - crane attachment slings
 - chains and cables
 - dead-eye slings
 - estimating load and balance of tree components

- controlling tree sections during crane lift, including:
 - controlling balance
 - methods for controlling branches, leaders and trunk
- dismantle techniques for branches and trunk sections, including:
 - cut and drop method
 - directional felling
 - arborist rigging techniques
- records and reporting procedures for crane supported tree dismantling operations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a crane and a tree to be dismantled as stipulated in the performance evidence
- resources, equipment and materials:
 - rigging equipment
 - personal protective equipment
 - first aid and emergency response equipment
 - crane slings and rigging equipment
 - pruning and cutting tools and equipment
- specifications:
 - workplace procedures and instructions for dismantling trees with cranes
 - legislation, regulations, codes of practice and standards relating to crane use and dismantling of trees
 - preferred industry practices (as outlined in the Companion Volume) for tree dismantling work
 - documentation for planning, obtaining permits and reporting tree dismantling work with cranes
- relationships:
 - work team and crane operator.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB325 Manage trees to create and maintain habitat refuges

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to create and maintain habitat refuges in trees involving the installation of nesting boxes and the use of pruning techniques for habitat hollow and cavity creation in trees. It also involves the retention and positioning of materials from tree works for ground level habitat and refuges.

The unit applies to individuals who work in arboriculture under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

The arboriculture industry requires that all arboriculture work to create and maintain habitat refuges is undertaken according to preferred industry practices (as outlined in the Companion Volume).

No licensing, legislative or certification requirements are to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare site and inspect equipment	1.1 Interpret and confirm target area work instruction with supervisor 1.2 Select, check and use personal protective equipment 1.3 Conduct pre-operational preparations and safety checks, on ropes, harnesses, tools and equipment 1.4 Undertake a site-specific job safety analysis (JSA), record and implement control measures according to workplace safety procedures
2. Retain and stabilise trees and standing vegetation for wood habitat	2.1 Identify vegetation with existing viable hollows 2.2 Plan retention of standing vegetation with viable hollows and defects 2.3 Identify environmental pruning points to accommodate retention or formation of hollows 2.4 Determine length of limb to be retained according to weight, size and natural fracture points 2.5 Identify and retain branch stubs and residual epicormic growth on lower limb sections 2.6 Implement pruning cuts to tension side of wood to weaken branch at desired point for fracture pruning 2.7 Apply physical force to create natural fracture and breakage of branch at desired point 2.8 Undertake coronet cutting using equipment that minimises contaminants on cut surface 2.9 Use materials and equipment to protect the environment from residues according to workplace and environmental procedures
3. Implement vegetation management techniques to create habitat	3.1 Identify and select vegetation suitable for habitat creation work 3.2 Apply natural fracture pruning techniques consistent with natural branch failure 3.3 Implement coronet cuts on branches or stub according to specifications 3.4 Fracture prune from ground or aerially and remove excess branches safely at a natural breakage point, leaving stub to specified length according to job requirements 3.5 Prepare habitat hollows with an angled faceplate to prevent ingress of water 3.6 Remove internal wood from hollows and install faceplate and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	entrance holes according to job requirements 3.7 Install ground refuges using dimensions and materials specific to fauna habitat requirements 3.8 Install nesting boxes to height and dimensions for target fauna species 3.9 Remove unsafe habitat features for reinstallation into tree canopy 3.10 Select, retain and position tree materials, from tree works, suitable for ground habitat, burrows and refuges
4. Clean worksite and store equipment	4.1 Inspect, clean, maintain and store equipment according to manufacturer instructions and workplace procedures 4.2 Collect and dispose of waste materials according to industry, workplace and environmental procedures and practices 4.3 Clean and restore site to condition according to workplace procedures and instructions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret legislation, industry standards and manufacturer instructions
Numeracy	<ul style="list-style-type: none"> Measure and calculate dimensions of materials for installation of habitat, hollows and nesting boxes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB325 Manage trees to	Not applicable	The unit has been created to address an industry	Newly created

create and maintain habitat refuges		requirement	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB325 Manage trees to create and maintain habitat refuges

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed vegetation to create and maintain habitat refuges in at least one tree not less than six metres tall with a stem diameter of at least 20cm at four metres above the ground, including:

- complied with all safety requirements including:
 - completed job safety analysis
 - used personal protective equipment
 - conducted pre-operational preparation and checks on ropes, harnesses, tools and equipment
- identified and implemented measures to prevent tree and environmental health issues including:
 - cleaned and sanitised chainsaws and equipment
 - cleaned up waste and used materials and equipment to protect the environment from residues
- accessed tree for habitat and hollow activities and fracture pruning either:
 - a mobile elevated work platform (MEWP)
 - or arborist climbing techniques
- selected vegetation and created habitats and hollows in trees including:
 - retained viable hollows and defects
 - used fracture pruning applying force using within the tree or hook poles or ropes from the ground
 - identified suitable points to retain or create new hollows
 - retained branch stubs and epicormic growth on tree limbs
- used pruning techniques for habitat creation on branches with a diameter of no less than 20cm, including:
 - natural fractures

- coronet cuts
- pruned and removed excess branches
- ensured overhang is retained to prevent water ingress
- prepared at least three habitat hollows or cavities in trees at least four metres above the ground with a tree diameter of no less than 20cm, including:
 - angled faceplate to prevent water ingress
 - removed internal wood
 - installed or repaired faceplate and entrance hole no closer than 30cm to branch bark ridge
 - installed faceplate through side or rear wall of cavity or through faceplate of sufficient thickness
 - prepared artificial habitat hollow to meet specified dimensions of target fauna for size of hollow, height, and entrance
 - removed an unsafe hollow branch and reinstalled back into a tree with same orientation and attitude
 - removed a branch containing a cavity and reinstalled and fixed cavity branch back into tree or another tree with same orientation and attitude
- installed the following types of nesting boxes:
 - two boxes using natural materials
 - two boxes using artificially constructed structures
- retained materials from tree works for ground habitat, refuges or burrows and restored the site.

All arboriculture work to create and maintain habitat refuges is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- preferred industry practices (as outlined in the Companion Volume) for arboriculture work to create and maintain habitat refuges
- importance and impact of living and dead vegetation in the environment, including:
 - habitat and refuges
 - public safety and environmental hazard and removal
 - risk management
- common vegetation features providing an ecological habitat, including:
 - stubs, snags, tears and scars
 - fungi
 - dead wood volumes
 - hollows, cavities and small holes
 - animal/insect damage and food

- defective branch union
- bird damage
- extent and quality of fungus rot and colonising organisms
- tree response to infection and compartmentalisation of decay in trees (CODIT), including biosecurity and infection controls
- conservation values of a dead wood habitat and a live wood habitat
- removal or reduction of dead wood or living wood to prevent breakage, including:
 - natural fracture pruning from the ground using hook poles or ropes
 - natural fracture pruning aurally by applying direct force with hand or foot
 - coronet cutting
 - retention of materials suitable for positioning in the landscape for ground burrows, habitat and refuges
 - leaving and rendering safe root plate of fallen trees for animal burrows, habitat and refuges
- different types of ground level refuges, including:
 - vegetation
 - soil
 - artificial
- the nature and role of habitat trees, including:
 - characteristics and essential components of plant and animal life cycles
 - features associated with ageing
 - value or potential value
 - hollows, cavities and roosting branches
 - removal and replacement of hollows or cavities
- nesting box designs and installation, including:
 - animal and bird species and nesting box design
 - natural materials repurposed for nesting structures
 - artificially constructed structures, materials, design and installation
- heritage or protected vegetation, environmental overlays and regulated vegetation, including:
 - historical and cultural aspects of vegetation
 - Aboriginal and Torres Strait Island mortuary and sacred/cultural trees
- pruning techniques for habitat development and possible consequence, including:
 - weakening branches to ensure pruning cut protrudes into the wood of not more than 30% of the diameter at the cut point
 - wood not weakened to break at the desired fracture point
 - cutting with a 15 degree opening on the compression side of the wood to allow the vegetation to fracture
 - use of ropes and pulleys to apply the sufficient force to assist the breakage
 - removal of excess branches and importance of leaving stub lengths of at least 20 cm

- pruning techniques to allow colonisation points for beneficial fungi, invertebrates and small animals
- pruning techniques for habitat hollow and cavity creation in vegetation for larger animals
- importance of retaining and creating variations in dead wood habitat niches
- natural fracture pruning techniques, including:
 - when to apply to branches <20 cm in diameter
 - fibre separation, along the grain and splintering
 - fibre separation in various planes, linear, radial and circumferential
 - natural fracture points
 - appropriate use of hand saws and equipment
 - approved chainsaw use and bar oil to avoid contamination of pruning cuts
- relevant statutory and local authority requirements
- personal protective equipment, including:
 - chaps or chainsaw pants
 - hand tools such as shovels, saws, drills, screwdrivers, hammers
 - ear protection
 - full face helmet/visor or safety glasses
 - harness and full body for MEWP or work position harness for tree climber
 - gloves
 - safety helmet
 - steel-cap boots
- potential hazards when managing vegetation, including:
 - animal responses to interference
 - vegetation density
 - incorrect and unsafe pruning methods used by self and others
 - incorrect and unsafe approaches to staking severed trunks or limbs
 - power lines and utilities
 - unsafe tree climbing methods
 - unsafe use of MEWP
 - unstable ground for equipment
- structural integrity and defects within vegetation that pose a threat to infrastructure, persons in and using the immediate area, and tree health, including:
 - broken branches
 - cankers
 - cracks
 - dead wood
 - decay/fungi
 - poor branch unions
 - poor vegetation architecture

- root problems
- torsional fractures
- environmental and biodiversity values
- when to use natural fracture pruning, coronet cutting and habitat hollow and cavity creation, including alternatives to felling trees to render them safe and retain dead wood habitat.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a site with a range of vegetation requiring natural fracture pruning, coronet cutting, and habitat and cavity creation stipulated in the performance evidence
 - an appropriate site where branch habitat hollows and cavities in branches can be created, nesting boxes can be constructed and installed, and burrows and ground level refuges can be created
- resources, equipment and materials:
 - arborist climbing kit or MEWP for accessing trees
 - personal protection equipment
 - tools, equipment and materials for pruning, constructing and installing habitat, burrows and nesting boxes
- specifications:
 - workplace policies, procedures, operations manuals and instructions related to pruning vegetation to manage habitat
 - biosecurity procedures for managing environmental contamination
 - regulations and codes of practice that relate to pruning vegetation to manage habitat
 - preferred industry practices (as outlined in the Companion Volume) for arboriculture work to create and maintain habitat refuges
 - plans, diagrams and specifications for installing nesting boxes
 - specification for fauna habitat
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.
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Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB406 Verify pruning specifications

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to verify specifications for pruning against tree conditions and national industry standards.

The unit applies to individuals who work in arboriculture and apply specialist skills to provide solutions to technical and unpredictable problems. They work autonomously, instruct and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Locate and verify tree and site characteristics	1.1 Confirm trees to be pruned and desired outcomes for pruning works according to client brief and arborist specifications 1.2 Undertake a site-specific job safety analysis (JSA) and record and implement control measures according to workplace safety procedures 1.3 Confirm identified tree species and location according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace and botanical standards 1.4 Determine dimensions of tree and record characteristics according to workplace requirements
2. Inspect tree and determine pruning specifications	2.1 Inspect and assess condition and growing environment for trees identified in client brief and specifications 2.2 Determine planned pruning operations required for canopy modification or canopy maintenance according to industry standards 2.3 Determine tree care requirements to compensate for planned pruning operations 2.4 Identify and select biosecurity procedures for planned pruning operations
3. Confirm and validate pruning operations	3.1 Review client brief and arborist specifications against tree inspections and planned pruning operations 3.2 Confirm pruning operations comply with client brief and arborist specifications 3.3 Verify planned pruning operations for compliance with industry standards
4. Confirm pruning works with client and work team	4.1 Document planned pruning operations according to workplace procedures 4.2 Confirm and clarify pruning operations plan with client and arborist 4.3 Prepare specifications and contract for pruning works and submit to client for approval according to workplace procedures and industry standards 4.4 Provide specification of pruning operations to work crew for implementation
5. Maintain records of pruning works	5.1 Assess pruning works performed against pruning specifications 5.2 Implement remedial action where anomalies are identified 5.3 Review works with work crew and document improvements for future works 5.4 Record results of completed works and report to client according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret complex documents, plans and specifications to extract critical information to compare pruning requirements against work performed
Writing	<ul style="list-style-type: none"> Create, edit and proofread contracts, specifications and records, ensuring clarity of meaning, accuracy and consistency of information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB406 Verify pruning specifications	AHCARB401 Verify pruning specifications	Elements and performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB406 Verify pruning specifications

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has verified pruning specifications on at least nine trees for three different classes of pruning, with no more than one pruning class per tree, including:

- confirmed and identified tree species to be pruned and its size and characteristics
- assessed and documented site safety and implemented controls
- assessed the tree to be pruned for condition and growing environment and determined planned pruning operations and compensatory tree care
- reviewed and confirmed planned pruning operations complied with client brief, arborist specifications and industry standards
- documented planned pruning operations and confirmed with client and arborist
- prepared pruning specification and contract for approvals and provided specifications to work team
- assessed completed pruning works against specifications and implemented remedial action for non-compliance
- reviewed pruning operations and documented future improvements
- maintained records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- work health, safety, site and environment, including:
 - preparing job safety analysis and safe work method statements for site-specific risks
 - personal protective equipment used when climbing
 - safety and procedures when working near overhead power lines
- specifications and Australian Standard AS4373 for crown maintenance, including:

- dead wooding
- crown thinning
- selective pruning
- formative pruning
- specifications and Australian Standard AS4373 for crown modification, including:
 - reduction pruning
 - crown lifting
 - pollarding
 - remedial or restorative pruning
 - utilities line clearing
- current national recognised industry standards relating to tree pruning operations
- tree species identification standards, including:
 - botanical nomenclature
 - common names
- characteristics of trees and pruning operations, including:
 - approximating height and canopy size and spread
 - trunk dimensions as diameter-at-breast-height (DBH)
 - estimating total crown foliage
 - the location and distribution of branches
 - estimating extent of pruning as a percentage of canopy
 - specification of key reference points within a tree
- tree's health, growth habit, structure, stability and growing environment
- post-pruning tree care, including:
 - impacts arising from pruning of live tissue
 - compensatory tree care activities
- minimising transmission of diseases with pruning equipment and materials, including:
 - biosecurity requirements
 - basic principles of hygiene when maintaining tools and equipment
- pruning procedures and methods, including:
 - maximum and average diameter of live branches
 - minimum clearance distances
 - branch pattern
 - direction of branch growth by selecting north, south, east or west
 - approximation of branch collar diameter
 - location of pruning point
- crown maintenance and modifications and pruning cut options, including:
 - stem co-dominance
 - stem bark ridge
 - old cuts
 - dead branches

- occluded and occluding branches
- basics of contracts and their purpose in arboriculture work, including:
 - client communication strategies
 - verbal contracts
 - documented contracts
 - legal requirements
- importance of gaining regulatory approvals
- specifying and documenting pruning work requirements
- record keeping and reporting procedures when verifying pruning specifications.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - nine different trees stipulated in the performance evidence
- resources, equipment and materials:
 - computer for accessing information and documenting outcomes
- specifications:
 - client or arborist specifications for pruning as stipulated in the performance evidence
 - workplace procedures and instructions, related to pruning operations
 - preferred industry practices (as outlined in the Companion Volume) relating to tree pruning operations, including AS4373
- relationships:
 - client and work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB407 Supervise and audit tree operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to supervise and audit tree operations on an arboriculture work site in accordance with existing tree hazard evaluation and pruning specification documentation.

The unit applies to individuals who work in arboriculture and apply specialist skills to provide solutions to technical and unpredictable problems. They work autonomously, instruct and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare site and equipment	1.1 Confirm tree operations, schedule of works and desired outcomes with client brief and arborist specifications 1.2 Undertake a site-specific job safety analysis (JSA), record and implement control measures according to workplace safety procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Assess site access conditions for equipment and personnel 1.4 Ensure pruning tools, equipment and machinery comply with operation specification, planned works and site assessment
2. Supervise and monitor tree operations	2.1 Monitor site establishment and compliance with site and tree operation specifications 2.2 Review and confirm tree condition against tree assessment report 2.3 Document specification for tree operation works 2.4 Communicate tree operation works and specification to work team and verify understanding 2.5 Conduct safety audit of work team, equipment and machinery and document outcomes 2.6 Monitor compliance with safety procedures during tree operation work
3. Supervise and monitor work team operations and performance	3.1 Monitor work team operational activities 3.2 Identify and resolve work-related issues within work team 3.3 Conduct work team member performance reviews 3.4 Provide feedback to work team members on performance 3.5 Issue rectification notices where performance is below expectations 3.6 Promote work team improvement through professional development activities 3.7 Document work team operational performance according to workplace procedures
4. Audit and report tree operations	4.1 Monitor tree operations for compliance to specifications and Australian standards 4.2 Estimate and record progress of tree operations against specifications and scheduled works 4.3 Review quality of completed tree works against specifications and Australian standards 4.4 Identify and record incomplete and substandard pruning works 4.5 Implement rectification procedures to resolve incomplete and substandard tree works 4.6 Record and report results of tree operations audit according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret plans and specifications to extract critical information on tree work performance requirements and for instructing and monitoring work activity
Writing	<ul style="list-style-type: none"> Create, edit and proofread specifications for tree operations work, ensuring clarity of meaning, and accuracy and consistency of information
Oral communication	<ul style="list-style-type: none"> Use active listening, open questions, and effective verbal and non-verbal signals when providing feedback and communicating job requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB407 Supervise and audit tree operations	AHCARB402 Supervise and audit tree operations	Prerequisite units removed Elements and performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB407 Supervise and audit tree operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion demonstrated the ability to supervise and audit tree operations on an arboriculture work site with no less than 2 team members and has:

- confirmed tree operations specifications with client brief and arborist and communicated and verified understanding with work team
- conducted a safety audit and analysis of site, tree operations, work team, equipment and machinery against safety procedures
- assessed site access conditions for equipment and personnel and ensured pruning tools, equipment and machinery complied with specification
- monitored site establishment, reviewed tree assessment report and confirmed tree operational works against specifications and standards
- monitored work team activity and tree operations and provided appropriate feedback
- identified and resolved issues of poor performance and non-compliance
- estimated and recorded progress of tree operations against planned works and reviewed completed works against quality standards
- recorded and reported tree operation audit outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- site-specific hazards, risks and controls and the role of the JSA, including:
 - work health and safety hazards
 - work health, safety, site, environmental and traffic control measures
 - hazards and hazardous site conditions
 - safe use and operation of pruning tools, equipment and machinery

- preferred industry practices (as outlined in the Companion Volume) relating to tree operations
- basic safety auditing procedures for personal protection standards and recording and reporting procedures for breaches in safety
- documenting and interpretation of tree operations specifications, including:
 - compliance with Australian standards
 - compliance to specifications
 - types of tree work and expected standards
- supervising an arboriculture site establishment, including:
 - conformance to requirements
 - communications strategies for work teams and the role of toolbox meetings
 - tree evaluation and expected impact on worksite activities
- staff performance review procedures, including:
 - feedback process and the benefits of positive feedback
 - communicating and dealing with poor performance and the use of improvement notices
- work team performance improvement strategies, including professional development
- auditing quality of pruning works
- work team member performance management, including:
 - attendance and punctuality
 - conflict
 - breaches in safety procedures
 - dealing with drug and alcohol abuse
- record keeping and reporting procedures for tree operations, including:
 - digital images and role in recording performance and compliance
 - mandatory and workplace-specific documentation and reporting.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - access to active arboriculture work site with work team and tree operations, or environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer and software for accessing information and documenting outcomes
 - digital image capture device for recording outcomes
- specifications:
 - workplace procedures, instructions and arborist specifications for tree operations
 - preferred industry practices (as outlined in the Companion Volume) relating to tree operations

- relationships:
 - client and work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
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AHCARB408 Perform a ground-based tree defect evaluation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to examine trees from the ground, assess and test them for defects, evaluate the potential risk of failure, secure the site and report the condition to specialist arborist for a tree risk assessment.

The unit applies to individuals who work in arboriculture and apply specialist skills to provide solutions to technical and unpredictable problems. They work autonomously, instruct and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine evaluation requirements	1.1 Confirm trees to be evaluated according to client brief 1.2 Undertake a site-specific job safety analysis (JSA) and record and implement control measures 1.3 Determine tree health and hazard benchmarks for project

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	according to industry standards
2. Examine tree visually for indicators of potential failure	2.1 Examine tree for indicators of general poor health 2.2 Examine tree for visual defects 2.3 Examine tree for indication of damage from organisms 2.4 Assess examination outcomes to determine potential for structural failure of tree components according to industry benchmarks
3. Undertake basic testing of tree for indicators of potential failure	3.1 Conduct tests for cavities according to visual indicators 3.2 Expose root crown and examine for concealed root defects according to visual examination outcomes 3.3 Remove loose bark and examine stems for concealed defects according to visual examination outcomes 3.4 Assess test outcomes for potential impact on tree health and structural integrity according to industry benchmarks
4. Record tree attributes and indicators	4.1 Capture images and record botanical name, dimensions and location of tree under evaluation 4.2 Document the results of examinations and tests conducted for tree under evaluation 4.3 Capture images, location and visual indicators of defects in tree for inclusion in documentation 4.4 Estimate and record dimensions of defect and affected tree component
5. Assess and mitigate potential risk, and document actions	5.1 Identify possible targets affected by tree under evaluation from client brief 5.2 Assess identified defective tree components for structural integrity and potential risk on possible targets 5.3 Validate assessment of severe defects on structural integrity of tree with consulting arborist 5.4 Advise client of outcomes of tree defect evaluation where a heightened potential risk to targets is identified 5.5 Take action to mitigate potential risk according to client advice and workplace policies and procedures 5.6 Document action taken to mitigate potential risk on target
6. Document and report	6.1 Review and assess tree defect evaluation results, and consider

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
hazards and recommendations	<p>options for resolving any unmitigated risk</p> <p>6.2 Identify and document recommended options for client approval</p> <p>6.3 Compile records, results and recommendations, and document tree defect evaluation report according to workplace procedures and industry standards</p> <p>6.4 Submit tree defect evaluation report to client according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Create, edit and proofread tree defect evaluation report and recommendations to ensure clarity of meaning, and accuracy and consistency of information
Oral communication	<ul style="list-style-type: none"> Present complex information about tree defects to client using clear and convincing language, tone and pace appropriate to the client's understanding

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB408 Perform a ground-based tree defect evaluation	AHCARB403 Perform a ground-based tree defect evaluation	<p>Prerequisite units removed</p> <p>Elements and performance criteria clarified</p> <p>Foundation skills added</p> <p>Assessment requirements updated</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB408 Perform a ground-based tree defect evaluation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted a whole-of-tree defect evaluation from the ground for at least 20 individual trees with defects, from at least 10 different species.

There must also be evidence that the individual has:

- performed a site-specific job safety analysis (JSA) and recorded and implemented control measures
- determined tree hazard benchmarks for the project
- considered relationship between tree species, defects and potential risk
- examined trees for indicators of the following defects:
 - tree health
 - visible physical defects
 - damage from organisms
- assessed examination results to determine potential structural failure
- conducted tests to determine visual and concealed defects, including:
 - sounding accessible visual and concealed defects
 - probing accessible cavities
 - exposing and examining root crown
 - removing loose bark and examining for defects
- assessed test results for structural integrity against tree hazard benchmarks
- recorded details of tree under defect evaluation, including:
 - captured images of tree
 - identified tree to genus, species and common name
 - estimated approximate dimensions of tree
 - identified geographical location of tree
- recorded the following attributes of the defects:
 - image of the defect

- location within the tree canopy
- visual indicators of the defect
- estimated the dimensions of defect and affected tree component
- identified potential target from client brief and assessed consequences of tree defects on structural integrity and risk to target
- advised client on outcomes of tree defect evaluation
- implemented action to mitigate tree hazard according to client and workplace procedures
- documented actions taken to mitigate risk
- reviewed tree defect evaluation results and assessed possible options for controlling hazard
- identified and recommended action for client approval
- compiled all results, records and recommendations, and documented in tree defect evaluation report according to workplace procedures
- submitted tree defect evaluation report to client according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- work health, safety and environmental hazards, assessing risk and the role of a JSA
- preferred industry practices (as outlined in the Companion Volume) relating to tree defects and effect on structural integrity
- structure and function of client briefs and their interpretation, including:
 - targets and the role of targets in tree risk assessment
 - industry and client tree hazard benchmarks
- work health, safety and environmental hazards, assessing risk and the role of a JSA
- noting and specifying tree under evaluation, including recording:
 - plant naming conventions
 - estimating tree dimensions from the ground
 - specifying geographic location on maps, pictures and global positioning systems (GPS)
- tree examination procedures and methods from the ground, including:
 - signs and symptoms of health of trees
 - methods for determining tree health
 - tree anatomy and morphology relating to structural failures
- tools and equipment required to assist in tree examinations, including:
 - cameras and digital imaging
 - sounding mallet and probing tools
 - materials
- recognising visual indicators of tree defects, their causes and effect on structural failure, including:
 - visible and concealed defects, including cavities, cracks and included bark

- common symptoms of diseases (e.g. rot, fungal growth, loose bark)
- common signs of organisms (e.g. holes, frass, live organisms, loose bark)
- testing procedures for confirming visual indicators of tree health and structural defects, including:
 - sounding and probing techniques for defects
 - loose bark removal and signs of defects
 - exposure of root crown to identify root and crown defects
- health and approximate dimensions of the tree and affected tree part and defect
- documentation of the tree defect evaluation, including:
 - digital imaging and photographs
 - reports and reporting styles and industry best practice
- assessing tree hazards and likelihood of failure, including:
 - potential consequences
 - measures to rectify
 - types of potential target
 - urgency for notifications and gauging imminent threat
 - isolation of hazardous trees
 - moving potential target
 - size of tree and its defects
- considerations for remedial action arising from defect evaluation, including:
 - aerial inspection
 - load testing
 - role of a consulting arborist, and seeking further advice from consulting arborist
 - laboratory testing
- documenting and presenting reports to clients.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - 20 trees from 10 different species as stipulated in the performance evidence
- resources, equipment and materials:
 - cross-sectioned tree components representing visual indicators of tree defects
 - computer and computer software
 - digital image capture device
- specifications:
 - workplace procedures, instructions and client brief for trees requiring evaluation
 - preferred industry practices (as outlined in the Companion Volume) relating to tree defects and effect on structural integrity
- relationships:

- client and consulting arborist.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB409 Conduct a safety audit

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to prepare for and conduct safety audits of arboriculture work teams, work procedures and practices. It includes the detection of faults in height safety equipment and determination of remedial action.

This unit applies to individuals designated as 'Height safety equipment inspectors'. Work is implemented with low-risk work procedures to comply with Australian Standards (AS1891). Individuals work autonomously, instruct and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Perform audit planning	1.1 Identify objectives, scope and focus of audit 1.2 Identify audit target and required documentation 1.3 Determine audit process and sampling technique 1.4 Plan frequency and scheduling of audit events

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.5 Prepare audit documentation</p> <p>1.6 Conduct pre-audit communications with client and relevant stakeholders</p>
2. Undertake safety audit activities	<p>2.1 Undertake a site-specific job safety analysis (JSA) and record and implement control measures</p> <p>2.2 Conduct planned audit of personal protective equipment used on site</p> <p>2.3 Conduct planned audit of tools and equipment for defective components</p> <p>2.4 Conduct planned audit inspection of emergency and rescue procedures, practices and equipment</p> <p>2.5 Conduct planned audit inspection of height safety procedures, practices and equipment</p> <p>2.6 Conduct planned audit inspection of workplace safety documentation</p> <p>2.7 Confirm currency of licencing requirements of individuals in work team for specialised work functions</p>
3. Identify and respond to non-conformance	<p>3.1 Assess safety audit outcomes against compliance to safety policies and procedures</p> <p>3.2 Identify non-conformance with safety policies, procedures, manufacturer instructions and applicable industry standards</p> <p>3.3 Identify and detect faults, levels of wear and damage in equipment and determine remedial action</p> <p>3.4 Issue rectification notices for breaches in work health and safety policies, procedures and practices</p> <p>3.5 Remove unsafe tools and equipment from service and tag according to workplace safety procedures</p> <p>3.6 Recommend training to improve safety</p>
4. Record, report and present audit results	<p>4.1 Prepare safety audit report according to workplace procedures</p> <p>4.2 Review safety audit outcomes against workplace policies, procedures and industry safety standards</p> <p>4.3 Identify and record inconsistencies in safe work practices, and recommend action for approval according to workplace safety procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.4 Make recommendations to resolve unsafe work practices according to workplace safety procedures 4.5 Record and report results of safety audit according to workplace procedures 4.6 Maintain equipment data and audit inspection records according to industry standards and workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret critical information in documentation used for workplace compliance, including manufacturer instructions, workplace policies and procedures for equipment, and industry standards
Writing	<ul style="list-style-type: none"> Accurately and clearly report outcomes of safety audits using industry terminology

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB409 Conduct a safety audit	AHCARB404 Conduct a safety audit	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB409 Conduct a safety audit

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted, recorded and reported three separate safety audits, including completion of the following for each audit:

- prepared for audit, including:
 - identified safety audit objectives, scope and focus
 - reviewed legislation, standards, codes of practice, manufacturer instructions and industry guidance required for audit
 - identified target operations and documentation required for audit
 - determined the audit process and sampling technique
 - determined the frequency and scheduling of audit events
 - prepared audit documentation for recording audit
 - communicated audit requirements with client and relevant stakeholders
- assessed, analysed and documented site safety and implemented control measures
- conducted site audits according to planned schedule against workplace and industry safety standards for the following:
 - testing and use of personal protective equipment
 - testing and inspection of tools and equipment for safety defects
 - inspection of height safety equipment for condition and suitability for intended use
 - inspection and operation of emergency and rescue equipment
 - maintenance of workplace safety documentation
 - confirmed currency of licencing requirements for specialised equipment
- identified and recorded non-conformances and issued notices for breaches in safety policies, procedures and standards
- presented auditing outcomes and recommendations and sought approvals, including:
 - recommended alternative equipment configurations and practices
 - removed from service and tagged unsafe tools and equipment

- recommended training to improve safety
- maintained inspection records and equipment data.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- preferred industry practices (as outlined in the Companion Volume) relating to safe arboriculture work
- process and procedures of developing and conducting safety audits, including:
 - developing safety audit objectives
 - understanding and developing safety audit scope and focus
 - specifying the operational targets for audit
 - audit sampling technique
 - scheduling the frequency and timing of audit events
 - developing audit documentation and checklists
- communication strategies for informing key stakeholders of audit, and their purpose, including toolbox talks
- testing and observation of safety procedures and practices, including:
 - work function and operational safety
 - use and condition of personal protective equipment
- testing and observation of tools and equipment use on site, including:
 - defective components
 - correct safe operation
 - pre-start checks and shutdown procedures
 - use and maintenance of safety guards
 - restriction on equipment use
 - tagging tools and equipment
 - repair information and log books
 - application of Australian Standard AS1891 when testing fall arrest equipment
- testing and checking operation and availability of emergency resources, including:
 - rescue equipment kit
 - first aid kit
 - emergency response procedures
- testing and checking procedures used for:
 - arborist height safety equipment
 - rigging and climbing ropes
- manufacturer guidelines, industry standards and applicable regulations to determine suitable configurations and use of arborist height safety equipment
- purpose and use of safety documentation, including:
 - injury, accident and incident reports

- job safety analysis (JSA) and safe work method statements (SWMS)
- equipment tags and repairs log books
- availability of chemical and material safety data sheets
- audit requirements and safety procedures requiring certifications
- procedures for assessing work performance and activities against safety policies, procedures and industry standards
- managing non-conformance to safety standards, including:
 - non-conformance notices
 - professional development
 - changes to policies and procedures
 - recommendations for rectification of non-conformance
- safety audit reporting procedures and documentation.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - access to an active arboriculture work site, or environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer and word processing software
 - arborist equipment stipulated in the performance evidence
- specifications:
 - workplace safety policies and procedures
 - client brief and instruction for safety audit objectives
 - preferred industry practices (as outlined in the Companion Volume) relating to safe arboriculture work
 - Australian and international standards related to safety audits for arboriculture work including AS1891
 - manufacturer instructions for arborist equipment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB508 Identify, select and specify trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to identify, select and specify a range of trees in a range of urban and regional applications for local government and legal contexts. It requires the documentation of specification of trees and their respective growing environment in residential, commercial, public open spaces and amenity areas.

The unit applies to individuals who work in arboriculture and analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others, and analyse, design and communicate solutions to a range of complex problems.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine tree selection criteria	1.1 Develop tree selection brief in consultation with client 1.2 Undertake site inspection to identify site conditions and constraints 1.3 Identify tree selection limitations according to legislative,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	regulatory and Australian standards 1.4 Determine functional life expectancy of site and planting 1.5 Assess tree characteristics suitable for the site conditions and constraints according to client brief 1.6 Assess and confirm the suitability of trees as a valid option for site
2. Identify and select trees	2.1 Determine dimensions of site for planting according to client brief 2.2 Estimate available root zone profile of site for planting 2.3 Assess and verify root zone profile is proportional to proposed tree size according to client brief 2.4 Assess environmental and hydrological conditions and consider impact on tree selection 2.5 Test and assess root zone profile physical and chemical properties to assist tree selection 2.6 Recommend soil/media amendments for planting site according to test result outcomes 2.7 Identify and evaluate performance of trees common in local region for suitability of selection 2.8 Use reference materials to identify and select trees with characteristics conforming to site conditions, selection criteria and client brief 2.9 Compile and update a database of tree selections and characteristics
3. Specify trees	3.1 Research and select availability, type and size of tree stock for selected trees 3.2 Select size and type of tree stock according to tree production characteristics and Australian quality standards for tree stock 3.3 Verify tree selection against selection criteria, size and quantities with client 3.4 Determine planting method and specification appropriate to the species and the site 3.5 Document specifications for selected trees according to industry and Australian standards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Verify quality of tree and materials on delivery	4.1 Inspect selected plants on site for quality and quantities according to specifications 4.2 Inspect delivered materials for root zone profile for quality and quantity according to specifications 4.3 Record quality check results according to workplace procedures
5. Correlate and present a report	5.1 Produce a report of the identification, selection and specification process, and incorporate correlated records according to industry standards 5.2 Present client or organisation with report

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Accurately interpret information from legislation, industry standards, botanical and biological references for plant selections and specifications
Writing	<ul style="list-style-type: none"> Create reports and recommendations, expressing ideas and exploring complex issues, that are logically constructed, succinct and accurate

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCARB508 Identify, select and specify trees	AHCARB502 Identify, select and specify trees	Elements and performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB508 Identify, select and specify trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has used reference materials to identify and select ten trees for three distinctly different sites (a total of 30 trees), taking into account the following:

- geographical location on the site
- taxonomic characteristics
- edaphic and environmental preferences
- limitations of the tree for the site
- rationale for tree selection

There must also be evidence that the individual has compiled and updated a database for at least 50 tree species, from the taxonomic groups of angiosperms (dicotyledons and woody monocotyledons) and gymnosperms with the following details:

- botanical and common name
- general size characteristics
- canopy characteristics
- distinguishing features
- general cultural requirements

There must also be evidence that the individual has:

- consulted with client and developed a tree selection brief for the size and type of the site, including:
 - identified site conditions and constraints
 - identified limitations for tree selection
 - determined functional life expectancy of site and plantings
 - assessed tree characteristics suitable for site and client requirements
 - assessed and determined the suitability of trees for site

- evaluated performance of trees common to a local region for suitability for planting site
- assessed the root zone profile for the tree planting site, including:
 - estimated the available root zone profile
 - verified the root zone profile is proportionate for proposed tree dimensions
 - assessed the hydrological and environmental conditions on tree selection
- tested root zone profiles for characteristics to aid tree selection for at least 5 distinct root zone profiles, including: 3 natural soils, 1 soil mix and 1 growing media. The tests must include:
 - field texture assessment
 - structure
 - compaction
 - bulk density
 - organic content
 - pH and electrical conductivity
 - infiltration rate and drainage
 - moisture holding capacity
- prepared specifications for tree selection according to industry standards including:
 - planting method appropriate to the species and the site
 - soil or media amendments from test results
- investigated the availability of potential tree stock and verified size and quantities against selection criteria and client brief
- checked and recorded quality and quantity of trees and root zone profile materials on site for quality and quantities according to specifications
- produced a report of the identification, selection and specification process and incorporated the correlated records and presented report according to client brief.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles of consulting with clients and use and purpose of client brief
- legislative and regulatory requirements regarding tree selection, including:
 - environmental and ecological implications
 - declared and other weed restrictions
 - hazardous tree species
- assessing site characteristics for tree selection, including:
 - functional life expectancy of tree and site
 - tree functionality for specified locations
 - appropriateness of tree selection characteristics for site aspect and dimensions
- effect of site constraints on the tree selection process, including:

- verge width
- aerial power and telecommunications lines
- potential to impede visual references (roads and driveways, signage, traffic lights)
- potential to impede traffic flow and structures (footpaths, roadways, building, infrastructure)
- use of research techniques from reference materials, including:
 - plant taxonomic keys
 - electronic data
 - plant guides
- broad botanical concepts of tree selection for the following:
 - ethnobotany
 - tree morphology
 - tree physiology
 - taxonomy and nomenclature
 - environmental conditions for the functional characteristics of the tree
- basic calculations for estimating planting area and root zone profile
- root zone profile and characteristics as a determinant for tree selection, including:
 - type of root zone profile (natural soil, soil mix or growing media)
 - size and volume of root zone profile and proportion to the mature size of tree
 - site hydrology
 - specifying soils and growing media, including standards to apply
- testing and evaluating soils, soil mixes and growing media for physical and chemical properties and suitability for growing trees, including:
 - identifying soils and soil types
 - testing for pH, electrical conductivity (EC), nutrients
 - testing for wettability, moisture holding capacity, drainage, organic matter
 - amendments to improve soil, soil mix and growth media
 - growing media or soil selection and suitability for purpose
- tree selection methodology using quality criteria of suitability for purpose, including:
 - evaluation of trees common to a region
 - documenting and rationale for tree selection
 - selection of trees based on form and function
 - selection of trees for ecological and environmental purposes
 - recommendations of trees
 - matching species and cultivars appropriately to the selection criteria
 - transplanting issues for mature trees
- documenting tree specifications, including:
 - quality standards for tree stock
 - tree stock selection, type and size of plant, container or root ball
 - tree stock selection and growing media quality and specifications

- tree planting specifications
- quality control and quality assurance, including:
 - checking procedures for deliveries of plants and growing materials with the specifications
 - how to monitor quality and apply quality controls
 - tree structural quality
 - recording quality checks on delivered plants and products
 - impact of Australian Standards AS2303, AS2223 and AS3743 on growing media and quality assurance
- design and construction of plant databases, including:
 - field design for taxonomy and nomenclature
 - field design for characteristics of tree
 - entry of tree data
- reports and reporting procedures for identification, selection and specification process.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a worksite requiring tree planting, or environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with word processing software, and database software
 - digital image capture device
 - soil testing equipment
 - loupe
 - tree reference materials, including field guides, print and digital taxonomic keys
 - live tree specimens
 - soils, soil mixes and growing media
- specifications:
 - workplace safety policies and procedures related to tree identification and selection
 - client brief and instruction for tree requirements for a specific site
 - Australian Standards AS2303, AS2223 and AS3743
- relationships:
 - client.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed

- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB509 Develop an arboricultural impact assessment report

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to decide on the appropriateness for retaining trees and to assess, plan and monitor the protection of trees on construction and development sites where trees subject to retention are exposed to potential damage.

The unit applies to individuals who work in arboriculture and analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Undertake assessment of trees affecting site	1.1 Identify and research impact of legislation and Australian Standards of trees on site 1.2 Determine requirements of statutory authorities for trees on development site

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Determine local government planning laws, tree protection and preservation regulations for site</p> <p>1.4 Assess or survey trees on adjacent site and determine legal status and suitability for retention</p> <p>1.5 Conduct a site assessment and identify conditions that impact tree protection program</p> <p>1.6 Identify hazards, activities and circumstances that have potential to harm trees and assess the level of risk</p> <p>1.7 Locate and confirm trees plotted on survey plan</p> <p>1.8 Plot trees not represented onto survey plan</p>
2. Compile preliminary tree assessment data	<p>2.1 Collect available relevant plans and documentation</p> <p>2.2 Identify and record affected trees with botanical and common name on development and adjoining site</p> <p>2.3 Record tree dimensions according to statutory requirements</p> <p>2.4 Determine age class and estimate life expectancy</p> <p>2.5 Determine tree health in relation to tree physiology and pathology</p> <p>2.6 Determine condition of tree structure in relation to tree anatomy</p> <p>2.7 Assess heritage and cultural value of trees</p> <p>2.8 Assess habitat, ecology and environmental impact of trees on site</p> <p>2.9 Assess impact of location to existing and past site structures</p> <p>2.10 Determine the retention value</p> <p>2.11 Compile all tree assessment data required for report</p>
3. Document preliminary arboricultural report	<p>3.1 Record all trees and groups of trees suitable for retention</p> <p>3.2 Determine indicative tree protection zone (TPZ) and structural root zone (SRZ) for each tree</p> <p>3.3 Plot tree identifiers and indicative TPZ on survey plan</p> <p>3.4 Document preliminary arboricultural report</p>
4. Assess impact of proposed development on trees	<p>4.1 Interpret existing plans, working drawings, terms and symbols</p> <p>4.2 Interpret development and design language</p> <p>4.3 Assess potential mechanical and chemical impact of development on trees and determine controls</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.4 Determine impact of proposed development on trees</p> <p>4.5 Provide preliminary feedback to client on potential areas of improvement</p>
5. Contribute to design development	<p>5.1 Liaise with client on design of development to minimise impact on trees</p> <p>5.2 Assess constructability of design to ensure impacts on trees are minimised</p> <p>5.3 Liaise with design team to develop tree sensitive design and construction methods</p>
6. Determine indicative and actual TPZ	<p>6.1 Assess development requirements for site access and logistics</p> <p>6.2 Review indicative TPZ</p> <p>6.3 Determine extent of encroachment into indicative TPZ</p> <p>6.4 Determine impact of works on SRZ</p> <p>6.5 Determine extent of actual SRZ</p> <p>6.6 Determine actual TPZ for trees to be retained</p> <p>6.7 Define and record the actual TPZ</p>
7. Establish site conditions to retain tree viability to major encroachment	<p>7.1 Determine level of encroachment into TPZ following design development</p> <p>7.2 Assess impact of major encroachment on tree</p> <p>7.3 Consider implications of major encroachment on health, physiology and structural integrity of tree</p> <p>7.4 Assess impact on soil characteristics and volume of past, existing and future structures on tree</p> <p>7.5 Consider site conditions and design factors to minimise impact of encroachment on tree</p> <p>7.6 Establish site conditions and design factors required to retain viability of tree</p> <p>7.7 Determine additional remedial measures to protect tree viability</p>
8. Develop protection measures and advise client	<p>8.1 Investigate tree protection devices and techniques to mitigate development activities</p> <p>8.2 Specify protection devices, techniques and systems to minimise impact of development</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	8.3 Specify construction operations to minimise impact on trees 8.4 Produce working drawings for installation and construction of tree protection systems 8.5 Provide advice on tree removal and tree pruning program to client
9. Document the relevant reports	9.1 Prepare draft arboricultural impact assessment report 9.2 Document tree protection recommendations and drawings 9.3 Prepare and document tree management and monitoring guidelines and strategies for addressing potential problems 9.4 Consolidate reports, plans and guidelines into final arboricultural impact assessment report and present to client according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret legislative documents, industry standards, plans and specifications to identify critical information and concepts for use in tree assessment reports
Writing	<ul style="list-style-type: none"> Create complex documents and reports demonstrating control over different writing styles and purposes
Numeracy	<ul style="list-style-type: none"> Accurately interpret numeric data from plans, specifications and site measurements Perform calculation for measuring and estimating tree dimensions and the extent of TPZ and SRZ

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCARB509 Develop an arboricultural impact assessment report	AHCARB504 Develop an arboricultural impact assessment report	Prerequisite unit removed Element added Elements and performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB509 Develop an arboricultural impact assessment report

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion developed an arboricultural impact assessment report for a development site and has:

- identified and researched the impact and specific requirements of legislation, Australian Standards, and local government laws for trees on development site
- conducted site assessment and identified conditions that impact tree protection program
- identified work health and safety hazards, assessed risk and applied controls for site
- identified hazards and assessed the risks that harm trees
- located, confirmed and plotted all trees on survey plan
- collected plans and documentation
- identified and recorded tree by botanical and common name and included a record of:
 - tree height, crown spread and diameter-at-breast-height (DBH), diameter at ground level and statutory dimensions
 - age class and estimated life expectancy
 - tree health in relation to tree physiology and pathology
 - condition of tree structure in relation to tree anatomy
- assessed the following values for trees:
 - heritage and cultural
 - habitat, ecological and environmental
 - location of tree to existing and past site structures
- determined the tree retention value
- compiled tree assessment data for report
- recorded all trees suitable for retention
- determined and plotted indicative tree protection zone (TPZ), tree identifiers for each tree on survey plan
- documented preliminary arboricultural report

- interpreted plans, designs, working drawings, terms, symbols and language for development
- assessed and determined controls for mechanical and chemical damage affecting trees
- provided client with preliminary feedback for potential improvements
- liaised with client on design development and assessed impact of construction on trees
- liaised with design team to develop tree sensitive design and construction methods
- assessed development requirements for site access and logistics
- reviewed indicative tree protection zone and determined:
 - extent of encroachment into indicative TPZ
 - impact of works on structural root zone (SRZ)
- determined extent of SRZ
- determined and recorded level of encroachment and actual TPZ for trees to be retained
- assessed the following factors affecting tree viability for a major encroachment:
 - location and distribution of roots
 - potential loss of root mass
 - species tolerance to root loss
 - age, health, size, lean and stability of tree
- assessed impact of encroachment on health, physiology and structural integrity of tree
- assessed impact on soil characteristics and volume from past, existing or planned structures
- considered site and design factors to minimise impact of proposed encroachment
- rationalised all factors to decide on the viability of the tree
- determined remedial measures to protect the tree
- investigated, specified and produced installation and construction drawings for tree protection devices and systems to mitigate tree damage
- provided advice to client on tree removal and tree pruning program
- prepared a draft arboricultural impact assessment report
- developed a tree protection plan and drawings
- prepared, documented tree management and monitoring, including strategies to handle problems
- consolidated reports, plans and guidelines into final arboricultural impact assessment report in both:
 - digital format
 - print format
- presented report to client.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislative and regulatory framework for trees on development sites, including:
 - role of Australian Standards AS2303, AS2223, AS3743, AS4970 and AS4373

- specific requirements of statutory authorities
- local government tree protection and preservation regulations
- construction drawings, plans and documentation, including:
 - types of drawings and plans
 - terms, symbols and language used in development
 - version control of drawings, including revision and issue dates
- working and communicating with clients and development design personnel
- conducting site assessment and conditions that impact tree protection programs, including:
 - development site safety and safe access procedures
 - plotting trees/tree identifiers onto survey plans
 - naming and recording tree by botanical and common name
 - methods for determining tree dimensions, height, crown spread and DBH
 - age class and estimated life expectancy
 - tree health in relation to tree physiology and pathology
 - assessing and determining the viability of a trees
 - soil volume and characteristics on development sites
- tree values and importance, including:
 - heritage and cultural values
 - habitat, ecological value
 - environmental values
 - methods of determining retention value
- the principles of TPZ, including:
 - methods of mechanical and chemical damage to trees on development sites
 - impact of proposed development on trees
 - SRZ
 - levels of tolerance to encroachment and potential loss of root mass
 - species tolerance to root loss
- type and structure of tree impact assessment reports, including:
 - purpose and structure of preliminary arboricultural report
 - purpose and structure of arboricultural assessment report
 - use and interpretation of development plans and documentation
 - drawing techniques for illustration in reports and plans, including digital images
 - tree protection plans and drawings
 - purpose and structure of tree management and monitoring guidelines
 - presenting reports in digital or paper-based formats
- tree protection devices, methods and systems, including:
 - designs and their purpose
 - tree response to tree protection systems
 - installation and construction methods for tree protection.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a development worksite with existing trees, or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with word processing and drawing software
 - digital image capture device
 - personal protective equipment
 - basic diagnostic tools, including sounding hammer, trowel, probe, cordless drill
 - basic soil testing equipment
 - trees
- specifications:
 - client brief and instruction for safety audit objectives
 - industry standards AS2303, AS2223, AS3743, AS4970 and AS4373
- relationships:
 - client.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB510 Specify and audit tree work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to review and audit arboriculture operations for tree establishment, restoration, repair, protection, tree pruning, tree support systems and removal works and produce specifications required to rectify identified non-compliance.

The unit applies to individuals who work in arboriculture and analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify and prepare audit information	1.1 Identify audit objectives, scope and focus 1.2 Identify target operations and documentation 1.3 Determine audit process and sampling technique

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Determine frequency and schedule of audit events</p> <p>1.5 Acquire and prepare audit documentation and information ready for audit</p> <p>1.6 Conduct pre-audit communications with client and relevant stakeholders</p>
2. Audit tree works	<p>2.1 Organise on-site inspections to conduct audit process</p> <p>2.2 Audit tree work operations being undertaken</p> <p>2.3 Inspect and assess impact of arboricultural tree work on the tree health, structure, environment and development works</p> <p>2.4 Audit works according to prepared documentation and legislative and regulatory requirements</p> <p>2.5 Audit work to identify compliance with project documentation, and legislative and regulatory requirements</p> <p>2.6 Record non-compliance according to audit procedures</p> <p>2.7 Assess extent and manner of non-compliance against workplace and industry standards</p> <p>2.8 Document findings according to audit and workplace procedures</p>
3. Assess impact of non-arboricultural works	<p>3.1 Inspect and assess non-arboricultural works impacting on the tree or work environment</p> <p>3.2 Determine impact of non-arboricultural works of contractors and stakeholders</p> <p>3.3 Provide feedback on non-arboricultural works to contractors and stakeholders</p>
4. Provide feedback to stakeholders on audit	<p>4.1 Provide feedback on the findings of audit to clients, contractors and stakeholders</p> <p>4.2 Provide advice for improvement, rectification and management of non-conformances</p> <p>4.3 Identify and specify priority of ongoing tree management</p>
5. Specify remedial action for tree defects	<p>5.1 Identify and assess impact of remedial action on tree and stakeholder expectations</p> <p>5.2 Discuss tree retention value and remedial action options with stakeholder</p> <p>5.3 Select and agree on acceptable remedial action with stakeholder</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.4 Document specifications for remedial action according to workplace procedures, industry standards and design parameters 5.5 Submit specifications to stakeholder for final approval
6. Document and present audit report, notifications and plans	6.1 Document audit report with non-conformance notifications 6.2 Advise stakeholders according to legislative and regulatory requirements 6.3 Document an ongoing management plan addressing audit findings 6.4 Document a rectification plan specifying the required rectifications of non-conformances and remedial action 6.5 Review audit process and outcomes and recommend modifications to audit process 6.6 Prepare and present reports and plans to stakeholders according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret complex texts, including industry standards and workplace procedures, to extract critical information required for the tree work to be performed
Writing	<ul style="list-style-type: none"> Create complex written arborist reports, demonstrating control over a range of writing styles using industry-specific language
Oral communication	<ul style="list-style-type: none"> Use effective verbal communication, including open questioning and active listening, to communicate effectively with contractors, clients and other stakeholders

Unit Mapping Information

Code and title	Code and title	Comments	Equivalence status

current version	previous version		
AHCARB510 Specify and audit tree work	AHCARB505 Document and audit tree work	Element added Performance criteria clarified Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB510 Specify and audit tree work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least two occasions, audited tree works and created a report with specifications for rectification.

For each of the two audits, there must be evidence that the individual has:

- identified audit objectives, scope and focus
- identified target operations and documentation
- determined audit process, sampling technique, frequency and schedule
- compiled and prepared audit documentation
- communicated audit preparations with client and stakeholders
- organised site inspections to conduct audit
- conducted audits of operational tree works for each of the following activities:
 - pruning, including root pruning
 - tree removal
 - transplanting and planting
 - tree protection on development sites
 - tree support systems
 - arboricultural practices
- inspected and assessed impact of works on tree health, structure, environment and development
- conducted the audit according to prepared documents and legislative requirements
- audited compliance of works to documented project outcomes
- recorded and assessed non-compliances against expected standards
- prepared records of audit and non-compliances
- inspected and assessed non-arboricultural works
- determined impact of non-arboricultural works of contractors and stakeholders

- provided feedback on the findings of inspections to stakeholders, including provided advice for:
 - improvements
 - rectification
 - management of non-conformances
- identified and specified ongoing management priorities
- discussed tree retention with stakeholder
- identified and assessed effect of remedial action on tree and stakeholder expectations and selected remedial action
- documented remedial action, which must include specifications for:
 - tree removal
 - tree transplanting
 - pruning, including root pruning work
 - tree support system
 - tree protection
- documented audit report and non-conformance notifications and advised stakeholders according to regulatory requirements
- documented ongoing management plan, which must include:
 - specifying the tree management techniques and ongoing maintenance
 - practices required to address the audit findings
- documented a rectification plan specifying rectification of non-conformances
- prepared and presented reports and plans to stakeholders.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- developing and planning for audits, including:
 - setting objectives, scope and focus
 - auditing terminology
 - audit processes
 - audit sampling techniques
 - setting frequency and timing of audit events
 - preparation of audit documentation
- communication in audit situations, including:
 - notifying and preparing stakeholders for audit
 - providing feedback after auditing
 - rectification notices and follow-up for non-compliance
 - negotiating rectification works and actions
 - reporting procedures of completed audit
- relevant audit information and sample documentation, including:

- codes of practice
- Australian Standards including, AS2303, AS2223, AS3743, AS4373 and AS4970
- arboriculture reports and specifications
- legislation and regulations governing audit procedures and topics, including:
 - responsibilities for safety and safe work practices
 - tree protection and removal
 - conservation and environmental protection
 - statutory reporting and documentation
- targeting, auditing and documenting specific tree work operations, including:
 - pruning, including root pruning
 - tree removal
 - planting and transplanting
 - tree protection techniques
 - arboricultural practices and construction and development activities
 - tree support systems
- inspection and assessment of tree works and impact on physiology, anatomy, pathology and environment
- inspections and assessment of non-arboricultural works that may impact on the tree or its environment
- reconciling actual works performed against documented planned works
- provision of feedback and findings of inspections to clients, contractors and stakeholders
- improvement, rectification and management of non-conformances
- documenting specified remedial action, including:
 - tree removal
 - pruning, crown maintenance and crown modifications
 - response of roots to wounding and treatment of severed roots
 - planting and transplanting
 - tree support systems
 - tree protection systems
 - tree management techniques and practices
 - rectifying and modifying work site practices and tree protection measures for trees on development sites
 - ongoing management and maintenance
- documentation for recording and reporting audit procedures, including reviewing and revising audit procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- an arboriculture work site with trees, or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with word processing software
 - digital image capture device
- specifications:
 - workplace safety policies and procedures
 - client brief and instruction for safety audit objectives
 - codes of practice relevant to tree works and use of arboriculture equipment
 - industry standards AS2303, AS2223, AS3743, AS4373 and AS4970
 - legislation and regulations relevant to safe work practices, environmental safety and conservation and protection of trees
- relationships:
 - client and stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

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AHCARB511 Prepare arborist reports

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to collect and analyse arboricultural information from a site and make determinations and recommendations for inclusion in arborist reports, using word processing software to meet the standard expected of arboricultural professionals.

The unit applies to individuals who work in arboriculture and analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine report parameters from client brief	1.1 Review client brief and determine expectations for report outcomes 1.2 Determine evidentiary data records according to client brief

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Determine statutory reporting requirements 1.4 Establish specific scope and assumptions for report 1.5 Evaluate requirements and limitations and determine arboricultural content 1.6 Determine textual and visual content required for report 1.7 Confirm report parameters with client
2. Determine and collate evidentiary data	2.1 Research content and information for report 2.2 Assess primary and secondary sources of research material 2.3 Evaluate the validity and reliability of researched information 2.4 Inspect site and record observations relevant to scope of report 2.5 Record visual evidence using image capture equipment required for report 2.6 Obtain and record information from test results 2.7 Collate and record observations, test results, research material and inspections as evidentiary data 2.8 Store and back up data according to workplace data management procedures
3. Prepare a report format using a word processing program	3.1 Determine report structure and style to meet stakeholder and statutory outcomes 3.2 Determine requirements for specific document content and layout according to arboriculture industry conventions 3.3 Obtain permissions for copyrighted material required for report 3.4 Produce document using a word processor according to workplace style guide and industry conventions 3.5 Incorporate collated data, information and evidentiary data into formatted report 3.6 Operate computer and word processing software application to produce report
4. Formulate a conclusive determination and recommendations	4.1 Assess body of evidentiary data according to scope of report 4.2 Determine value of data from conflicting evidence 4.3 Develop an informed decision from considered viewpoints 4.4 Formulate a conclusive determination

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.5 Inform client of determination 4.6 Develop recommendations based on determination
5. Prepare draft report	5.1 Compile determinations and recommendations in a draft report 5.2 Seek professional feedback and opinion on draft report and findings 5.3 Review feedback and opinion expressed, and edit report according to professional advice 5.4 Draft final sections of report document
6. Deliver the final report	6.1 Review report content and develop and document summary for report 6.2 Review and edit final version of report ready for distribution 6.3 Deliver final report to client and stakeholders according to client brief

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and analyse complex texts, including industry standards, workplace procedures and research materials, to identify critical information and concepts for use in arborist reports
Writing	<ul style="list-style-type: none"> Create complex arborist reports, demonstrating control over a range of writing styles and using industry-specific language appropriate for key stakeholders
Oral communication	<ul style="list-style-type: none"> Use effective verbal communication, including open questioning and active listening, to communicate with contractors, clients and other stakeholders, and when discussing and presenting arborist reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB511 Prepare arborist reports	AHCARB506 Prepare arborist reports	Elements and performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB511 Prepare arborist reports

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared at least one arborist report, including:

- reviewed client brief and determined report outcomes
- determined evidentiary data records
- determined statutory requirements for report
- established scope and assumptions for report
- determined arboricultural content and textual and visual content for report
- confirmed report parameters with client
- researched content and information for report
- assessed primary and secondary sources, and evaluated the validity and reliability of researched material
- inspected site and recorded details and observations, which must include:
 - location of site and trees under consideration
 - matters relevant to scope of report
- recorded visual evidence using image capture equipment
- obtained and recorded information from test results
- collated observations, test results, research material and inspection data into a body of evidentiary data
- stored and backed up data according to data management procedures
- prepared report format and layout according to workplace style guide and industry standards, which must include:
 - used a word processor and its tools and functions to produce the report
 - used custom templates and logos
 - obtained permission for copyrighted materials intended for the report
 - created and populated tables and charts
 - used images and graphics to enhance report presentation and content

- inserted document elements for titles, page numbers, table of content, glossary of terms, headers and footers, watermarks for drafts, endnotes or footnotes and acknowledged references
- incorporated information and evidentiary data into formatted report.

There must also be evidence that the individual has:

- assessed body of evidentiary data and determined value of conflicting evidence
- developed an informed decision from considered viewpoints
- formulated a conclusive determination and informed client
- developed recommendations based on determination
- prepared a draft document based on brief, method, observation, conclusion and recommendations
- sought feedback on report from at least two professional colleagues and edited report based on feedback
- drafted final sections of report
- reviewed and developed summary of report content
- reviewed and edited final report ready for distribution
- delivered final report to client and stakeholders according to client brief.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- consulting with clients and purpose of a client brief
- arborist reports and their development and context, including:
 - evidentiary data
 - statutory reporting
 - limits and assumptions of arborist reports
 - arboricultural content in reports
- investigation and researching valid data and information, including:
 - research design and methodology
 - valid and reliable data collection
 - sources of research material, including primary and secondary sources
 - methods of analysing data collected and compiling into logical data sets
 - balancing conflicting viewpoints
- site inspections and gathering primary data
- image capture equipment appropriate to arboricultural reports and visual evidence, including:
 - still photographic images
 - imaging equipment, including light detection and ranging (LiDAR) technology
 - video recording

- collation of observations, test results, research material and inspection data into a body of evidentiary data, including:
 - managing, storing and interrogating data
 - data collection procedures
 - storage, backup and retrieval systems for data
- report for statutory, client and organisation purposes, including:
 - formats and presentation
 - requirements for specific document content
 - layout and arboriculture industry conventions
 - copyright, intellectual property and referencing when preparing reports and using material as inclusions in reports
 - developing draft report structure
 - use of active and passive voice in reports and presentations
 - summarising the report
- computer software for preparing and organising data sets
- word processors and computer software used for creating and editing documents
- corporate style guides and their purpose for formal reports, including:
 - custom document templates
 - purpose and use of corporate logos
 - creating and formatting tables
 - generating charts and graphics
 - elements of reports, including, title, page numbers, table of contents, footers and headers and watermarks
- quality document outcomes, including:
 - correct use of language
 - logical organisation and development of content
 - spelling, grammar and punctuation
 - arborist terminology and jargon
 - industry expectations and standards
- decision-making processes, including:
 - consideration of different viewpoints in making informed decisions
 - formulating conclusions and determinations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - access to an arboriculture work site with trees, or an environment that accurately represents workplace conditions
 - resources, equipment and materials:

- computer with word processing software
- internet connection
- digital image capture device
- specifications:
 - client and/or project brief and instructions for report outcome
 - codes of practice relevant to tree works and use of arboriculture equipment
 - preferred industry practices (as outlined in the Companion Volume) related to project brief
 - legislation and regulations relevant to arboriculture and project brief
- relationships:
 - clients and stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB512 Generate tree plans using computer-aided design software

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to generate tree plans using computer-aided design software.

The unit applies to individuals who work in arboriculture and analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm project and drawing requirements	1.1 Confirm project requirements for computer-aided design (CAD) drawings 1.2 Identify drawing requirements, purpose and scope and confirm with client

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Create drawing template files to meet standard drawing requirements	<p>2.1 Prepare CAD desktop layout and user interface according to software instructions and working environment</p> <p>2.2 Determine layering strategy for plan components</p> <p>2.3 Identify and select CAD libraries containing blocks, symbols and components according to software application</p> <p>2.4 Select text and dimensioning styles according to workplace style guide</p> <p>2.5 Select line types and weights to provide visual differentiation of plan elements</p> <p>2.6 Select hatch and infill patterns and styles according to planned components, elements and purpose</p> <p>2.7 Set up title blocks for planned drawings and sizes</p> <p>2.8 Set up reference schedules according to project outcomes</p>
3. Create 2D drawings	<p>3.1 Use CAD software and functions to produce two-dimensional (2D) drawings according to industry drawing standards</p> <p>3.2 Scan documents and save as digital files compatible for importing into 2D CAD programs</p> <p>3.3 Import digital drawing components from software applications into 2D CAD drawings</p>
4. Edit, measure and inspect drawing components	<p>4.1 Review, edit and remove incongruous elements in drawings</p> <p>4.2 Record explanatory notes in drawings according to project purpose</p> <p>4.3 Identify and apply dimensions and scale to drawings</p> <p>4.4 Identify and apply tree symbols appropriate for purpose</p> <p>4.5 Plot tree symbols with precision on drawing according to drawing scale and dimensions</p> <p>4.6 Perform calculations to determine tree protection zones (TPZ), structural root zone (SRZ) and encroachments, and plot on drawing according to project purpose</p> <p>4.7 Check accuracy and quality of drawing and amend drawings where below standard</p>
5. Print CAD drawings	<p>5.1 Input page setup parameters to suit printing and project requirements</p> <p>5.2 Input printer setup parameters for quality and quantity of pages</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.3 Print drawings according to printer instructions, workplace and environmental procedures
6. Save and back up files	6.1 Create file directories for drawing project on storage media according to workplace file management procedures 6.2 Identify and create file names according to workplace style guide, software instructions and project naming convention 6.3 Save drawing files to file directories according to software and workplace procedures
7. Export files to CAD program or document reader	7.1 Select and open drawing files to be exported and save in file format specified by external drawing software application 7.2 Select and open drawing files to be exported and save in file format specified by external document reader software

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Document plan annotations according to plan requirements using terminology and style appropriate for arboriculture plans and drawings
Numeracy	<ul style="list-style-type: none"> Identify and interpret embedded mathematical information from site plans and information, and transition into two-dimensional (2D) drawings
Get the work done	<ul style="list-style-type: none"> Use the main features and functions of computer-aided design software and digital tools to generate 2D drawings

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCARB512 Generate tree plans using computer-aided design software	AHCARB507 Generate tree plans using computer-aided design software	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB512 Generate tree plans using computer-aided design software

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has produced plans using computer-aided design software and calculated and plotted tree protection zones (TPZ) for at least 20 trees and 10 encroachments across two different sites.

There must also be evidence that the individual has:

- confirmed project requirements for drawings
- identified drawing requirements, purpose and scope, and confirmed with client
- prepared computer-aided design (CAD) software ready for drawing, including:
 - prepared the computer desktop user interface
 - determined the layering strategy for components
 - identified and selected component libraries
 - selected text and dimension styles according to workplace style guide
 - selected line types and weights
 - selected hatch patterns and types
 - set up title blocks for drawing sizes
 - set up reference schedules
- used two-dimensional (2D) CAD software program and functions to produce drawings using layers for different components. The tree protection CAD plan must contain:
 - TPZ
 - structural root zone (SRZ)
 - encroachments
 - imported digital text and drawing files from other software applications
- scanned and saved documents in digital format for import into 2D CAD drawings
- reviewed, edited and deleted incongruous elements
- recorded notes to drawings
- identified and applied dimensioning and scale to drawings

- identified and applied tree symbols with precision. Drawing must provide the following differentiations:
 - trees to be retained
 - trees to be removed
 - trees to be transplanted
- calculated areas of TPZ, SRZ and encroachments
- checked the drawing for accuracy and quality
- set page layout on printer, including:
 - scale
 - line weights
- set print parameters for the printer, including:
 - page size and paper quality
 - output print quality (fast, draft, best)
- created file storage directories according to workplace file management procedures
- named and saved drawing files to file directories according to workplace file management procedures and naming convention
- created drawing files and sent to external personnel for use in different software applications
- created exportable files for CAD software and document readers.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- interpretations and planning of drawing needs for arboriculture projects, including:
 - types of drawings used in arboriculture
 - content and purpose of drawings
 - use of drawings and importance of accuracy
 - planning the design and drawing project
- sources of information for drawing development, including:
 - project personnel
 - site visits and survey plans
 - digital images and aerial photography
- basic principles of 2D CAD drawing, including:
 - 2D CAD software programs available
 - CAD drawing tools
 - principles of layers and a layering strategy
 - CAD libraries and standard detail and components
 - selecting and using fonts and styles in business and drawings
 - selecting and setting dimension size and styles

- line types, thickness and colour as a means to communicate and differentiate design elements
- entering text and notations into CAD drawings
- setting and maintaining accuracy in CAD drawings
- basic tools and setup of a CAD drawing program, including:
 - preparing the CAD desktop and user interface
 - CAD drawing tools, their use and menu options
 - preparing page layout for drawing size
 - selecting hatch patterns, fill and colour
 - creating and using title blocks
 - use of style guides in maintaining quality and standards for organisations
- adding, editing and changing CAD components in drawings, including:
 - drawing lines, shapes and polygons
 - editing and deleting lines, text and shapes
 - joining and breaking lines and shapes
 - adding and editing text
 - plotting and positioning trees and other symbols
 - entering and positioning dimensions
- quality control check and document control
- page layout and standard size paper, including:
 - International Organization for Standardization (ISO) and American National Standards Institute (ANSI) paper sizes and use in Australia
- standard file formats for drawings and file exchange between CAD software
- standard file formats for conversion of drawings for document sharing
- saving computer files, file directories and storage media, including:
 - methods of saving files
 - file retrieval and backup
 - importing and exporting files
 - organisational standards for naming, filing and file security
- scanning and importing documents and graphics into CAD software
- plan printers, plan plotters and printing requirements, including:
 - print page size
 - media type
 - print quality
- calculating and plotting TPZ, SRZ and encroachments.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- two arboriculture work sites with trees as stipulated in the performance evidence, or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with 2D CAD software, symbols libraries for architecture and arboriculture
 - digital scanner
 - plan printers and/or plotters
- specifications:
 - workplace safety policies and procedures for CAD drawing standards and file conventions
 - current drawing standards for page sizes and drawing conventions
- relationships:
 - client.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB513 Examine and assess trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to examine and assess tree health, structure, age, taxonomy, risk, amenity value and significance, and compile a tree assessment report.

The unit applies to individuals who work in arboriculture and analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for tree assessment	1.1 Identify scope of survey according to client brief 1.2 Select, check and use personal protective equipment 1.3 Locate tree and document tree position according to client brief 1.4 Identify and record tree species and determine implications on

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>brief</p> <p>1.5 Assess and consider tree health that impacts on brief</p> <p>1.6 Estimate age of tree, tree parts and defects</p>
2. Acquire data for valuation	<p>2.1 Determine and record tree dimensions according to client brief</p> <p>2.2 Investigate and assess tree for indicators of habitat and ecological significance</p> <p>2.3 Investigate and assess tree for historical and cultural significance</p> <p>2.4 Investigate statutory controls on tree</p> <p>2.5 Record outcomes of investigation of tree significance and restrictions</p>
3. Assess value of trees	<p>3.1 Select and compare amenity tree valuation methods</p> <p>3.2 Collect and collate unit values and data required for selected tree valuation methods</p> <p>3.3 Calculate and record amenity value of individual trees</p> <p>3.4 Compare results and account for different values for selected methods</p> <p>3.5 Consider and communicate value of trees captured by amenity valuation</p>
4. Acquire data for tree risk assessment	<p>4.1 Assess relationship of tree to potential targets</p> <p>4.2 Inspect tree for visual indicators of likely failure of tree or tree parts</p> <p>4.3 Use basic diagnostic tools to confirm presence and extent of hazards</p> <p>4.4 Assess likely impact of wind loading on potential for failure of tree</p> <p>4.5 Assess hazards and determine likelihood of failure</p>
5. Undertake tree risk assessment calculations	<p>5.1 Select tree risk assessment methods and determine their limitations</p> <p>5.2 Determine target of concern and occupation rate</p> <p>5.3 Determine tree components of concern and their likelihood of failure</p> <p>5.4 Determine likelihood of impact of tree on target</p> <p>5.5 Determine likely consequence of impact of target and tree</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	components 5.6 Calculate and document determinations and level of risk according to client brief
6. Document and communicate tree risk assessment	6.1 Provide client with benchmarks and context for risk assessment results 6.2 Determine and document potential risk mitigation controls and estimate residual risk of each control 6.3 Recommend timeframe for implementation of risk mitigation controls 6.4 Recommend follow-up inspection type and timeframe 6.5 Consider risk against value of tree 6.6 Produce a tree risk assessment report

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Create logical, accurate and succinct reports with recommendations that include complex issues for risks and valuation of trees
Numeracy	<ul style="list-style-type: none"> Identify numerical information for use in complex formulae for calculating the value of trees

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB513 Examine and assess trees	AHCARB601 Examine and assess trees	Code changed to reflect AQF alignment Removed prerequisite	Equivalent

		units Elements and performance criteria clarified Foundation skills added Assessment requirements updated	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB513 Examine and assess trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has examined and assessed at least two different trees, including:

- identified scope and purpose of assessment from client brief
- selected, checked and used personal protective equipment
- located tree and documented position
- identified and recorded tree species and determined implication on brief
- assessed and considered tree health and impact on brief
- estimated age of tree, tree parts and defects
- determined and recorded tree dimensions, which must include:
 - tree height
 - tree spread
 - diameter-at-breast-height (DBH)
 - trunk circumference
 - diameter at base
- investigated, assessed and recorded the following indicators of value:
 - habitat and ecological significance
 - historical and cultural significance
 - statutory controls
- selected and compared amenity tree for at least 2 different valuation methods
- collected unit values and data required by the valuation method selected
- calculated and recorded amenity value of at least 2 different trees
- compared results of different valuation methods and accounted for differences
- considered and communicated value of trees captured for valuation
- inspected tree for visual indicators of likely failure of tree or tree parts
- assessed relationship of tree to potential targets

- assessed likely impact of wind loading on potential for failure
- used basic diagnostic tools to confirm presence and extent of hazards
- assessed hazards and determined likelihood of failure
- selected tree risk assessment methods and determined their limitations
- determined target of concern and occupation rate
- determined tree components of concern and their likelihood of failure
- determined likelihood of impact and consequence of tree failure on target
- calculated and documented determinations and level of risk
- provided client with benchmarks and context for risk assessment
- determined and documented potential risk mitigation controls and estimated residual risk
- recommended timeframes for implementation of risk mitigation controls and follow-up inspections
- considered risk against value of tree
- produced a tree risk assessment report.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- areas to address in a client brief and developing the scope of assessment, including:
 - purpose of assessment
 - owner/client and address
 - who requested the assessment
 - reasons for assessments to be requested
 - client risk thresholds
 - data capture procedures
 - requirements for assessment
 - tree assessment and measuring equipment
- trees and surveying their location on a site, including:
 - methods for locating trees on devices, drawings, plans or aerial images
 - techniques to position tree on site from boundaries and structures
- tree identification, biology and physiology
- assessing tree health, including:
 - signs and symptoms of disease
 - methods of detecting decay and structural defects in trees
 - use of basic diagnostic tools
 - testing equipment to detect decay, disease and scope of tree problems
 - factors affecting the likelihood of tree failure
 - use of diagnostic tools
- computations and estimating tree dimensions and their relevance to tree assessment, including:

- tree height and spread
- trunk circumference
- DBH
- diameter at ground level
- assessing structure and symmetry of the canopy, including:
 - symmetrical and asymmetrical canopy structure and consequences on tree stability and health
 - trunk inclination and calculating the lean
 - impact of wind loading on trees and tree structures
 - estimating and calculating wind loading
- relationship and responsiveness of form of crown to surrounding trees and structures
- tree age and health issues and their estimation, including:
 - unimodal and multimodal tree species as an indicator of age
 - growth increments, including bud scars, sympodial growth and flush marks
 - checking age estimations using documented images
- valuation methods of amenity trees, including:
 - a range of tree valuation methods and their application
 - legal and statutory controls and protection of trees
 - indicators of habitat use
 - ecological value and significance
 - cultural value and significance
 - historical value and significance
 - preservation orders and local environmental protection laws
 - calculating amenity tree value of individual trees
- visual tree assessment (VTA) techniques and procedures, including:
 - visual indications and symptoms of disease and health issues
 - tests and checking the extent of disease and health issues
 - assessment of impact of tree disease and health issues on tree safety
 - the purpose and use of basic diagnostic tools
- methods of determining and mitigating levels of risk, including:
 - a range of tree risk assessment methods and their application
 - identification and extent of tree hazards
 - causes of instability, decay, damage and stress in trees
 - quantification and qualification of tree risk
 - risk benchmarks from non-arboricultural activities
 - controls available to mitigate risks
 - remedial action of tree problems
- determining the consequence of risk, including:
 - why most likely outcomes are used and not worst case
 - abbreviated injury index/scale

- possible targets associated with tree risk, including:
 - persons, property, interruptions to community activity, interruptions to services
 - occupation rates
- tree assessment reporting procedures, including images.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an arboriculture site with the trees stipulated in the performance evidence
- resources, equipment and materials:
 - computer with software for word processing
 - digital imaging equipment
 - personal protective equipment
 - diagnostic tools, including sounding hammer, trowel, probe, cordless drill
 - measuring equipment for tree dimensions, locating trees on site
 - samples of cross-sectioned defects and diseases
 - field tree inspection equipment, including hand lenses, probes, binoculars, containers for sample collection
- specifications:
 - legislation and regulations relevant to arboriculture
 - client brief and specifications for tree assessment task
- relationships:
 - client.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB514 Diagnose tree diseases

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to diagnose tree diseases and develop a management program for their control. Diseases include pathogens, pests and other disorders of angiosperms, gymnosperms and woody monocotyledons.

The unit applies to individuals who work in arboriculture and analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess environmental impact	1.1 Identify tree species and determine its region of origin and seasonal growth characteristics 1.2 Determine current and past cultural practices and impact on tree health 1.3 Determine characteristics of growing environment affecting

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>growth of tree</p> <p>1.4 Identify environmental and cultural factors predisposing tree to disease</p> <p>1.5 Determine and assess physical and chemical properties of the soil or growing media</p>
2. Identify diseased trees	<p>2.1 Identify trees displaying disease symptoms</p> <p>2.2 Recognise natural defence systems of trees for major disease types</p> <p>2.3 Determine disease groups according to classification</p> <p>2.4 Investigate trees for signs and symptoms of disease</p> <p>2.5 Determine impact of disease type on tree parts and systems</p>
3. Diagnose tree disease	<p>3.1 Record symptoms and signs of disease according to accepted nomenclature</p> <p>3.2 Collect and collate samples and evidence of disease and reference according to industry procedures</p> <p>3.3 Determine the nature and severity of the disease condition</p> <p>3.4 Determine disease type according to disease classification procedures</p> <p>3.5 Research and identify disease according to industry standards</p> <p>3.6 Prepare specimens of diseases for examination</p> <p>3.7 Collect and package specimens in preparation for despatch to specialist for diagnosis and laboratory testing according to biosecurity procedures</p>
4. Provide a prognosis	<p>4.1 Determine the current health and vigour of the tree</p> <p>4.2 Assess the severity and extent of the disease</p> <p>4.3 Research the virulence of the disease on the specific host</p> <p>4.4 Determine the phenology of the host and the disease</p> <p>4.5 Research and consider constraints for management options</p> <p>4.6 Consider influences of environmental conditions on host, disease and management options</p> <p>4.7 Document prognosis and report according to workplace procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Develop, document and monitor the management program	5.1 Investigate and recommend management options 5.2 Develop a disease management program according to industry best practice 5.3 Record and document tree diseases and management programs according to workplace procedures 5.4 Monitor, review and update management plans

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret complex and technical information from scientific references to identify diseases and their virulence on host plants
Writing	<ul style="list-style-type: none"> Generate complex management plans for diseases, demonstrating control over a range of writing styles

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB514 Diagnose tree diseases	AHCARB602 Diagnose tree diseases	Code changed to reflect AQF alignment Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB514 Diagnose tree diseases

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that individual has identified and collated representative samples of at least 30 diseases of trees, including evidence of infection, into a referenced collection, including:

- 10 invertebrate pests, including insects and molluscs
- 10 pathogenic organisms
- 10 environmental and soil disorders.

Where biosecurity is a concern, the sample can be replaced by a high quality informative image.

There must also be evidence that the individual has:

- identified the affected tree and determined its origin and seasonal growth stages
- determined factors affecting tree health and growth, which must include:
 - current and past cultural practices
 - characteristics of growing environment
 - environmental and cultural factors that predispose trees to disease
 - assessed physical and chemical properties of the soil or growing media
- identified trees with diseases
- recognised natural defence systems for major disease types
- determined disease groups according to disease classification
- investigated trees for signs and symptoms of disease
- recorded symptoms and signs of disease using accepted nomenclature
- determined impact of disease type on tree parts and systems
- determined the nature and severity of the disease
- determined disease type
- researched and identified tree diseases
- prepared specimens of diseases for microscopic examination

- collected, packaged and prepared specimens for dispatch for specialist diagnosis or laboratory testing according to biosecurity procedures
- determined current health and vigour of the tree
- assessed severity and extent of the disease
- researched virulence of the disease on the specific host
- determined phenology of the host and the disease
- researched and considered the constraints for management options
- considered influences of environmental conditions on host, disease and management options
- documented prognosis according to workplace procedures
- investigated and recommended management options
- developed a disease management program
- recorded and documented tree diseases and management programs in a report
- monitored, reviewed and updated management plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- definition of disease and basic concepts of plant pathology, including:
 - plant pathogens, pests and disorders
 - macro organisms, microorganisms
 - disease classification guides
 - virulence, phenology, prognosis and disease severity and extent
 - economics and tree diseases
- trees species; their growing environment and relationship to diseases, including:
 - taxonomic identification
 - tree anatomy, physiology, pathology
 - life cycle stages and characteristics of trees and their vulnerabilities
 - primary cellular and anatomical structures of trees
 - critical systems in trees and relationship to plant health, including physiological and biochemical
 - natural defence mechanisms and systems of trees
 - implications of growing season, climate and regional characteristics on tree species and disease development
 - cultural practices, including mulching, irrigation, pruning
- impact of soil or media on tree health, including:
 - chemical and physical characteristics
 - test and test results indicating tree nutrient, and growth health issues
 - controlling soil and environmental problems
- identification of signs and symptoms of tree health problems, including:

- disease detection and identification methods
- patterns of host–disease interaction for each major disease type
- nomenclature of symptoms and signs of pathogens, pests and disorders
- describing the nature and severity of disease infection, including:
 - chronic and acute
 - passive and aggressive
 - seasonal and ongoing
 - localised and unconfined
- methods for managing pathogens, pests and disorders, including:
 - mechanical control practicalities
 - chemical use, toxicity and safety, compatibility and off-target considerations
 - managing the cultural factors, growing conditions and environment
 - managing soil fertility and amelioration
 - biological control and working with natural agents to control pathogens, pests and growing environment
 - importance and use of Integrated Pest Management strategies
 - biosecurity and basic principles of hygiene in arboricultural work
- constraints to disease management, including:
 - timing and scheduling treatments
 - cost and budgetary constraints
 - perceived and real value of infected tree
- tree diseases collection and diagnosis, including:
 - collecting, preserving, securing and storing specimens and examples of tree pathogens, pests and disorders
 - biosecurity risks and mitigation when collecting and storing specimens
 - preparation of specimens for diagnostics
 - microscopic and macroscopic examinations
 - microscope slide preparation
 - methods of providing a reasoned prognosis
- horticultural function, cultural and performance requirements and characteristics of the trees or other woody plants
- processes and principles of researching tree health problems, diagnoses and remedial treatment available
- industry standards and terminology to describe disease attributes
- recording and reporting tree disease prognosis and management strategies, including:
 - written documentation
 - oral presentations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an arboriculture work site with the diseased trees stipulated in the performance evidence
- resources, equipment and materials:
 - computer with word processing software
 - digital imaging device
 - diagnostic tools, including sounding hammer, trowel, probe, cordless drill
 - soil testing equipment and materials
 - basic dissection microscope 10x – 100x
 - optical devices, including compound microscope, binoculars, hand lens
 - sampling equipment, secure storage containers, disinfectant
 - trees without diseases
 - trees with biotic diseases
 - trees with abiotic diseases
 - bio-secure samples of tree diseases
 - disinfection materials and equipment to minimise infections
- specifications:
 - codes of practice relevant to tree diagnostics work.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
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AHCARB608 Interpret diagnostic test results

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to interpret diagnostic test results and evaluate and critique the testing methods and results. It requires knowledge and application of tree anatomy, physiology, pathology, tree dynamics and edaphic environment with substantial depth of understanding of diagnostics methods and analysis.

The unit applies to individuals with broad theoretical and technical knowledge of tree diagnostics. They have a broad range of cognitive, technical and communication skills and demonstrate autonomy and judgement for a defined area of responsibility, undertaking complex work with broad parameters to provide specialist advice and functions.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Compile diagnostic tool knowledge requirements	1.1 Compile a portfolio of sample reports of diagnostic test results 1.2 Compile peer reviewed papers on the use of each diagnostic tool 1.3 Review the diagnostic tool specifications and user manuals

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Research output ranges for each diagnostic tool 1.5 Identify key thresholds and benchmarks for diagnostic test outputs 1.6 Determine suitability of tool selection for purpose of test
2. Analyse the data and testing methods	2.1 Identify and evaluate testing methods used 2.2 Assess relevance, benefits and limitations of methodology 2.3 Determine assumptions used in formulating testing method 2.4 Determine veracity of equipment, software and systems used for test 2.5 Access raw data and testing evidence for test results 2.6 Verify data relevance and accuracy against standard industry test procedures 2.7 Review report and identify discrepancies against industry testing procedures and testing standards 2.8 Record discrepancies according to workplace procedures
3. Evaluate and critique test results	3.1 Assess the suitability of the testing process as fit for purpose 3.2 Analyse the test results against benchmarks 3.3 Reconcile analysis with original interpretation and account for anomalies 3.4 Determine the validity of outcomes of original report 3.5 Develop substantiated positions to inform critical analysis of test results 3.6 Determine further testing required to verify results
4. Document the critique	4.1 Compile analysis of test method and results 4.2 Review the completeness and accuracy of the analysis 4.3 Record analysis outcomes and rationale 4.4 Document the analytical processes 4.5 Provide alternative analysis and conclusion 4.6 Document critique in a report 4.7 Present report according to agreed format and timelines

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and critique complex texts relating to testing procedures and test results to gather information for analysis
Writing	<ul style="list-style-type: none"> Create logical, succinct and accurate documents that express views and ideas from analysis of test results
Numeracy	<ul style="list-style-type: none"> Manipulate and calculate numerical information and data from test results to assess and verify accuracy

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB608 Interpret diagnostic test results	AHCARB603 Interpret diagnostic test results	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB608 Interpret diagnostic test results

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has analysed and critiqued a minimum of five different diagnostic test results.

- For each of the five tests, there must also be evidence that the individual has:
- compiled a portfolio of sample reports of diagnostic test results, including the following types of tests:
 - dynamic and static loading
 - drill resistance measurement device
 - sap flow measurements
 - electronic impedance
 - chlorophyll fluorescence
 - increment core
 - sonic tomography
 - radar imaging system
 - bulk density
 - soil and pH tests
- compiled peer reviewed papers on the use of each diagnostic tool
- reviewed diagnostic tool specifications and user manuals and researched output ranges for each diagnostic tool
- identified key thresholds and benchmarks
- determined suitability of tool selection for purpose of test
- identified and evaluated testing methods
- assessed relevance, benefits and limitations and determined assumptions of methodology
- determined veracity of the equipment, software and systems
- accessed available raw data and testing evidence and verified data relevance and accuracy
- reviewed references cited in the report and identified inconsistencies

- evaluated test results and completed the following:
 - recorded discrepancies against standards
 - assessed the suitability of diagnostic tool for purpose
 - highlighted unsupported statements and factual errors
 - detailed significant omissions, errors and ambiguities
 - detailed inconsistencies and errors of logic
 - identified variances to specifications
- assessed the suitability of the testing process as fit for purpose
- analysed test results, compared test outcomes with original interpretation and considered and accounted for anomalies
- determined validity of outcomes of original report
- developed substantiated positions for critical analysis
- determined further testing required to verify results
- compiled the analysis and reviewed completeness and accuracy of analysis
- recorded analysis outcomes and rationale and documented the analytical processes
- provided alternate analysis and conclusion and documented critique in a report
- presented report according to agreed format and within agreed timelines.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- diagnostic tests and tools used in arboriculture and their purpose, including:
 - dynamic and static loading
 - drill resistance measurement device
 - sap flow measurements
 - electronic impedance
 - chlorophyll fluorescence
 - increment core
 - sonic tomography
 - radar imaging system
 - bulk density
 - soil and pH tests
- specifications of arboricultural diagnostic tools, including:
 - arboriculture terminology and language used in tree diagnostics
 - data output, interpretation and output ranges, key thresholds and benchmarks
 - diagnostic tool selection and testing methods
- developing an evidence-based critique of testing procedures and results, including:
 - reviewing and verifying cited references and data reports
 - data accuracy and relevance
 - testing diagnostic tools and methods against standards and quality assurance

- identifying non-conformances in documentation of results and reports, including:
 - unsupported statements and factual errors
 - significant omissions, errors and ambiguities
 - variances to specifications and standard procedures
 - incorrect use of arboricultural terminology
 - verification and falsification of results
- selecting and determining the suitability of diagnostics tools and testing procedures and deciding best fit for purpose
- analysing test results and use of industry benchmarks and standards.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an arboriculture work site or environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with word processing software and statistical analysis software
- specifications:
 - test equipment manuals, standard procedures and quality standards
 - sample reports for the diagnostic test methods listed in the performance criteria.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB609 Measure and improve the performance of urban forests

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to research, analyse the values, analyse the performance, and develop management recommendations to improve the performance of an urban forest.

The unit applies to individuals with broad theoretical and technical knowledge of urban forest management. They have a broad range of cognitive, technical and communication skills and demonstrate autonomy and judgement for a defined area of responsibility, undertaking complex work with broad parameters to provide specialist advice and functions.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research urban forest practices and applications	1.1 Research urban forest case studies and management reports 1.2 Review best management practices in urban forest planning and management

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Research applications and functional tools for measuring benefits of urban forests
2. Analyse and report on urban forest benefits	2.1 Analyse economic, social and environmental benefits of urban forests 2.2 Document evidence-based research into a preliminary report on benefits of urban forests
3. Determine values of urban forest benefits	3.1 Conduct sampling analysis of specified urban forest 3.2 Determine required sample size to assess total tree population 3.3 Determine accuracy of sample size 3.4 Determine the quantitative values of urban forest environmental benefits 3.5 Identify base financial value for functional benefit 3.6 Calculate financial values of functional and environmental benefits of current tree population 3.7 Determine benefits of heat island modification of urban areas 3.8 Document a preliminary report on total asset valuation of an urban forest
4. Analyse and compile results	4.1 Analyse urban forest structure and function 4.2 Estimate life expectancy of tree population 4.3 Compile results of urban forest analysis
5. Determine and report on urban forests improvements	5.1 Identify urban forest issues within tree population sample area 5.2 Determine recommendations for tree species and diversity 5.3 Determine extent of current tree planting and replacement programs 5.4 Determine volume and rate of planting programs required for improvements to urban forest performance 5.5 Determine required modifications to planting practices 5.6 Determine targets for urban forest improvement 5.7 Document urban forest performance and provide recommendations for improvement in a report

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse and extract information from complex research materials for urban forest management and analysis to critique and formulate performance outcomes for urban forests
Writing	<ul style="list-style-type: none"> Demonstrate sophisticated writing skills by selecting appropriate conventions and stylistic devices to express precise meaning in urban forest performance reports
Numeracy	<ul style="list-style-type: none"> Select and apply a wide range of highly developed mathematical and problem-solving strategies and techniques to quantitatively analyse the financial, social and ecologic benefits of urban forests

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB609 Measure and improve the performance of urban forests	AHCARB604 Measure and improve the performance of urban forests	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB609 Measure and improve the performance of urban forests

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has measured and improved the performance of an urban forest, including:

- researched urban forest case studies and management reports
- reviewed best management practices in urban forest planning and management
- researched applications and functional tools measuring benefits of urban forests
- analysed and documented a preliminary report of social and environmental benefits of urban forests
- conducted sampling analysis of a specified urban forest
- determined sample size required to accurately assess total tree population
- determined the quantitative values of urban forest, energy savings, environmental and amenity benefits for the following:
 - canopy cover
 - total carbon storage and annual carbon dioxide sequestration
 - rainfall interception
 - air pollution removal
- identified base financial value for each functional benefit
- calculated financial values of functional and environmental benefits of tree population
- determined benefits of urban heat island modification
- documented a preliminary report on total asset valuation of urban forest
- analysed urban forest structure and function, covering the following in the analysis:
 - urban tree population half-life
 - vacant planting ratio
 - species distribution
 - population diversity
- estimated life expectancy of tree population

- compiled results of urban forest analysis
- identified urban forest issues within tree population sample area
- determined recommendations for tree species and diversity
- determined extent of current tree planting and replacement programs
- determined volume and rate of planting programs required for improvements to urban forest performance
- determined required modifications to planting practices
- determined targets for urban forest improvement
- documented a report on urban forest performance and provided recommendations for improvement.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- urban forests and their management, including:
 - sources of reports and case studies
 - best practices in urban forest planning and management
- measuring the performance of urban forests and their management
- applications and functional tools for measuring benefits of urban forests
- analysing the benefits of urban forests, including:
 - economic and political
 - physical and psychological on community
 - environmental and ecological
- evidence-based research, including what it is and how it is conducted
- sampling techniques and their analysis
- urban forests and their social, environmental and economic implications, including:
 - calculating canopy cover and estimating carbon storage and annual carbon dioxide sequestration
 - rainfall interception
 - air pollution removal
 - energy savings benefit
 - environmental benefits
 - amenity benefits
- valuing urban forests from an economic perspective, including:
 - financial value for functional benefits
 - calculations of financial values of functional and environmental benefits
 - concepts of urban heat island and its modification with urban forests
 - determining the total asset valuation
- the structure, function and faults of urban forests, including:
 - urban tree population life expectancy

- vacant planting ratio
- species distribution and population diversity
- urban forest analysis techniques
- identifying urban forest issues within tree populations
- defining problems and compiling recommendations for tree species and diversity, including:
 - tree planting and replacement programs
 - volume and rate of planting programs
 - modifications to planting practices
 - targets for urban forest improvement
- report writing and structure of urban forest documents and reports.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an urban forest
- resources, equipment and materials:
 - computer with word processing software and statistical analysis software
 - measurement and data collection tools
- specifications:
 - urban forest performance reports, research materials and case studies.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB610 Provide consultation in a legal framework

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to provide arboricultural consultation in a legal framework, including the analysis of cases and their outcomes, reviewing policies and preparing for and contributing to legal proceedings.

The unit applies to individuals with a broad theoretical and technical knowledge of the legal implications of arboriculture. They have a broad range of cognitive, technical and communication skills and demonstrate autonomy and judgement for a defined area of responsibility, undertaking complex work with broad parameters to provide specialist advice and functions.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Analyse the legal context	1.1 Determine legislation and legal cases for area of arboricultural specialisation 1.2 Review and analyse state, territory and federal legislation, regulations and planning instruments pertaining to arboriculture

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Apply legal and ethical standards to professional practice 1.4 Recognise and use legal terminology relevant to professional practice in arboriculture
2. Analyse precedent cases to determine advice outcomes	2.1 Analyse the jurisdiction of tree matters for specific cases 2.2 Recognise the legal framework and court system when preparing and implementing strategies for management of client legal needs 2.3 Seek and review precedents in law and published case studies for arboriculture related cases 2.4 Determine appropriate statutes and supporting precedent cases 2.5 Extract arboricultural information from case studies based on the legal context 2.6 Develop a course of action and discuss consequences with client 2.7 Provide advice within context of statutes and precedent cases
3. Review, develop and apply policies	3.1 Analyse and review policy documents according to legislation and relevant cases 3.2 Prepare policy documents based on legislation and relevant cases 3.3 Determine areas of uncertain legal outcomes in policy documents 3.4 Seek legal advice and amend policy documents to comply with advice
4. Prepare expert report	4.1 Identify additional research and supporting documentation required for matter under investigation 4.2 Follow statutory framework to give advice and work as an expert 4.3 Ensure all available observations and test results are recorded with precision in expert reports 4.4 Declare assumptions underpinning any discussion in report 4.5 Substantiate reported opinion with external authorities according to availability and case requirements 4.6 Prepare and provide a detailed evidentiary expert report according to client brief and statutory requirements
5. Provide expert evidence	5.1 Determine any matter or conflict of interest that may impact on ability to provide impartial evidence 5.2 Read and comply with statutory requirements for an expert witness

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>5.3 Prepare presentation of evidence based on factual data, documented observations and results according to rules of evidence in legal proceedings</p> <p>5.4 Deliver oral evidence and report according to legal proceedings, jurisdiction and client requirements</p> <p>5.5 Assist the court on matters relevant to expert witness testimony and area of expertise</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Draw on a broad range of strategies to build and maintain understanding while interpreting complex legal and regulatory texts when researching and preparing for legal proceedings
Writing	<ul style="list-style-type: none"> Demonstrate sophisticated writing skills by selecting appropriate conventions and stylistic devices to express precise meaning for evidentiary and legal reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB610 Provide consultation in a legal framework	AHCARB605 Provide consultation in a legal framework	<p>Performance criteria clarified</p> <p>Foundation skills added</p> <p>Assessment requirements updated</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB610 Provide consultation in a legal framework

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least two occasions, provided consultation in a legal framework, including:

- determined legislation and cases applying to trees within specialist consulting areas of work
- reviewed and analysed legislation, statutory regulations and planning instruments
- applied legal and ethical standards to professional practice
- recognised and used legal terminology in professional practice
- analysed jurisdiction of tree matters to specific cases
- recognised the legal framework and courts system when managing client legal needs
- sought and reviewed precedents in law and published arboriculture related case studies
- determined statutes and supporting precedent cases
- provided arboricultural information based on the legal context
- determined course of action and discussed with client
- provided advice within the context of statutes and precedent cases
- analysed and reviewed policy documents according to legislation and relevant cases
- prepared policy documents based on legislation and relevant cases
- determined areas of uncertainty in policy documents
- sought legal advice and amended policy documents
- identified gaps in own arboriculture knowledge and developed and implemented professional development for improvements
- implemented statutory framework when providing advice as an expert
- ensured observations and test results were recorded with precision
- declared and clarified assumptions underpinning policy documents
- substantiated reported opinions using external authorities
- prepared and provided a detailed evidentiary report
- confirmed status as provider of expert evidence

- read and complied with expert witness code of practice
- prepared presentation of evidence based on factual data, documented observations and results and complied with the rules of evidence
- delivered oral evidence and report to court according to legal proceedings, jurisdiction and client requirements
- assisted the court on matters relevant to expert testimony.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislation, statutory regulations, including planning instruments in state, territory and federal jurisdictions affecting the arboriculture industry, including:
 - environmental planning and management
 - interactions with people and property
- court systems including common law, statute law, civil law, law of torts
- precedents to strategies
- management of client needs
- professional practice and legal and ethical standards, including:
 - processes and practices of preparing and presenting in court
 - responsibilities and constraints of legal presentations
 - developing areas of expertise
- precedents in law and working with published case studies for arboriculture testimony
- accessing and developing professional and arboricultural knowledge, including:
 - benefits of accessing legal and arboricultural professional bodies
 - accessing and studying legal cases
 - maintaining professional standards
 - building and developing expertise and specialised arboriculture knowledge
- legal terms associated with professional practice in arboriculture, their meaning and common use in discourse
- preparation of policy documents based on legislation and relevant cases
- preparation of detailed evidentiary reports
- oral presentation skills and presenting in court.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - courts and court system used for arboriculture cases, or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- computer
- word processing software
- specifications:
 - procedures and processes used in the courts system
 - court case studies related to arboriculture
- relationships
 - client.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB611 Develop an operational tree management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to determine, collect and collate information required, and to develop and document an operational tree management plan for a specified geographical area.

The unit applies to individuals with a broad theoretical and technical knowledge of trees and their management. They have a broad range of cognitive, technical and communication skills and demonstrate autonomy and judgement for a defined area of responsibility, undertaking complex work with broad parameters to provide specialist advice and functions.

No licensing, legislative or certification requirements are to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine strategic context	1.1 Determine operational area for management plan 1.2 Define scope and purpose of management plan 1.3 Source workplace policies that impact on management plan 1.4 Specify the geographical area for which management plan will

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	apply 1.5 Determine historical and cultural values within geographical area of management plan
2. Determine legislative framework	2.1 Determine land use and ownership of geographic area 2.2 Establish national, state and local government legislative and regulatory constraints for the area
3. Determine stakeholders	3.1 Determine key stakeholders and community group influences in geographic area 3.2 Determine core objectives for trees in geographic area 3.3 Determine current and permissible usage of area
4. Determine tree resources	4.1 Identify, assess and record species, diversity and distribution of trees to be included in management plan 4.2 Determine tree assessments requirements for geographic area 4.3 Define and collect data required for operational management 4.4 Locate and map position of tree planting locations 4.5 Determine tree removal and tree replacement processes 4.6 Determine selection criteria for replacement trees 4.7 Establish a tree inventory for geographic area
5. Determine financial resources	5.1 Determine estimated and actual resources required for development of management plan 5.2 Determine management requirements of trees 5.3 Estimate cost of works required for operational program 5.4 Establish a priority of works and a risk mitigation plan 5.5 Determine frequency of pruning cycles 5.6 Determine operational resources required for planned works 5.7 Identify and incorporate existing third party obligations into planned works
6. Develop documentation	6.1 Collate supporting data and documentation for management plan 6.2 Develop and document operational procedures to achieve management plan objectives

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	6.3 Document draft operational tree management plan
7. Incorporate feedback and prepare plan	7.1 Prepare draft plan for public consultation 7.2 Notify stakeholders and community groups and obtain feedback 7.3 Review and evaluate feedback 7.4 Amend draft plan and incorporate feedback 7.5 Prepare final version of operational tree management plan

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret relevant information from complex texts, reports, maps and plans, including legislation and regulations, policies and procedures, to formulate organisational strategies for the development of operational management plans for trees
Writing	<ul style="list-style-type: none"> Create detailed procedures and planning documents that include selecting appropriate conventions and stylistic devices to convey precise meaning to the target audience
Numeracy	<ul style="list-style-type: none"> Interpret complex financial information and perform calculations to translate estimates of operational costings and scheduling for inclusion in tree management plans

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB611 Develop an operational tree management plan	AHCARB606 Develop an operational tree management plan	Performance criteria clarified Foundation skills added Assessment requirements	Equivalent

		updated	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB611 Develop an operational tree management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed an operational tree management plan, which must take all of the following operational components into consideration:

- tree inspections and assessments
- tree selection and planting requirements
- tree management
- tree maintenance
- tree protection
- tree removal
- risk identification and mitigation
- infrastructure protection
- habitat protection
- power line clearance
- community and private trees
- pest and disease control
- significant trees
- trees of a selected geographic area.

There must also be evidence that the individual has:

- determined the strategic context for a specific operational area for management plan
- defined scope of operational management plan
- sourced policies that impact on the management plan
- specified geographical area for the management plan and determined the historical and cultural values within the area
- determined land use and ownership of the area
- established national, state and local government legislative and regulatory constraints for the management plan

- determined key stakeholders and community group influences
- determined core objectives for trees in area
- determined current and permissible usage of area
- identified, assessed and recorded trees to be managed, which must include:
 - botanical and vernacular names
 - diversity of species
 - distribution
- identified and performed assessments required, which must include:
 - tree health and hazards
 - site conditions
 - soil type and condition
- defined and collected data required for operational management
- located and mapped position of planting locations
- determined tree removal and tree replacement processes
- determined selection criteria for replacement trees
- established a tree inventory for the geographical area
- identified financial resources available for management plan implementation
- determined the requirements for tree management
- determined operational resources, priorities, schedules and estimated cost of works required for operational program
- identified existing third party management arrangements and incorporated in plan
- collated information for management plan and developed and documented operational procedures
- prepared a draft operational tree maintenance plan and circulated to key stakeholders and community groups for feedback
- reviewed feedback, amended draft and prepared final operational tree management plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- tree management plans, their purpose and structure, including:
 - operational areas for formulating an operational tree management plan
 - specifying the objectives, performance targets and intended outcomes for the plan
 - identifying key stakeholders who influence operational tree management plans
 - documenting and preparing draft management plans for feedback
 - preparing documentation and distribution for stakeholder feedback
 - using and assessing stakeholder feedback to finalise final versions
- communications strategies for stakeholder engagement, including:
 - print media
 - public submissions

- public hearing and presentations
- developing and documenting tree management policies and procedures
- considerations for specific sites and trees their use and value, including:
 - historical and cultural heritage
 - land ownership and use
 - street trees and street tree planting
 - national, state and local government legislation and regulations governing arboriculture management policies, including:
 - zoning and planning controls
 - development and planning laws
 - disability discrimination
 - companion animals
- management and maintenance of trees within specific sites, including:
 - health, condition and maintenance requirements
 - the need and frequency of pruning cycles
 - tree assessments and maintaining an inventory
 - tree species, type, diversity and distribution
 - soils analysis and growing conditions
 - tree protection for development and construction sites
 - tree pruning operations
 - power line clearance
 - habitat protection
 - pest and disease controls and control strategies relevant to users
- tree removal and replacement strategies, including:
 - selection of planting locations
 - criteria for the selection of tree species
 - reasons for tree replacement
 - protecting infrastructure
- working with and managing third party obligations, including:
 - contractual arrangements and contractors
 - leasing arrangements
 - licensing obligations
- data collection methodologies and storage
- developing and documenting operational procedures and managing resources, including:
 - personnel
 - supplies and materials
 - equipment and machinery
- third party management and maintenance arrangements, including:
 - obligations affecting management plans
 - existing contracts for works or resources

- leasing arrangements for equipment
- licensing requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an arboriculture work site with trees or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with word processing and statistical software
- specifications:
 - tree inventory
 - operational tree management plan
 - federal, state and local government legislation and regulations relevant to trees
 - codes of practice and Australian standards relevant to arboricultural activities.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB612 Review and develop strategic tree policy

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to develop and review tree policies for the strategic management of trees within an organisational and legal planning framework.

The unit applies to individuals with broad theoretical and technical knowledge for the strategic management of trees. They have a broad range of cognitive, technical and communication skills and demonstrate autonomy and judgement for a defined area of responsibility, undertaking complex work with broad parameters to provide specialist advice and functions.

No licensing, legislative or certification requirements are to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Analyse the system	1.1 Identify, consult with and establish stakeholder needs 1.2 Research historic and current tree policies 1.3 Analyse statutory context of tree policies

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Research tree management activities 1.5 Analyse industry tree policy models 1.6 Evaluate comparative tree policy methods and systems 1.7 Research policy and strategic information to inform and develop policy
2. Define policy objectives	2.1 Identify key management objectives and metrics, and establish benchmarks 2.2 Analyse existing policies, procedures and systems for compliance with policy planning requirements 2.3 Evaluate conflicting needs amongst stakeholders 2.4 Determine tree management strategies 2.5 Define strategic tree policy objectives of the organisation 2.6 Define organisational tree policy reflecting strategic objectives 2.7 Develop and communicate change management strategies 2.8 Make recommendations for policy options
3. Define legal parameters	3.1 Determine legal parameters, statutes and local planning laws affecting tree policy 3.2 Determine need for tree policy in compliance with statutory documents 3.3 Seek advice on legal implications of policy from legal representative
4. Define context and limitations of tree policy	4.1 Determine parameters of tree policy 4.2 Determine and record localised soil characteristics relevant to tree species and policy 4.3 Compile database of local and indigenous tree species 4.4 Compile database of introduced tree species suitable for inclusion in policy 4.5 Create list of preferred and desired species 4.6 Determine extent and type of tree data for inclusion in policy documentation 4.7 Set diversity goals of trees for policy

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Develop tree policy	5.1 Develop tree policy to meet strategic objectives 5.2 Develop and communicate procedures to implement policy 5.3 Develop policy determinations for key elements of policy 5.4 Develop draft of strategic tree policy 5.5 Promote tree policy and expected outcomes to key stakeholders 5.6 Seek feedback from stakeholders 5.7 Review and amend policy 5.8 Develop tree policy documentation 5.9 Develop compliance programs in policy documentation 5.10 Implement strategies for continuous improvement
6. Review tree policy implementation	6.1 Publish final tree policy documentation 6.2 Use policy to guide development of operational tree management plans 6.3 Investigate and document implementation outcomes of policy 6.4 Provide feedback to key personnel and stakeholders 6.5 Monitor records for remedial action to improve performance 6.6 Modify policy and procedures according to feedback and performance outcomes

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret relevant information from complex texts, reports, maps and plans, including legislation, regulations, policies and procedures, to formulate a strategic view for the development of a tree policy
Writing	<ul style="list-style-type: none"> Create detailed documents for recommendations and tree policy that include selecting appropriate conventions and stylistic devices

Skill	Description
	to express precise meaning to the target audience <ul style="list-style-type: none"> • Create and edit a database of trees using appropriate language, botanical references and characteristics

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB612 Review and develop strategic tree policy	AHCARB607 Review and develop strategic tree policy	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB612 Review and develop strategic tree policy

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has reviewed at least two strategic tree policies and has developed at least one strategic tree policy.

There must also be evidence that the individual has:

- identified, consulted with and established stakeholder needs
- researched historic and current tree policies
- analysed statutory and policy context of tree policies
- researched tree management activities
- analysed current industry tree policy models
- evaluated comparative tree methodologies and systems
- researched current policy and strategic information for policy development
- identified key management objectives and management metrics and established benchmarks
- analysed existing policies, procedures and systems for compliance with policy planning requirements
- evaluated stakeholder needs and analysed conflicts
- determined tree management strategies
- defined strategic organisational policy objectives
- defined strategic objectives of the tree policy
- developed and communicated change management strategies
- made recommendations for policy options
- determined legal parameters, statutes and local planning laws
- determined impact of statutory documents on tree policy
- sought legal advice on implications of tree policy
- determined parameters of policy
- determined and recorded soil characteristics relevant to policy

- compiled a database of at least 20 tree species, detailing intensive tree profiles and attributes affected under the policy. The database must include:
 - preferred and desired species highly suitable for local use to be included under the policy
 - the location of species
 - taxonomic characteristics of each species
 - edaphic and environmental preferences and limitations of the trees selected
 - a mix of local, indigenous and exotic tree species must be included
- determined extent and type of tree data to be included in policy documentation
- set goals for tree diversity for the policy
- developed tree policy to meet strategic objectives
- developed and communicated procedures to implement policy
- developed policy determinations for key elements of policy, which must include:
 - hazard identification and mitigation
 - significant trees
 - tree selection and tree replacement strategies
 - street tree planting
 - tree removal
 - tree inspections and assessments
 - tree pruning operations, including power line clearance
 - habitat protection
 - infrastructure protection
 - pest and disease control
- developed draft of strategic tree policy
- promoted tree policy and expected outcomes to key stakeholders
- sought feedback from stakeholders
- reviewed and amended policy
- developed tree policy documentation
- developed compliance programs in policy documentation
- implemented strategies for continuous improvement.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- organisational tree policies their use and structure, including:
 - value and purpose of reviewing historic and current tree policies
 - models for the design of tree policies
 - influences of current and historic tree management activities
- setting management objectives for trees, including:
 - management metrics

- developing and working with industry benchmarks
- setting strategic objectives for trees for organisations and policies
- key stakeholders and their influences on tree policies, including:
 - identifying key stakeholders and their needs
 - assessing and evaluating stakeholder input and values
- analysing and developing tree management strategies
- tree policies and the legal framework, including:
 - legal parameters
 - impact of statutes on trees and policy development
 - local planning laws and their impact on tree policy development
 - compliance with policy planning requirements
 - legal implications of policies
 - seeking legal advice
 - policy design and styles
- local environment and tree selection for policy development, including:
 - edaphic and environmental preferences and limitations
 - rainfall infiltration and runoff
 - local and introduced tree species and their performance for inclusion in tree policies
 - regional implication of tree selection
 - taxonomic characteristics
- database development for tree species, including:
 - programs used for database design
 - structure and use of databases
 - data input of tree inventory and tree profiles
- key elements for policy determination, including:
 - hazard identification and mitigation
 - the significance of trees from an environmental, cultural or historic perspective
 - tree selection and use in the landscape
 - tree replacement strategy
 - street tree planting and effect on the urban landscape
 - tree removal and tree protection issues
 - tree inspections and assessments
 - tree pruning operations, infrastructure protection and power line clearance
 - environmental considerations and habitat protection
 - pest and diseases and their control
- communications strategies for seeking and providing feedback on draft policies
- developing, documenting and reviewing draft policies, including:
 - compiling and organising policy materials into a structure policy design
 - role and design of compliance programs
 - the continuous improvement process in policy development

- record keeping, reporting and policy development.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - access to an organisation requiring strategic tree policy development, or environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with word processing, statistical and database software
- specifications:
 - procedures and processes used for the design of strategic tree policies
 - two strategic tree policies stipulated in the performance evidence
- relationships:
 - organisation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB804 Analyse tree structure and biomechanics

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to identify and analyse aspects of tree biomechanics that affect the physical load and strength of trees, branches and anchorage in the ground. It requires the assessment of tree strength and the loads that occur, and the ability to assess factors that can weaken trees that increase the chance of failure.

The unit applies to individuals with highly specialised advanced theoretical and technical knowledge for professional work and research in arboriculture. They exercise advanced cognitive, technical and communication skills and demonstrate complete autonomy, judgement and adaptability in research and analysis for complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine existing physical loads and strengths of trees, branches and anchorage	1.1 Determine existing physical loads affecting trees 1.2 Identify source and factors causing stress on trees 1.3 Assess root plate environment and history for damage

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Assess history of pruning operations to above and below ground components</p> <p>1.5 Determine presence and extent of defects on trunk and root system</p> <p>1.6 Assess strength and material properties of tree structural components</p>
2. Determine wind load	<p>2.1 Determine wind environment of tree</p> <p>2.2 Determine surface area of structure exposed to wind</p> <p>2.3 Determine crown surface area exposed to wind</p> <p>2.4 Assess aerodynamic drag factor of tree crown</p> <p>2.5 Estimate primary loads occurring in seasonal climatic events</p> <p>2.6 Determine wind-load of prevailing stormy weather</p> <p>2.7 Determine load and drag associated with saturated foliage</p>
3. Determine structural integrity by static load testing	<p>3.1 Determine static load on trees for structural integrity testing and estimate wind-equivalent load</p> <p>3.2 Calibrate static load testing instruments according to manufacturer instructions</p> <p>3.3 Conduct static tests according to instrument instructions and analysis procedures</p> <p>3.4 Monitor loads and forces on trees to ensure safe limits to prevent damage</p> <p>3.5 Record data from static tests according to workplace procedures</p> <p>3.6 Compare data with benchmarks obtained from stable tree populations</p> <p>3.7 Prepare a report on structural integrity testing of tree from the static load tests</p>
4. Determine tree dynamic response	<p>4.1 Investigate tree biomechanics using dynamic methods of analysis</p> <p>4.2 Review complex models of tree dynamics analyses</p> <p>4.3 Calculate mass of branches of tree to determine degree of open-grown</p> <p>4.4 Calculate vector of force on tree</p> <p>4.5 Determine tree dynamic response under defined wind loads</p> <p>4.6 Prepare a report on structural integrity testing of tree from</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	dynamic load analysis
5. Investigate and consolidate structural integrity data and create a structural integrity report	5.1 Investigate level of contribution of material properties in tree dynamics 5.2 Investigate dynamic effect of branches on natural oscillation frequency and damping effect 5.3 Determine level of contribution of form and morphology in tree dynamics 5.4 Review suitability of invasive and non-invasive methods of testing 5.5 Evaluate and determine likelihood of structural failure 5.6 Confirm level of anchoring potential of root system and stability of tree 5.7 Prepare a structural integrity report and provide to client

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Create logical, succinct and accurate reports that use appropriate industry terminology and mathematical language and symbols
Numeracy	<ul style="list-style-type: none"> Analyse and synthesise highly complex mathematical information for tree mechanics, and perform calculations to determine structural integrity of trees

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB804 Analyse tree structure and biomechanics	AHCARB701 Analyse tree biomechanics	Code changed to reflect AQF alignment	Equivalent

		Title changed Elements and performance criteria clarified Foundation skills added Assessment requirements updated	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB804 Analyse tree structure and biomechanics

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has analysed the structure and biodynamics of a minimum of five different trees, including performed the following:

- five static load tests, and
- five dynamic load analyses.

There must also be evidence that the individual has:

- determined existing physical loads affecting trees
- identified areas of high stress on trees and the factors that affect these areas of high stress
- assessed root plate environment for damage
- assessed history and effect of tree pruning operations on tree roots and stems
- determined presence and extent of tree defects
- assessed strength and material properties of tree structural components
- determined wind environment of tree
- determined surface area of structure exposed to wind
- determined crown surface area exposed to wind
- assessed aerodynamic drag factor of tree crown
- estimated primary loads occurring in seasonal climatic events
- determined wind-load of prevailing storms
- determined load associated with saturated foliage
- determined static load on trees for structural integrity testing as an estimate of a wind equivalent load
- calibrated static load testing instruments
- conducted static tests that must include:
 - loads to the tree
 - measures the trunk strength
 - assesses root plate anchorage

- monitored loads and forces using electronic equipment
- monitored trees to ensure loads are kept within safe limits to prevent damage
- maintained records of all data from static tests
- compared data against benchmarks from stable tree populations and prepared a report on structural integrity testing
- investigated tree biomechanics using dynamic methods of analysis
- reviewed complex models of tree dynamics analysis
- calculated mass of branches to determine degree of open-grown form of tree
- calculated vector of force on the tree
- determined tree dynamic response under defined wind loads
- investigated level of contribution of material properties in tree dynamics
- investigated the dynamic effect of branches on frequency and damping
- determined the level of contribution of form and morphology in tree dynamics
- reviewed suitability of invasive and non-invasive methods of testing
- evaluated and determined likelihood of structural failure
- confirmed level of anchoring potential of root system and stability of tree
- prepared a structural integrity report and provided to client.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- tree dynamics and impact of tree form and morphology
- tree stability and physical loads affecting trees, particularly in high stress environments
- root plate environment, including:
 - depth and consistency of soil
 - spatial limitations
 - site excavations and potential damage
- arboricultural activity and impact on tree structure and stability, including:
 - pruning operations to branches and roots
- presence and impact of defects on tree structure, including:
 - extent of decay and damage of trunk and root system
 - assessment of strength and material properties of structural wood
- biomechanical impact of wind on tree structure, including:
 - seasonal wind patterns, and tree exposure
 - surface area and tree structure
 - aerodynamic drag factor of tree crown in relation to trunk diameter and extent of hollowness
 - estimation of primary loads occurring in seasonal climatic events
 - severe wind-load due to storms and extreme weather conditions
 - load associated with rain and snow saturated foliage

- additional drag associated with saturated foliage
- open-grown form of tree
- testing principles for static load, including:
 - use and purpose of a static load on trees during structural integrity testing as an estimate of a wind equivalent load
 - calibrating static load testing instruments
 - limits of structural safety during a static testing
 - measurement of trunk strength
 - invasive and non-invasive methods of testing trees
- assessment of root plate anchorage in the ground
- methods and reasons for monitoring loads and forces on trees, including:
 - electronic monitoring
 - monitoring of tree to ensure loads are kept within safe limits
- value and purpose of benchmarks obtained from stable tree populations
- tree biomechanics studies using dynamic methods of analysis, including:
 - simple models of tree dynamics
 - complex models and finite element analyses
 - multimodal approaches representing dynamics of branches on trees
- calculations required for structural and biomechanical assessments of trees, including:
 - mass of branches
 - vector of force on trees
 - tree dynamic response
 - wind velocity and direction
 - statistical analysis and interpretation of test results
- dynamic effect of branch movement on tree stability and failure rate, including:
 - oscillation frequency
 - energy dissipation and damping effect of canopy structure
 - likelihood of structural failure
 - level of anchoring potential of root system
 - stability of tree
- records and reporting procedures for analysis of structural integrity testing.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an arboriculture work site that has the trees stipulated in the performance evidence
- resources, equipment and materials:
 - computer with word processing software

- wind environment statistics
- static load test equipment
- models of tree dynamics
- specifications:
 - test equipment manuals, standard procedures and quality standards for performing load tests
 - sample reports for the diagnostic test methods listed in the performance criteria.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB805 Perform mycology assays

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to safely work within a laboratory environment, collect and identify wood decay fungi specimens from the field, prepare in-vitro cultures, and carry out primary experiments on fungi cultures. Work is performed using laboratory hygiene and safety procedures for sampling, sterilisation and cleaning of laboratory equipment and instruments.

The unit applies to individuals with highly specialised advanced theoretical and technical knowledge for professional work and research in arboriculture. They exercise advanced cognitive, technical and communication skills and demonstrate complete autonomy, judgement and adaptability in research and analysis for complex problems.

No licensing, legislative or certification requirements are to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research pathogenic and saprophytic wood decay fungi species	1.1 Investigate role of microbiological organisms on tree and forest health 1.2 Investigate the role and contribution of wood decay fungi to forest

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>and tree health, and responses</p> <p>1.3 Examine the taxonomy and evolutionary relationships of corticoid and polypore wood decay fungi</p> <p>1.4 Investigate the role of fungal species on specific host trees</p> <p>1.5 Analyse lifecycle, biology, ecology and effects of wood decay fungal species</p> <p>1.6 Examine relationship between fungal species and tree defects and failures</p> <p>1.7 Analyse biosecurity implications of pathogenic fungal species</p> <p>1.8 Review state and federal biosecurity plans and procedures</p>
2. Evaluate decay and identify fungi in trees	<p>2.1 Observe and evaluate signs and symptoms of fungi causing decay in trees</p> <p>2.2 Identify wood decaying fungi to generic level in field</p> <p>2.3 Identify non-pathogenic fungi to generic level in field</p> <p>2.4 Record location, size, and condition of wood decay fungi and mycoparasites of hollows and cavities in trees</p> <p>2.5 Document details of environmental characteristics of fungal affected trees</p> <p>2.6 Determine methods of dissemination and infection of fungi to other trees and vegetation</p> <p>2.7 Sample wood decay fungi and mycoparasites from trees for in-vitro culture and identification</p>
3. Prepare in-vitro media, cultures	<p>3.1 Select, check and fit personal protective equipment and contamination prevention clothing according to workplace procedures</p> <p>3.2 Decant and prepare standard laboratory chemicals and materials</p> <p>3.3 Prepare selective media to isolate and culture mycology specimens</p> <p>3.4 Prepare field samples ready for culturing on media</p> <p>3.5 Excise specimens and apply to media</p> <p>3.6 Maintain cultures and repeat excise procedures to isolate clean specimens</p> <p>3.7 Prepare and maintain cultured samples for further testing</p> <p>3.8 Update records and store securely according to chain of evidence protocols</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Conduct laboratory identification and assays	4.1 Prepare microscope slides of isolated cultures 4.2 Examine and identify cultured fungal samples 4.3 Perform laboratory identification of wood decay fungi to generic level 4.4 Record digital images of identified fungi 4.5 Perform laboratory assay tests to evaluate fungal characteristics 4.6 Document experimental assay test results 4.7 Develop and maintain mycology culture collection and submit to government database and culture collections according to procedures 4.8 Prepare a diagnostic report on suspected emergency plant pest according to state and federal biosecurity procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information from complex texts and research reports and select information relevant to microbial activity and impact on forest ecosystem and trees
Numeracy	<ul style="list-style-type: none"> Use complex formulae to calculate chemical concentrations when formulating mycological growing media

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB805 Perform mycology assays	AHCARB702 Analyse mycology cultures	Code changed to reflect AQF alignment Elements and performance	Equivalent

		criteria clarified Foundation skills added Assessment requirements updated	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB805 Perform mycology assays

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed the following:

- conducted field identification of a minimum of ten wood decay fungi to generic level
- conducted field identification of a minimum of ten non-pathogenic fungi to generic level
- analysed the lifecycle, biology, ecology and effects of a minimum of ten saprophytic wood decay fungi species on trees
- analysed the lifecycle, biology, ecology and effects of a minimum of ten pathogenic wood decay fungi species on trees
- collected, cultured, analysed and identified a minimum of five wood decay fungi to generic level.

There must also be evidence that the individual has:

- researched the role of microorganisms in the health of trees and forests
- researched the role and contribution of wood decay fungi to forest and tree health, and responses
- examined the taxonomy and evolutionary relationships of corticoid and polypore wood decay fungi
- investigated the role of fungal species on various hosts
- analysed lifecycle, biology, ecology and effects of wood decay fungi species
- examined relationships of fungal species with tree defects and failures
- analysed biosecurity implications of pathogenic fungal species
- reviewed state and federal biosecurity plans and procedures
- observed and evaluated signs and symptoms of fungi causing decay in trees
- maintained a record of the following for each mycological specimen:
 - location, size, and condition of wood decay fungi
 - presence of mycoparasites
 - size, condition and extent of hollows and cavities

- documented details of environmental characteristics of fungal affected trees
- determined methods of dissemination and infection of adjacent trees and vegetation
- sampled wood decay fungi and mycoparasites from trees for in-vitro culture and identification
- selected, checked and fitted personal protective equipment and contamination prevention clothing
- decanted and prepared standard laboratory chemicals and materials
- prepared selective mycological culture media to grow and isolate field samples
- prepared field samples of fungi for culturing on media
- excised fungal specimens and applied to media
- maintained cultures and repeated excise procedures to isolate clean specimens
- prepared and maintained cultured samples for further testing
- updated records and securely stored evidence according to chain of evidence protocols
- prepared microscope slides of isolated cultures
- examined and identified cultured fungal samples to generic level
- recorded digital images of identified fungi
- performed laboratory assay tests to evaluate fungal characteristics
- documented experimental assay test results
- developed and maintained a mycology culture collection and submitted to government databases and culture collections according to procedures
- prepared a diagnostic report on a suspected emergency plant pest according to state and federal biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- microbiological organisms and their impact on the health of forests and trees, including:
 - bacteria
 - fungi
 - protozoa
 - algae
 - viruses
- fungi in the forest environment, including impact on:
 - biodiversity
 - tree nutrition
 - forest health
 - environmental biochemistry
 - pathology
- taxonomy and evolutionary relationships of corticoid and polypore wood decay fungi, including:
 - lifecycles, biology and ecology

- important pathogenic and saprophytic tree wood decaying fungi
- tree infections of tree components by fungal species and tree failure
- visual symptoms of decay and tree decline, including:
 - dieback
 - reduced growth rate and chlorosis
 - presence of basidiocarps
 - decayed wounds
 - hollows and cavities
- state and federal biosecurity plans and procedures, including:
 - biosecurity implications of known and threat fungal species
 - Australian Emergency Plant Pest Response Plan
- field identification of fungi and fungal infections of trees, including:
 - pathogenic fungi
 - non-pathogenic fungi
 - recording and describing location, size and condition of wood decay fungi
 - presence of mycoparasites
 - size, condition and extent of hollows and cavities
- environmental characteristics and growing conditions of trees affected by fungi, including:
 - site characteristics and site history
 - soil conditions
 - climate and microclimatic variables
 - proximity of adjacent trees and vegetation
 - movement of people and vehicles
 - potential impact on assets, property and landscape
- tree infection methods and introduction, establishment, spread, and susceptibility of trees
- collecting and sampling of fungi in the field, including:
 - field sampling techniques of wood decay fungi and mycoparasites
 - storage of collected samples
- standard laboratory techniques and safety when preparing, measuring and decanting chemicals and materials
- culturing fungi for identification in the laboratory environment, including:
 - species-specific media and growing environment for culturing fungi
 - techniques to prepare and extract field samples for culturing
 - methods of excising and inoculating media with specimens
 - isolating clean cultures from primary cultures
 - preparation and maintaining clean cultured samples
- laboratory assay tests for fungal species identification, including:
 - deoxyribonucleic (DNA) based assay techniques
 - growth rate
 - temperature range

- pathogenicity
- mycoparasitism
- documentation of assay test results
- laboratory identification of wood decay fungi, including:
 - procedures and techniques for the preparation of microscope slides of isolated cultures
 - identification of cultured fungal samples
 - use of guides, keys and reference materials for identifying fungi
- development and maintenance of culture collections
- the importance and procedures for chain of evidence protocols, including:
 - secure storage of digital and physical evidence
 - storing and recording field samples
 - maintaining accurate records for slides, cultures and DNA samples
 - digital imaging techniques and importance in evidence and record keeping
- maintaining fungi collections, including:
 - methods of submission to relevant government databases and culture collections
- record keeping, reports and documentation requirements, including:
 - state and federal biosecurity procedures
 - emergency plant pest (EPP) and PLANTPLAN guidelines.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - trees with fungal infections stipulated in the performance evidence
 - laboratory suitable for performing the tests stipulated in the performance evidence
- resources, equipment and materials:
 - computer with word processing software
 - digital imaging device
 - diagnostic tools, including sounding hammer, trowel, probe, cordless drill
 - soil testing equipment
 - digital dissection microscope 10x – 100x
 - compound microscope
 - laboratory equipment to perform aseptic techniques in a sterile environment
 - personal protective equipment and contamination prevention clothing
 - culture growing environment
- specifications:
 - access to standard procedures and quality standards for growing culture, performing tests and conducting assessments
 - access to reference materials for fungi identification.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB806 Research urban forest performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to research an urban forest for its processes, benefits, values and impact on climate change, and produce a report on its performance.

The unit applies to individuals with advanced theoretical and technical knowledge and skills for professional or highly skilled work and/or further learning in one or more disciplines or areas of practice. This unit applies to individuals with advanced cognitive, technical and communication skills to provide specialist advice and analysis, and generate and transmit solutions to complex problems. They demonstrate autonomy, well-developed judgement, adaptability and responsibility as a practitioner or learner.

No licensing, legislative or certification requirements are to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research urban forest processes	1.1 Investigate and define elemental components of urban forests 1.2 Investigate role of urban forests as a primary component of urban ecosystems

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Investigate threats to and resilience of urban forests in cities</p> <p>1.4 Investigate effects of trees on hydrology and water quality</p> <p>1.5 Investigate relationship of trees on soil environment</p> <p>1.6 Determine contribution of trees towards rhizosphere biodiversity, bioremediation and soil health</p>
2. Evaluate benefits of urban forests	<p>2.1 Investigate energy conservation and microclimate modification systems of trees and urban forests</p> <p>2.2 Research heat island analyses of an urban area</p> <p>2.3 Evaluate health, social and psychological benefits of urban forests</p> <p>2.4 Compile investigations and research into a preliminary report on benefits of urban forests</p>
3. Analyse methods for urban forest valuation and prepare a report	<p>3.1 Investigate current methods and technologies for spatial mapping of urban forests</p> <p>3.2 Analyse process of carbon sequestration in urban forests</p> <p>3.3 Analyse methods for sampling urban forests</p> <p>3.4 Evaluate urban forest valuation methodologies</p> <p>3.5 Compile investigations and analysis into a preliminary report on methods for valuing an urban forest</p>
4. Evaluate climate change mitigation of urban forests	<p>4.1 Investigate contribution of urban forest to carbon cycles</p> <p>4.2 Evaluate local climate, soil and management factors affecting forest growth and carbon sequestration</p> <p>4.3 Investigate forest carbon sequestration to help mitigate climate change</p> <p>4.4 Prepare a report evaluating the contribution of forest for mitigation of climate change</p>
5. Compile information and prepare a report on urban forest performance	<p>5.1 Prepare a report on the social, environmental, economic and climatic values of urban forests</p> <p>5.2 Determine challenges of increased urbanisation and urban densification on urban forests</p> <p>5.3 Determine potential benefit of urban forest to mitigate climate change</p> <p>5.4 Compile and review reports and investigations</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.5 Prepare and present a final report on urban forest performance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret complex texts, research reports and biological references for urban forests and urban climate to extract information relevant to urban forest performance
Writing	<ul style="list-style-type: none"> Create complex technical reports that include appropriate conventions and stylistic devices to express precise meaning for target audience
Numeracy	<ul style="list-style-type: none"> Perform complex analytical calculations for testing and evaluating carbon sequestration and energy conservation in urban forests

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB806 Research urban forest performance	AHCARB703 Research urban forest performance	Code changed to reflect AQF alignment Elements and performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB806 Research urban forest performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has researched the performance of an urban forest, including:

- investigated urban forest processes, including:
 - elemental components of urban forests
 - role of urban forests as a component of urban ecosystems
 - threats and resilience of urban forests
 - impact of urban forests on hydrology and water quality
 - relationship of trees on soil biota and chemistry
- determined contribution of trees towards rhizosphere biodiversity, bioremediation and soil health
- investigated energy conservation and microclimate modification systems of trees and urban forests
- researched and analysed heat island effect of an urban area
- evaluated health, social and psychological benefits of urban forests
- prepared a preliminary report on benefits of urban forests
- researched methods and technologies for spatial mapping of urban forests
- analysed carbon sequestration process in urban forests
- analysed methods for sampling urban forests
- evaluated urban forest valuation methodologies
- prepared a preliminary report on valuation of an urban forest
- investigated contribution of urban forest to carbon cycles
- determined local climate, soil and management factors affecting forest growth and carbon sequestration
- investigated forest carbon sequestration to help mitigate climate change
- prepared a report evaluating the contribution of forest for mitigation of climate change
- prepared a report on social, environmental, economic and climatic values of urban forests

- determined challenges of increased urbanisation and urban densification on urban forests
- determined potential benefit of urban forest to help mitigate climate change
- compiled reports and investigations and prepared a final report on urban forest performance, which must include multi-disciplinary solutions to challenges of urbanisation on urban forests.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and impact of urban forest on our ecological and social environment, including:
 - elemental components of urban forests
 - role of urban forests as a primary component of urban ecosystems
 - urban forests in cities, their threats and resilience
- trees and their impact on hydrology and water quality, including:
 - regulation of hydrological processes
 - retention of precipitation
 - mitigation of salinity
- trees and their impact on soils, including:
 - relationship of soil biological network
 - soil chemistry and structure
 - soil stabilisation and erosion control
- interactions of trees in their growing environment and urban setting, including:
 - contribution of trees towards rhizosphere biodiversity, bioremediation and soil health
 - energy conservation and microclimate modification systems of trees and urban forests
 - heat island analyses of an urban area
 - health, social and psychological benefits of urban forests
- capturing, recording and assessing urban forest data and values, including:
 - methods and technologies of spatial mapping of urban forests
 - the carbon cycle, urban forests and carbon economics
 - methods for sampling urban forests
 - urban forest valuation methods
 - contribution of urban forest to carbon cycles and mitigation of climate change
 - influences of climate, soil and management strategies affecting forest growth and carbon sequestration
 - evaluation of urban forest and benefits to climate change
- social, environmental, economic and climatic values of urban forests, including:
 - urbanisation and urban densification on urban forests development
 - solutions to challenges of urbanisation on urban forests.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - urban forest and urban environment
- resources, equipment and materials:
 - computer with word processing and statistical software
 - measurement and data collection tools
- specifications:
 - standard procedures and quality standards for performing tests and conducting assessments
 - urban forest valuation methods and techniques.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCARB807 Conduct an entomology research project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to conduct an entomology research project requiring the collection and documentation of insects affecting trees. Important research themes to be investigated include the interrelationships of insects on their environment, forests and trees and the impact they have on economics, health of trees and the control strategies employed to contain infestations.

The unit applies to individuals with highly specialised advanced theoretical and technical knowledge for professional work and research in arboriculture. They exercise advanced cognitive, technical and communication skills and demonstrate complete autonomy, judgement and adaptability in research and analysis for complex problems.

No licensing, legislative or certification requirements are to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research insects	1.1 Investigate anatomical, morphological and taxonomic features of insects required for identification

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Examine the interaction of insects with trees</p> <p>1.3 Research annualised population and generational behaviour of insects</p>
2. Construct professional resource collections	<p>2.1 Develop and document a reference collection of insects</p> <p>2.2 Create a database of tree pests and vectors</p> <p>2.3 Compile and document host, climatic and geographic distribution data of insects affecting trees</p> <p>2.4 Record and compile generational phenology of insects</p>
3. Research and assess tree pest and vector interactions	<p>3.1 Investigate and identify natural antagonists, predators and parasitoids of insects affecting trees</p> <p>3.2 Investigate phytophagous and damaging insect–tree dynamics</p> <p>3.3 Investigate the tree dynamics of symbiotic/beneficial and insects</p> <p>3.4 Investigate physiological responses of tree resistance to insects</p> <p>3.5 Investigate host–pathogen and pathogen–vector interactions</p> <p>3.6 Evaluate conditions for selection of host trees by subcortical feeding insects and factors associated with attack</p> <p>3.7 Investigate and assess insect transmission of disease</p> <p>3.8 Evaluate multi-trophic interactions between host plant, pest and pathogen/parasitoids</p>
4. Evaluate control systems	<p>4.1 Determine economic costs of insect damage to trees</p> <p>4.2 Evaluate insects as indicators of environmental health and condition</p> <p>4.3 Determine insect biological hazards</p> <p>4.4 Investigate impact and effects of control strategies on target and non-target organisms</p> <p>4.5 Investigate insect resistance to pesticides</p> <p>4.6 Investigate and evaluate biological agents for tree pest control</p> <p>4.7 Investigate and evaluate tree health management options to manage insect infestation</p>
5. Present results of research	<p>5.1 Collect, tabulate, and analyse data from investigations</p> <p>5.2 Determine relevance of results to arboriculture</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.3 Compile and communicate research and results into a research paper 5.4 Submit research paper for review according to standards of a professional technical peer-reviewed journal 5.5 Review feedback and amend according to reviewer comments 5.6 Prepare article or presentation to communicate key facts and conclusions to industry

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret complex texts, research reports and biological references to extract information relevant to entomological research
Writing	<ul style="list-style-type: none"> Create complex technical documents that include appropriate conventions and stylistic devices to express precise meaning for target audience
Oral communication	<ul style="list-style-type: none"> Establish and maintain complex and effective spoken communication during presentations to target audience

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB807 Conduct an entomology research project	AHCARB704 Conduct an entomology research project	Code changed to reflect AQF alignment Elements and performance criteria clarified Foundation skills added Assessment requirements	Equivalent

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Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB807 Conduct an entomology research project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted entomological research with a focus in any two of the following research themes:

- conception, design, and implementation of safe and efficacious control strategy
- research and development of alternative pest management strategies
- investigative study on the longevity, infectivity and virulence of tree pests
- monitoring and assessment of infestation levels of a pest outbreak
- design and implementation of biocontrol strategies using predators, parasitoids and entomopathogenic fungi
- design and implementation of methods for monitoring and assessing population dynamics and distribution of tree pest species
- implementation of a comparative ecological field study investigating efficacy and compatibility of pest insect control strategies
- research and test a management plan for a phytophagous insect
- research and test a breeding program for a beneficial insect
- research three model systems to examine tritrophic effects of tree susceptibility
- design, implement, investigate, evaluate and report on tritrophic interactions
- investigate preference and survivability of insects in a tree environment
- design projects investigating the subsequent risk analysis and tests required
- development of a tree pest survey strategy
- research and report on geographical or climatic distribution of insect pests
- coordination with an international and domestic multidisciplinary collaborative research initiative.

There must also be evidence that the individual has:

- investigated anatomical, morphological and taxonomical features of insects
- examined the interaction of insects with trees
- researched annualised population and generational behaviour of insects

- developed and documented a reference collection of a minimum of one hundred specimens of arboricultural related insects and vectors from at least four orders of insects, annotated with the following:
 - date of collection
 - location where insect was collected
 - host tree/plant on which it was collected/feeds
 - name of insect to at least the level of genera
- designed and developed a database to store information of tree pests and vectors
- compiled host climatic and geographic distribution data
- investigated and identified natural antagonists, predators and parasitoids of insects
- investigated phytophagous and damaging insect–tree dynamics
- investigated symbiotic/beneficial insect–tree dynamics
- investigated physiological responses of tree resistance to insects
- investigated host–pathogen and pathogen–vector interactions
- evaluated conditions affecting selection of host trees by subcortical feeding insects and factors associated with attack
- investigated and assessed insect transmission of disease
- evaluated multi-trophic interactions between host plant-pest-pathogen/parasitoids
- determined economic costs of insect damage to trees
- evaluated insects as environmental indicators of health and condition
- determined insect biological hazards
- investigated impact and effects of control strategies on target and non-target organisms
- investigated insect resistance to pesticides
- investigated and evaluate biological control agents of tree pest control
- researched and evaluated plant health management options to manage insect damage
- collected, tabulated and analysed data for publications
- determined relevance of results to arboriculture
- compiled and communicated research and results in a research paper according to standards expected of professional technical peer-reviewed journal
- submitted research paper for review
- reviewed feedback from reviewer and amended paper
- communicated key facts and conclusions to industry in an article or presentation.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- research skills and designing research projects, including:
 - investigative skills and monitoring techniques
 - defining the scope and purpose of research activity
 - data collection, management and storage
 - data processing, analysis and modelling

- statistics and data interpretation
- design and development of formal research papers and the process of peer-reviewed publication
- design and development of industry papers and presentations for communication of research and findings
- entomology and the impact of insects on our environment, including:
 - anatomical, morphological and taxonomical features of different classes of insects
 - insect behaviour, ecology and nutrition and their interaction with trees
 - population and generational behaviour and phenology of insects and impact on plants and trees over time
 - host, climatic and geographic distribution of insects
 - insects as indicators of environmental health
- collecting, storing and documenting insect reference collections, including:
 - catching and preserving techniques
 - taxonomic and naming conventions for insects
 - tagging and labelling specimens
- design and construction of databases and data entry procedures
- insects and their economic impact on society and health of trees, including:
 - natural antagonists, predators and parasitoids of insects
 - phytophagous and damaging insects on tree dynamics
 - symbiotic and beneficial insects and impact on tree dynamics
 - natural responses of trees to insect invasion
 - host-pathogen and pathogen-vector interactions
 - subcortical feeding insects and conditions for selecting host trees
 - factors associated with successful attack
 - insect as a vector for transmission of disease
 - insects as biological hazards
- a systems approach to multi-trophic interactions between host plant-pest-pathogen or parasitoids
- pest insect control strategies, their advantages and disadvantages, including:
 - mechanical control
 - chemical control and pesticide resistance
 - biological control agents
 - managing the environment and tree health to offset infestations
 - integrated pest management (IPM)
- direct and indirect impact of chemical pesticides and biocontrol agents on target and off-target organisms.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - trees and forests with insect populations
- resources, equipment and materials:
 - computer with word processing, database and statistical analysis software
 - digital imaging device
 - diagnostic tools, including sounding hammer, trowel, probe, cordless drill
 - soil testing equipment
 - digital dissection microscope 10x – 100x
 - compound microscope
 - microtome, staining and slide mounting equipment
 - histochemical stains
- specifications:
 - standard procedures and quality standards for performing tests and analysis
 - reference materials and keys for insect identification.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

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AHCARB808 Contextualise diagnostic tests

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to review diagnostic testing models, analyse their performance, contextualise the test for a range of tree domains and execute a diagnostic test project.

The unit applies to individuals with highly specialised advanced theoretical and technical knowledge for professional work and research in arboriculture. They exercise advanced cognitive, technical and communication skills and demonstrate complete autonomy, judgement and adaptability in research and analysis for complex problems.

No licensing, legislative or certification requirements are to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research diagnostic testing principles and processes	1.1 Conduct a literature review on tree-related research and diagnostic test case studies 1.2 Operate diagnostic testing equipment to industry and manufacturer standards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Interpret underpinning scientific principles of test processes 1.4 Determine diagnostic assumptions and limitations of testing process for selected diagnostic tool
2. Analyse requirements and calibration processes	2.1 Analyse quantification, variance and tolerance requirements for selected diagnostic tools 2.2 Investigate and verify calibration baselines for diagnostic equipment 2.3 Verify calibration processes have been performed on diagnostic equipment according to verified baselines
3. Determine project parameters and execute a diagnostic test project	3.1 Select testing processes for primary tree domains 3.2 Select diagnostic tools for each domain and contextualise the testing process 3.3 Define research method to be used 3.4 Conduct a literature review for current research and science of each primary domain 3.5 Establish efficacy of test for each primary domain 3.6 Conduct a diagnostic test project
4. Interpret testing results	4.1 Analyse test results for performance metrics of each of the selected diagnostic tools 4.2 Interpret results against benchmark and anticipated ranges 4.3 Confirm predictive responses in terms of pre-treatment results to projected post-treatment outcomes 4.4 Articulate meaning of results within context of primary domain
5. Provide prognosis and prepare management plans	5.1 Provide an informed prognosis 5.2 Research management options and lag time 5.3 Prepare a report that documents management plans

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Compare and contrast technical specifications and procedures for diagnostic tests from case studies to analyse and formulate views and opinions
Numeracy	<ul style="list-style-type: none"> Perform complex analytical calculations for testing and evaluating the accuracy and tolerances of diagnostic tests and to establish baselines and calibration requirements for testing and equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB808 Contextualise diagnostic tests	AHCARB801 Contextualise diagnostic tests	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB808 Contextualise diagnostic tests

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has contextualised diagnostic test results for each of the following five primary domains for trees:

- anatomy
- physiology
- pathology
- dynamics
- edaphic environment.

There must also be evidence that the individual has:

- conducted a literature review of peer-reviewed research and relevant case studies
- operated diagnostic testing equipment
- interpreted underpinning scientific principles of test processes
- determined the diagnostic assumptions and limitations of the testing process for the selected diagnostic tool
- analysed quantification, variance and tolerance requirements
- investigated and verified calibration baselines for diagnostic equipment
- verified calibration processes have been performed on test equipment
- selected testing processes for each of five primary tree domains
- selected diagnostic tools and contextualised the testing process for each domain
- defined research method to be used
- conduct a literature review for current research and science of each primary domain
- established efficacy of the test for each primary domain
- conducted a diagnostic test project
- analysed test results for performance metrics of selected diagnostic tools
- interpreted results against benchmark and anticipated ranges
- confirmed predictive responses in terms of post-treatment to pre-treatment results

- articulated meaning of results within context of primary domain
- provided an informed prognosis
- researched management options and lag time
- formulated a report documenting management plans.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- conducting literature reviews for peer-reviewed documentation, scientific research and case studies
- diagnostic testing processes and test equipment, and their purpose and functional operation, used for tree domains, including:
 - limitations of the testing process
 - assumptions and limitations of tools used in diagnostics
 - standardising test equipment and determining baselines and calibration
 - verifying efficacy of testing methodologies
- primary tree domains and testing regimes and diagnostics used for each, including:
 - tree anatomy
 - tree physiology
 - tree pathology
 - tree dynamics
 - the edaphic environment of trees
- developing scientific research projects and selecting a research method, including:
 - setting goals and outcomes for research
 - hypothesis testing
 - observational research
 - measurement of functional relationships
 - establishing performance metrics and normal anticipated ranges of test result
- test results; their documentation and interpretation, including:
 - diagnostic test projects and processes
 - contextual understanding of results
 - statistical analysis of results
 - prognostics
 - use of diagnostic outcomes in the development of management plans.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- trees and forests or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with word processing and statistical analysis software
 - diagnostic tools for selected testing
 - access to diagnostic test equipment and operating instructions
- specifications:
 - standard procedures and quality standards of performing diagnostics tests and analysis
 - reference materials, reports and scientific literature for reviews.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

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AHCARB809 Develop an urban forest management framework

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to develop an urban forest management framework for a specific geographic location incorporating policy documentation and urban forest management planning.

The unit applies to individuals with highly specialised advanced theoretical and technical knowledge for professional work and research in arboriculture. They exercise advanced cognitive, technical and communication skills and demonstrate complete autonomy, judgement and adaptability in research and analysis for complex problems.

No licensing, legislative or certification requirements are to this unit at the time of publication.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- AHCARB806 Research urban forest performance.

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish performance metrics and analyse resources	1.1 Investigate models of urban forest management 1.2 Establish key performance metrics and outcomes from client brief 1.3 Determine the data sets required for objectives of managing

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>resources according to stakeholder needs</p> <p>1.4 Analyse urban forest resources</p> <p>1.5 Determine agents and conditions affecting urban forest health</p> <p>1.6 Analyse species spatial geography using geographical information systems (GIS)</p> <p>1.7 Determine canopy density targets</p>
2. Determine urban forest asset value	<p>2.1 Determine objectives and outcomes of urban forest for the community</p> <p>2.2 Determine asset value of trees and forest according to client brief and industry benchmarks</p> <p>2.3 Perform cost-benefit analysis of forest assets</p> <p>2.4 Analyse variation in asset value</p>
3. Review policy documentation	<p>3.1 Analyse and review urban forest policy documents for performance metrics and desired outcomes</p> <p>3.2 Determine statutory, liability and risk issues affecting urban forests</p> <p>3.3 Identify stakeholder requirements and perceptions</p> <p>3.4 Evaluate extent of impact and outcomes of proposed policy documents</p> <p>3.5 Record and report policy determinations on tree assets</p> <p>3.6 Document an urban forest management policy</p>
4. Develop and document management plan	<p>4.1 Develop a conceptual framework for urban forest management</p> <p>4.2 Develop street tree master plans according to client brief</p> <p>4.3 Set vision and objective statements</p> <p>4.4 Determine quantifiable goals</p> <p>4.5 Establish and maintain inventories and databases according to client brief</p> <p>4.6 Develop implementation and operational plans</p> <p>4.7 Develop and document an urban forest management plan</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information from complex texts, reports, maps and plans, including legislation and regulations, policies and procedures, to formulate strategies for the development of urban forest management plans
Writing	<ul style="list-style-type: none"> Create detailed planning documents that include selecting appropriate conventions and stylistic devices to convey precise meaning to the target audience

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB809 Develop an urban forest management framework	AHCARB802 Develop an urban forest management framework	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB809 Develop an urban forest management framework

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed an urban forest management framework for a specified geographic location, including:

- investigated models of urban forest management
- established key performance metrics and outcomes from client brief
- determined data sets required for objectives of managing the resources according to stakeholder needs
- analysed urban forest for resources
- determined agents and conditions affecting urban forest health
- analysed species spatial geography using geographical information systems (GIS)
- determined canopy density targets
- determined objectives and outcomes of urban forest to community
- determined asset value of trees and forest according to client brief and industry benchmarks
- performed cost-benefit analysis of forest assets
- analysed variation in asset value within variables
- analysed and reviewed policy documents for meeting performance metrics and desired outcomes
- determined statutory, liability and risk affecting urban forests
- identified stakeholder requirements and perceptions
- evaluated extent of impact and outcomes of proposed policy documents
- recorded and reported policy determinations on tree assets
- documented an urban forest management policy
- developed a conceptual framework for urban forest management
- determined requirements for street tree master plans according to client brief
- set vision and objective statements
- determined quantifiable goals

- established and maintained inventories and databases according to client brief
- developed implementation and operational plans
- developed and documented an urban forest management plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- urban forests and their benefits to community, including:
 - models of urban forest management
 - objectives, outcomes and performance metrics of urban forests
 - maintaining urban forest health
 - tree anatomy, physiology, pathology, tree dynamics and edaphic environment in relation to urban forest management
 - urban forest as a resource
- quantifying the urban forest as an asset, including:
 - measuring and data sets
 - spatial analysis of trees and forests, and the use of geographical information systems (GIS)
 - canopy density targets
 - asset value of single tree
 - asset value of forest
 - value criteria
 - relevant benchmarks
 - cost-benefit analysis
 - competing views of forest values
- community objectives and outcomes of urban forests, including:
 - social
 - environmental
 - public health
 - economic
 - aesthetic terms
- measuring the performance of urban forests, including:
 - performance metrics
 - stakeholder requirements and perceptions
- design and development of urban forest policies and management plans, including:
 - conceptual framework of managing urban forests
 - street tree master plans
 - vision statements and their role in management plans
 - setting and documenting achievable and quantifiable goals and objectives
- maintaining accurate and accessible tree inventories, including:

- mapping and managing data
- data management software
- inventories and databases
- setting and planning the implementation of management plans, including:
 - urban forest operational plans
 - the urban forest management plans.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an urban community with trees and forests or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with word processing software
- specifications:
 - standard procedures and quality standards for developing urban forest plans
 - client brief.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

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AHCARB810 Analyse edaphic interactions of trees and structures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to analyse the edaphic interactions of trees and structures through investigations into soil characteristics and effect on tree and structure stability, tree roots and interactions with structures, and their relationship resulting in potential tree and structural failure.

The unit applies to individuals with highly specialised advanced theoretical and technical knowledge for professional work and research in arboriculture. They exercise advanced cognitive, technical and communication skills and demonstrate complete autonomy, judgement and adaptability in research and analysis for complex problems.

No licensing, legislative or certification requirements are to this unit at the time of publication.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- AHCARB804 Analyse tree structure and biomechanics.

Unit Sector

Arboriculture (ARB)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine soil attributes for a specified site	1.1 Investigate angle of repose of soils and impact on structures 1.2 Investigate soil plasticity and impact on structures 1.3 Investigate the effects of soil moisture on cohesion and plasticity 1.4 Investigate modes of soil liquefaction and soil stability 1.5 Conduct tests on soil properties to establish soil stability for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	specified site 1.6 Assess level of soil cohesion for site 1.7 Determine shear strength of soil for site 1.8 Investigate load bearing capacity of soil for site 1.9 Determine mass of the soil plate for site
2. Determine root attributes for trees on site	2.1 Determine tree root morphology, division and distribution 2.2 Determine amount of buttressing 2.3 Determine anatomical features of tree roots for identification purposes 2.4 Identify tree roots based on anatomical features
3. Calculate forces from roots	3.1 Research, test and determine forces and pressures exerted by trees through roots in soil 3.2 Estimate and measure dimensions of roots exerting a force on structures on site 3.3 Calculate total surface area of the roots exerting a force on structures on site 3.4 Calculate force exerted by roots per unit of surface area of structure 3.5 Calculate total force exerted by roots of a given surface area
4. Determine attributes of structures	4.1 Measure and determine volume of structures impacted by roots 4.2 Research and calculate mass of structures on site 4.3 Determine the impact of gravity on structural mass 4.4 Determine effect of leverage of forces exerted by tree roots on structures
5. Define the root–soil matrix factors for root/soil breakage	5.1 Determine factors of root–soil matrix interactions 5.2 Investigate area of contact between root and soil 5.3 Investigate elasticity, tensile strength and breaking stress of roots 5.4 Investigate root cross-sectional morphology 5.5 Assess root plate for factors that may contribute to failure 5.6 Estimate impact of static and dynamic testing for root plate stability

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.7 Evaluate the likelihood of root failure by root breakage 5.8 Evaluate the likelihood of anchorage failure by soil breakage or slippage
6. Research structural engineering solutions	6.1 Investigate and assess effects of increasing mass of structure to prevent damage 6.2 Investigate and assess methods and effects of increasing the modulus of rupture to prevent damage 6.3 Investigate and assess effects of use of curved structures to prevent damage 6.4 Investigate and assess effects of soil mass and friction on structure stability 6.5 Investigate and assess effects of anchors, braces and props on trees to improve stability 6.6 Compile investigations and assessments into a reference portfolio
7. Prepare stability and expert witness reports	7.1 Prepare report on potential tree damage to structure 7.2 Provide design suggestions to mitigate potential damage 7.3 Review root plate evaluation and prepare report on stability of tree 7.4 Provide design suggestions to mitigate likelihood of tree failure 7.5 Prepare final report on potential structure and tree stability
8. Communicate with project personnel	8.1 Discuss installation and protection measures with project personnel using industry-specific language 8.2 Negotiate and resolve installation and protection issues

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine soil attributes for a specified site	1.1 Investigate angle of repose of soils and impact on structures 1.2 Investigate soil plasticity and impact on structures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Investigate the effects of soil moisture on cohesion and plasticity 1.4 Investigate modes of soil liquefaction and soil stability 1.5 Conduct tests on soil properties to establish soil stability for specified site 1.6 Assess level of soil cohesion for site 1.7 Determine shear strength of soil for site 1.8 Investigate load bearing capacity of soil for site 1.9 Determine mass of the soil plate for site
2. Determine root attributes for trees on site	2.1 Determine tree root morphology, division and distribution 2.2 Determine amount of buttressing 2.3 Determine anatomical features of tree roots for identification purposes 2.4 Identify tree roots based on anatomical features
3. Calculate forces from roots	3.1 Research, test and determine forces and pressures exerted by trees through roots in soil 3.2 Estimate and measure dimensions of roots exerting a force on structures on site 3.3 Calculate total surface area of the roots exerting a force on structures on site 3.4 Calculate force exerted by roots per unit of surface area of structure 3.5 Calculate total force exerted by roots of a given surface area
4. Determine attributes of structures	4.1 Measure and determine volume of structures impacted by roots 4.2 Research and calculate mass of structures on site 4.3 Determine the impact of gravity on structural mass 4.4 Determine effect of leverage of forces exerted by tree roots on structures
5. Define the root–soil matrix factors for root/soil breakage	5.1 Determine factors of root–soil matrix interactions 5.2 Investigate area of contact between root and soil 5.3 Investigate elasticity, tensile strength and breaking stress of roots 5.4 Investigate root cross-sectional morphology

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>5.5 Assess root plate for factors that may contribute to failure</p> <p>5.6 Estimate impact of static and dynamic testing for root plate stability</p> <p>5.7 Evaluate the likelihood of root failure by root breakage</p> <p>5.8 Evaluate the likelihood of anchorage failure by soil breakage or slippage</p>
6. Research structural engineering solutions	<p>6.1 Investigate and assess effects of increasing mass of structure to prevent damage</p> <p>6.2 Investigate and assess methods and effects of increasing the modulus of rupture to prevent damage</p> <p>6.3 Investigate and assess effects of use of curved structures to prevent damage</p> <p>6.4 Investigate and assess effects of soil mass and friction on structure stability</p> <p>6.5 Investigate and assess effects of anchors, braces and props on trees to improve stability</p> <p>6.6 Compile investigations and assessments into a reference portfolio</p>
7. Prepare stability and expert witness reports	<p>7.1 Prepare report on potential tree damage to structure</p> <p>7.2 Provide design suggestions to mitigate potential damage</p> <p>7.3 Review root plate evaluation and prepare report on stability of tree</p> <p>7.4 Provide design suggestions to mitigate likelihood of tree failure</p> <p>7.5 Prepare final report on potential structure and tree stability</p>
8. Communicate with project personnel	<p>8.1 Discuss installation and protection measures with project personnel using industry-specific language</p> <p>8.2 Negotiate and resolve installation and protection issues</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret relevant information from complex texts, reports, maps and plans to formulate a detailed understanding of soil characteristics and impact on trees
Writing	<ul style="list-style-type: none"> Create complex arborist reports, demonstrating control over a range of writing styles and using industry-specific language appropriate for target audience
Numeracy	<ul style="list-style-type: none"> Interpret complex numerical data and use complex formulae to measure and calculate volumes and mass of soils and structures for impact on tree roots

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB810 Analyse edaphic interactions of trees and structures	AHCARB803 Analyse edaphic interactions of trees and structures	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB810 Analyse edaphic interactions of trees and structures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has analysed the edaphic interactions of trees and structures for a specific site and has prepared a minimum of two reports, which must include:

- a report on damage to structures by tree roots
- a report on the stability of tree with a defective or damaged root plate.

There must also be evidence that the individual has:

- investigated soil conditions that contribute to structure and tree stability, including:
 - angle of repose of soil materials
 - soil plasticity
 - impact of soil moisture on soil cohesion and plasticity
 - modes of soil liquefaction
- investigated and tested soils for properties affecting soil conditions, including:
 - measured soil moisture content and field capacity
 - determined soil texture
 - assessed level of soil cohesion
 - determined shear strength of the soil
 - investigated load bearing capacity of soil
 - calculated mass of the soil plate
- determined root morphology, division and distribution and amount of buttressing of tree
- determined species characteristics for development of tap root system
- determined anatomical features of tree roots and identified tree roots for a given tree
- conducted research tests to determine forces and pressures exerted by trees through the soil
- estimated and measured dimensions of roots exerting a force on a structure
- calculated total surface area of the roots exerting a force on a structure
- calculated force exerted by roots per unit of surface area of structure

- calculated total force exerted by roots of a given surface area
- measured and determined volume of structure
- researched and calculated mass of structures
- determined impact of gravity on mass
- determined effect of leverage on the forces exerted by tree roots on structure
- determined factors of root–soil matrix interactions
- investigate area of contact between root and soil
- investigated elasticity, tensile strength and breaking stress of roots
- investigated root cross-sectional morphology
- assessed root plate for damage, deficiencies or defects that may contribute to tree failure
- estimated impact of static and dynamic testing for root plate stability
- evaluated possible root failure by root breakage
- evaluated possible anchorage failure by soil breakage or slippage
- investigated and assessed:
 - effects of increasing mass
 - methods for, and effects of, increasing the modulus of rupture
 - effects of use of curved structures
 - effects of soil mass and friction
 - effects of use of anchors, braces and props
- compiled investigations and assessments into reference portfolio
- created a report of potential tree damage to structure and provided design suggestions to mitigate damage
- reviewed root plate assessment, prepared final report on stability of tree and provided design advice to mitigate potential tree failure
- created an expert witness report on potential structure or tree stability
- discussed installation and protection measures with project personnel
- negotiated and resolved anomalies in installation and protection measures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- impact of soil on the stability and structural integrity of structures and trees, including:
 - angle of repose of soil
 - soil plasticity
 - soil moisture content
 - field capacity of soil
 - effects of soil moisture on soil cohesion and plasticity
 - modes of soil liquefaction
- testing soils for performance characteristics and soil stability, including:
 - soil texture
 - soil cohesion

- soil moisture and field capacity
- shear strength of soils
- load bearing capacity
- calculating mass of soil plate
- tree root structures and their impact on soils and stability, including:
 - root morphology
 - root division
 - root distribution
 - buttressing
 - species development of tap root systems
 - identification of tree roots based on anatomical features
- pressures exerted by tree roots, including:
 - experimental modelling of tree root damage
 - testing tree roots impact on structures and soils
 - direct and indirect forces and pressures exerted in soils by trees
 - techniques and methods of estimating and measuring dimensions of roots
 - factors of root–soil matrix interactions
 - area of contact between root and soil
 - elasticity of roots
 - tensile strength of roots
 - breaking stress of roots
 - root cross-sectional morphology
- calculations for determining forces exerted by tree roots, including:
 - total surface area of the roots exerting forces on structures
 - forces exerted by roots per unit of surface area of structure
 - total force exerted by roots of a given surface area
 - measurement of volume of structures
 - calculating the mass of structures and the impact of gravity on mass
 - effect of leverage on the forces exerted by tree roots onto structure
- tree root health and condition and impact on tree stability, including:
 - size of root plate and extent of root plate damage
 - extent of root plate deficiencies
 - extent of root plate defects
 - impact of static and dynamic testing for root plate stability
 - likelihood of root failure by root breakage and failure of root plate
 - likelihood of anchorage failure by soil breakage or slippage
- considerations of structural design and development, and tree support to mitigate potential tree or structure damage, including:
 - effects of increasing mass of structure
 - effects of structure design and curvature of shape on strength of structures

- effects of soil mass and friction
- effects of increasing the modulus of rupture
- effects of use of tree support mechanisms
- Australian standards relevant to trees on development sites
- structure designs for mitigation of tree damage and failure
- tree protection measures
- creating reference portfolios of research and investigations, including annotations and calculations
- documenting and reporting procedures, report preparation and communicating results of analysis, including:
 - test results and assumptions
 - expert witness reports, their purpose and design
 - using the correct language in reports and reporting
- fundamentals of the concepts, basic science and technology of structural engineering, construction and architecture as relates to arboriculture and impact of trees on structures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a construction or development site with trees and structures or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with word processing software
 - digital imaging device
 - diagnostic tools, including sounding hammer, trowel, probe, cordless drill
 - soil testing equipment
 - digital dissection microscope 10x – 100x
 - compound microscope
 - microtome, staining and slide mounting equipment
- specifications:
 - standard procedures and quality standards for performing soil analysis, tests and analysis on roots and structures
 - reference materials, reports and literature relevant to investigations and research into engineering, construction and architectural interactions with trees.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed

- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBAC102 Support agricultural crop work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.

Application

This unit of competency describes the skills and knowledge required to provide support to others undertaking agricultural crop production activities.

The unit applies to individuals who work alongside a supervisor and undertake defined routine activities. They exercise limited autonomy and identify and seek help with simple problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare materials, tools and equipment for agricultural crop work	1.1 Identify materials, tools and equipment required according to supervisor instructions 1.2 Check materials, tools and equipment and report inconsistencies and faulty items to supervisor 1.3 Load and unload materials onto vehicle without damage to load and vehicle

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Select and check personal protective equipment (PPE) 1.5 Identify hazards and report to supervisor according to work health and safety procedures
2. Undertake agricultural crop work as directed	2.1 Follow instructions from supervisor seeking clarification when unclear 2.2 Handle and transport materials, equipment and machinery according to instructions and safety procedures 2.3 Perform cropping work according to safety, environmental and biosecurity procedures 2.4 Communicate with work team in a positive and professional manner 2.5 Maintain a clean and safe work site 2.6 Report work performance and inconsistencies in timelines to supervisor
3. Clean up on completion of cropping work	3.1 Store re-usable materials according to supervisor instructions 3.2 Dispose of waste material according to supervisor instructions 3.3 Clean, maintain and store tools and equipment according to manufacturer specifications and supervisor instructions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret documented instructions for work relevant information and identifies inaccuracies for implementing requirements
Oral Communication	<ul style="list-style-type: none"> Use short simple spoken texts to communicate with work team and supervisor
Numeracy	<ul style="list-style-type: none"> Estimate weights and measures of materials to ensure safe manual handling and loading of materials

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC102 Support agricultural crop work	AHCBC101 Support agricultural crop work	<p>Minor edit to application for clarity</p> <p>Minor changes and consolidation of Elements and Performance Criteria for better sequencing and clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBAC102 Support agricultural crop work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion, supported others in agricultural crop production and has:

- identified and prepared tools, materials and equipment according to instructions
- demonstrated crop support activities while handling materials and equipment safely
- maintained a clean and safe working environment and cleaned up after work activities
- followed workplace work health and safety, biosecurity and environmental procedures
- selected and checked personal protective equipment (PPE) and reported work performance to supervisor.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- work procedures for cropping work, including:
 - health and safety
 - biosecurity risk
 - environmental controls
- common materials, tools and equipment used for agricultural crop production work, including:
 - loading and unloading transport vehicles safely
 - safe handling of materials and equipment
- common agricultural cropping work activities and expected performance outcomes
- procedures for cleaning site following completion of work.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a farm where cropping activities are performed or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - basic tools and equipment
 - materials and consumables
 - specific items of personal protective equipment
- specifications:
 - workplace procedures for work to be performed
 - manufacturer operating instructions for tools and equipment
 - workplace instructions
- relationships:
 - team member(s)
 - supervisor(s)
- timeframes:
 - according to timelines specified in supervisor instructions

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC202 Assist agricultural crop maintenance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to assist others to maintain agricultural crops.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for agricultural crop maintenance	1.1 Follow instruction for crop maintenance activities and clarify any

Element	Performance criteria
operations	special operating instructions 1.2 Select and prepare appropriate machinery, equipment and tools 1.3 Identify work health and safety hazards in crop maintenance and report to supervisor 1.4 Select, use and maintain suitable personal protective equipment
2. Assist with the implementation of maintenance operations	2.1 Assist with the implementation of the crop weed control program 2.2 Assist with the implementation of the crop pest and disease control program 2.3 Assist with the implementation of the crop nutrition program 2.4 Assist with the implementation of paddock maintenance duties 2.5 Assist with the implementation of any appropriate irrigation duties
3. Complete maintenance operation	3.1 Clean and sterilise tools and equipment appropriately 3.2 Dispose of all containers, leftover fluids, waste and debris according to enterprise policies and minimising the impact on the environment 3.3 Complete all required workplace records appropriately 3.4 Apply enterprise biosecurity policies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBC202 Assist agricultural crop maintenance.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA202 Assist agricultural crop maintenance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare machinery, equipment and tools to maintain crops
- conduct scheduled routine checks on machinery and vehicles for oil levels, tyre pressures, water levels and greasing points
- assist with cropping duties including weed control, pest and disease control, crop nutrition and paddock maintenance
- report the presence of weeds, pests and disease in crops
- record the details of crop maintenance
- identify hazards and follow safety directions at work
- read and interpret a range of workplace information
- calibrate equipment
- measure quantities of treatment
- operate machinery to manufacturer's specifications and enterprise procedures
- safely apply under supervision appropriate agricultural chemicals in weed and pest control programs
- follow enterprise work health and safety policies in the context of own work
- follow enterprise biosecurity policies in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- operations of a range of cropping machinery
- importance of correct timing and procedures for crop maintenance
- weed control in crops

- pest and disease control
- crop nutrition
- methods of waste disposal causing minimal impact on the environment
- enterprise work health and safety and biosecurity policies.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC204 Prepare grain storages

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to safely prepare storages, surrounding areas and equipment in readiness for receiving grain at an acceptable level of hygiene. This unit applies to workers in specialist grain storages or on grain farms.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication. However, all work in confined spaces must comply with state and federal legislation requirements.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to work in bulk material storage area	1.1 Follow the work program and clarify with supervisor 1.2 Identify work health and safety hazards in grain storage and report to supervisor and implement suitable controls 1.3 Select, use and maintain suitable personal protective equipment 1.4 Select, prepare and maintain appropriate equipment and tools
2. Prepare storage area	2.1 Clean the storage site of weeds, dust and spillage appropriately 2.2 Dispose refuse appropriately 2.3 Prepare and maintain the storage site appropriately
3. Prepare storages	3.1 Clean bulk material storages appropriately of all residues 3.2 Check bulk material storages for structural safety, damage or deterioration, and repaired or reported appropriately 3.3 Prepare and erect temporary storages appropriately
4. Prepare bulk material handling machinery	4.1 Clean bulk material handling machinery appropriately to be free of contamination and residues 4.2 Assist in the adjustment and setting bulk material handling equipment appropriately 4.3 Prepare bulk material handling equipment according to manufacturer's instructions and enterprise requirements
5. Complete maintenance operation	5.1 Record workplace information 5.2 Dispose of all waste and debris according to enterprise policies and minimising the impact on the environment 5.3 Clean and store tools and equipment appropriately 5.4 Apply enterprise biosecurity policies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBC204A Prepare grain storages.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC204 Prepare grain storages

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and follow safe work procedures
- erect simple temporary bulk material storages
- check equipment and storage facilities, and identify current or impending faults
- perform pre-operational checks and routine safety, service and maintenance procedures on tools, equipment and machinery
- operate hand and independently powered tools and cleaning equipment to industry standards
- clean, secure and store machinery and equipment
- handle hazardous substances (fuels) safely
- read and interpret manufacturer's specifications, work and maintenance programs, and Safety Data Sheets (SDS)
- prepare the storage area for access by grain carriers
- prepare grain storages by removing all residues and checking structure
- work in confined spaces in accordance with State/Territory legislation, where required
- prepare and test grain handling machinery
- communicate with supervisor
- follow enterprise work health and safety policies in the context of own work
- follow enterprise biosecurity policies the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- range of construction methods, potential hazards, safety and structural requirements for storage

- erection and dismantling for types of temporary storage used by organisation
- organisation and commodity quality requirements for grain storage
- grain storage hygiene requirements
- typical signs of structural damage to be documented and reported
- pre-operational and safety checks, servicing and maintenance procedures for tools and equipment
- machinery maintenance procedures and operating principles
- machinery and equipment cleaning, storage and protection methods
- appropriate action in contingency situations
- organisation requirements for protective equipment and safe practices in relation to work health and safety
- State/Territory legislation in respect to working in confined spaces
- potential hazards associated with the operation of basic tools and equipment
- regulations and codes of practice with regard to work health and safety, environment and the use and control of machinery and equipment
- personal protective clothing and equipment and when and how it should be used
- organisational recording and reporting procedures.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC205 Assist agricultural crop establishment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to assist others in the preparation of materials, equipment and crop site for agricultural crop establishment and to assist in the crop production program.

The unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for agricultural crop establishment operations	1.1 Interpret and implement instructions from supervisor 1.2 Prepare machinery, equipment and tools according to biosecurity and workplace procedures 1.3 Identify work health and safety hazards in crop establishment and report to supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Select, use and maintain suitable personal protective equipment (PPE)
2. Prepare the site for crop establishment	2.1 Implement procedures to manage previous crop and waste materials according to supervisor instructions, biosecurity and environmental procedures 2.2 Apply soil amendments, according to supervisor instructions 2.3 Implement crop protection activities according to instructions and crop production plan 2.4 Confirm planting pattern according to crop production plan 2.5 Operate tools, machinery, equipment or technology according to workplace safety procedures and operator instructions
3. Carry out crop establishment operations	3.1 Treat seeds/planting material according to supervisor instructions 3.2 Handle and transport seeds/planting material according to supervisor instructions and workplace health and safety procedures 3.3 Carry out seed/planting operations according to supervisor instructions, crop production plan and biosecurity procedures
4. Complete establishment operation	4.1 Clean and sanitise tools and equipment according to instructions and biosecurity procedures 4.2 Clean worksite and dispose of waste according to workplace and environmental procedures 4.3 Maintain crop production records according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret, consolidate and check understanding and accuracy of instructions with supervisor
Writing	<ul style="list-style-type: none"> Use industry language and correct concepts and terminology when updating records

Skill	Description
Numeracy	<ul style="list-style-type: none"> • Perform basic mathematical calculations to determine correct volumes of fuel, lubricants and coolants • Perform basic calculations when setting machinery for crop establishment operations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC205 Assist agricultural crop establishment	AHCBC201 Assist agricultural crop establishment	Minor editing of Application for clarity Minor changes to Element 3 heading and clarified Performance Criteria Foundation Skills refined Performance Evidence and Knowledge Evidence clarified and terminology updated Amended structure of Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC205 Assist agricultural crop establishment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assisted in the establishment of at least one agricultural crop in a broad acre setting, including:

- communicated with supervisor and team members and followed instructions and crop production plan
- performed paddock and ground preparations ready for planting including:
 - applied pre-planting soil treatments according to instructions
 - prepared planting equipment
- performed planting operations according to instructions and crop production plan including:
 - treated and planted crop
 - applied soil amendments if required
 - applied weed control treatments
- operated a range of crop establishment machinery or technology
- maintained records of preparation and planting according to workplace procedures
- used and maintained personal protective equipment (PPE)
- followed workplace work health and safety, biosecurity and environmental procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic principles of broad acre cropping and their establishment, including:
 - importance of correct timing and procedures for crop planting
 - field hygiene, biosecurity and quality control for crop establishment
 - a range of pre-planting soil treatments and amendments, their application and importance

- basics of managing previous crops including, cutting, slashing, rolling and burning stubble
- accumulation of waste and its disposal, including:
 - impact on the environment
 - types of waste common to cropping
 - procedures for the disposal of containers, leftover fluids, organic materials and other debris
- workplace health and safety, risks and hazards, including:
 - responsibilities for following safety instructions/directions
 - application and handling of agricultural chemicals
 - materials handling
- preparation and operation of common farm machinery used in crop establishment, including:
 - machinery operation and safety
 - manufacturer specifications
 - workplace procedures
- basic principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
 - integrated pest and weed management techniques
- communication with team members and supervisor
- calculations and measurements required for:
 - determining quantities of materials for treatments and amendments
 - determining crop row spacing and density.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broad acre farm or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seeds or plants for planting
 - broad acre crop planting tools machinery and equipment or technology
 - personal protective equipment

- specifications:
 - workplace procedures and processes
 - manufacturer operating instructions for tools, equipment and machinery
 - specific safety data sheets for treatments and fertilisers
 - instructions and plans for planting
- relationships:
 - team member(s) and supervisor(s)

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC206 Assist agricultural crop maintenance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to assist others to maintain broadacre agricultural crops according to supervisor instructions and within workplace procedures.

The unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for agricultural crop maintenance operations	1.1 Confirm crop maintenance work instructions and clarify anomalies with supervisor 1.2 Select and prepare machinery, equipment and tools according to operator instructions and biosecurity procedures 1.3 Identify work health and safety hazards in crop maintenance and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	report to supervisor 1.4 Select, check, use and maintain personal protective equipment (PPE)
2. Assist with the implementation of maintenance operations under direction	2.1 Assist in implementing crop weed, pest and disease control program 2.2 Assist in implementing soil amelioration and crop nutrition program 2.3 Assist in implementing paddock maintenance duties 2.4 Assist in implementing soil moisture management duties according to crop production plan
3. Complete maintenance operation	3.1 Clean and sanitise tools and equipment according to workplace procedures, operator instructions and biosecurity procedures 3.2 Dispose of waste according to workplace policies and environment procedures 3.3 Update crop maintenance records according to workplace procedures

Foundation Skills

This section describes those language, literacy, Oral Communication and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace instructions and operator instructions
Writing	<ul style="list-style-type: none"> Update records for maintenance tasks using industry language and correct concepts and terminology
Oral Communication	<ul style="list-style-type: none"> Maintain communication with supervisor and team members when assisting with maintenance tasks using appropriate language, tone and pace

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC206 Assist agricultural crop maintenance	AHCBC202 Assist agricultural crop maintenance	<p>Edited Application for clarity</p> <p>Minor changes to Element 2 title and consolidation of Performance Criteria for better sequencing and clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC206 Assist agricultural crop maintenance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assisted others in the maintenance of a broadacre agricultural crops one at least one occasion and has:

- prepared machinery, equipment and tools
- identified basic hazards and reported to supervisor for directions
- selected, checked and maintained personal protection equipment (PPE)
- conducted routine checks on machinery and vehicles for safe operation
- operated machinery to manufacturer specifications and workplace procedures
- reported the presence of weeds, pests and disease in crops
- assisted cropping duties under direction, including:
 - weed, pest and disease control program
 - crop nutrition program
 - general paddock maintenance
 - soil moisture management according to crop production plan
 - maintained records of crop maintenance activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- operations and maintenance of common cropping machinery, including:
 - preparation
 - safe operation
 - repairs and maintenance
 - cleaning and biosecurity
- importance of correct timing and procedures for crop maintenance

- weed, pests and disease control in crops, including:
 - recognition of common weeds, pests and diseases
 - basic control strategies
 - tools and equipment used for control and their safe operation
- basic crop nutrition, including:
 - common fertilisers and ameliorants used
 - application strategies for application
 - tools and equipment used for application and their safe operation
- basic irrigation maintenance activities, including:
 - component operation
 - common repairs
 - common water transport methods and maintenance activities
- general paddock maintenance duties, including:
 - basic fencing and paddock security
 - fire mitigation and control
 - headland weed control
 - drainage and irrigation channels
- waste disposal and potential impact on the environment
- work health and safety, including:
 - broadacre farm hazards, risks and controls
 - working at heights and confined spaces with storage bins
 - power lines and elevated equipment safety.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - pests, diseases and weeds and related control materials
 - specific tools and equipment
 - personal protective equipment (PPE)
 - irrigation equipment
- specifications:
 - workplace procedures and processes
 - manufacturer operating instructions for tools, equipment and machinery
 - safety data sheets
 - workplace instructions

- relationships:
 - supervisor(s).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC207 Assist agricultural crop harvesting

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to assist others in harvesting a broadacre agricultural crop, under direction of a supervisor.

The unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for agricultural crop harvesting operations	1.1 Confirm crop harvesting plan and instructions with supervisor 1.2 Prepare tools, machinery, equipment or technology according to supervisor instructions 1.3 Identify work health and safety hazards in crop harvesting, assess risks and report to supervisor 1.4 Select, check, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	(PPE)
2. Prepare harvesting machinery and vehicles for crop harvesting operations	2.1 Refuel machinery and vehicles used for harvesting 2.2 Conduct routine pre-start checks 2.3 Confirm special operating instructions and work procedures with supervisor
3. Assist with harvesting of crops	3.1 Assist safe operation of harvesting machinery and ancillary equipment according to crop conditions 3.2 Maintain hygiene procedures for harvest equipment 3.3 Assist with checks and adjustments for harvester and ancillary equipment according to instructions
4 Complete harvesting operation	4.1 Clean harvesting machinery and vehicles according to biosecurity and hygiene procedures 4.2 Dispose waste according to workplace and environmental procedures 4.3 Update workplace records according to procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret, consolidate and check understanding and accuracy of instructions with supervisor
Writing	<ul style="list-style-type: none"> Use industry language and correct concepts and terminology when updating records
Numeracy	<ul style="list-style-type: none"> Perform basic mathematical calculations to determine correct volumes of fuel, lubricants and coolants Perform basic calculations when setting machinery for harvesting operations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC207 Assist agricultural crop harvesting	AHCBC203 Assist agricultural crop harvesting	<p>Edited Application for clarity</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified and terminology updated</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC207 Assist agricultural crop harvesting

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion assisted in the preparation, operation and maintenance of machinery and equipment during harvest operations, including:

- identified and reported safety hazards and risks and follow safety directions
- communicated with supervisor
- prepared harvesting equipment or technology and machinery, including:
 - calibrated and adjusted equipment for optimum performance
 - measured quantities
 - checked and maintained oil levels
 - greased equipment and machinery components
 - checked and maintained water levels
 - checked and maintained tyre air pressures
- operated machinery to manufacturer instructions and workplace procedures as directed in support of the harvesting team
- refuelled harvesting vehicles and machinery
- disposed of waste according to environmental procedures
- maintained records according to procedures
- followed workplace health and safety and biosecurity procedures
- used and maintained personal protective equipment (PPE).

Knowledge Evidence

- An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:
- basic harvesting machinery operation and equipment basic maintenance

- basic principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
- hazard identification during harvesting, including:
 - workplace health and safe work practices
 - trapping, entanglement, sheering and cutting
 - noise
 - dust and respiratory issues
 - vibration
 - personal protective equipment and its use
- crop hygiene and biosecurity requirements and procedures
- work health and safety, including:
 - types of crops and their characteristics for harvest
 - weather conditions, fire risk and fire prevention
 - broad acre farm hazards, risks and controls
 - working at heights and confined spaces with storage bins
 - power lines and elevated equipment safety
 - workplace biosecurity procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broad acre farm with harvestable crop or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - harvest equipment appropriate for the crop to be harvested
 - tools and equipment or technology for checking and maintaining machinery
 - personal protective equipment
- specifications:
 - workplace procedures
 - manufacturer operating instructions for machinery and equipment
 - workplace instructions
- relationships:
 - supervisor(s).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC208 Prepare grain storages

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to safely prepare storages, surrounding areas and equipment in readiness for receiving grain at an acceptable level of hygiene. This unit applies to workers in specialist grain storages or on grain farms.

The unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No licensing, legislative or certification requirements apply to this unit at the time of publication. However, all work in confined spaces must comply with state and federal legislation requirements.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to work in bulk material storage area	1.1 Confirm work program instructions and clarify anomalies with supervisor 1.2 Identify work health and safety hazards in grain storage and report to supervisor and implement suitable controls 1.3 Select, check, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	(PPE) 1.4 Select, prepare and maintain equipment and tools
2. Prepare storage area	2.1 Clean storage site of contaminants according to workplace and biosecurity procedures 2.2 Dispose of waste according to workplace procedures 2.3 Prepare and maintain the storage site according to procedures
3. Prepare storage facilities	3.1 Clean residue from bulk material storage facility according to workplace and biosecurity procedures 3.2 Check structural integrity, damage or deterioration of bulk material storage facility and repair or report according to workplace procedures 3.3 Prepare and erect temporary storage facility according to work program instructions
4. Prepare bulk material handling machinery	4.1 Clean machinery of contamination and residues according to workplace and biosecurity procedures 4.2 Assist setting and adjustment of bulk material handling equipment according to work program instructions 4.3 Conduct pre checks of bulk material handling equipment according to manufacturer instructions and workplace requirements
5. Complete maintenance operation	5.1 Update grain storage preparation records according to workplace procedures 5.2 Dispose of waste according to workplace and environmental procedures 5.3 Clean, maintain and store tools and equipment according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret manufacturer specifications, work and maintenance programs, and safety data sheets (SDS) relevant to storage preparation and equipment operation
Oral Communication	<ul style="list-style-type: none"> Use concepts and industry terminology when communicating with supervisor
Numeracy	<ul style="list-style-type: none"> Use and recognise the numerical relationships between adjustment and settings on bulk materials handling equipment and their effective operation

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC208 Prepare grain storages	AHCBC204 Prepare grain storages	<p>Edited Application for clarity</p> <p>Minor changes to Performance Criteria for sequencing and clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBAC208 Prepare grain storages

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared grain storage facilities for any 2 of the following storage methods:

- silo
- grain bags
- shed
- bunker/pit

In doing so, there must also be evidence that the individual has:

- identified hazards and followed safe work procedures
- erected temporary bulk material storages according to storage plan
- checked equipment and storage facilities, and identified current or impending faults
- selected, checked, used and maintained personal protective equipment (PPE)
- performed pre-operational checks and routine safety, service and maintenance procedures on tools, equipment and machinery
- operated hand and independently powered tools and cleaning equipment to industry standards
- cleaned, secured and stored machinery and equipment following use
- prepared storage facility ready for grain delivery
- worked in confined spaces in accordance with State/Territory legislation
- followed work health and safety, and biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- methods for storing grain in Australia and their construction, including:

- hazards, safety and structural requirements for storage
- erection and dismantling for types of temporary storage used by organisation
- typical signs of structural damage to be documented and reported
- commodity quality standards for grain storage
- grain storage hygiene and biosecurity requirements
- machinery and equipment used in grain storage work, including:
 - pre-operational and safety checks
 - settings and adjustments and effect on grain handling
 - servicing and maintenance procedures
 - safety and operating principles
 - cleaning and storage
 - biosecurity requirements
- common problems and contingencies in grain storage situations
- workplace health and safety practices and personal protection, including:
 - working at heights and confined spaces with storage bins
 - potential hazards associated with the operation of basic tools and equipment
 - regulations and codes of practice for grain storage machinery and equipment
 - personal protective clothing and equipment and when it should be used
 - power lines and elevated equipment safety
 - storage dust and potential for fire and explosions
- recording and reporting procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated at a grain storage facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - materials and consumables for grain storage repair/construction
 - cleaning tools, equipment and consumables
 - machinery and equipment for grain handling
 - specific items of personal protective equipment (PPE)
- specifications:
 - workplace procedures
 - manufacturer operating instructions for equipment and machinery
 - safety data sheets
 - workplace instructions
- relationships:

- supervisor(s).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC303 Prepare to receive grains and seeds

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare to test grains and seeds at receival facilities.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes.

This unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to work	1.1 Identify and report on work health and safety hazards and risks in grain handling to supervisor 1.2 Select and use appropriate personal protective equipment 1.3 Follow enterprise work health and safety policies
2. Maintain hygiene in receival storage facilities	2.1 Clean and inspect receival and storage areas 2.2 Ensure receival area is free from potential contaminants 2.3 Inspect facilities and identify and report items that require maintenance or repair
3. Prepare testing equipment for use	3.1 Assemble testing equipment manufacturers instructions 3.2 Check equipment calibration and arrange for recalibration if required 3.3 Inspect testing equipment and identify and report items requiring maintenance or repair 3.4 Clean testing equipment and ensure it is free from residue
4. Prepare to provide service to growers or suppliers	4.1 Collate all documentation and information including conflict and dispute resolution procedures 4.2 Record information on receival and store all documents and data appropriately
5. Prepare for storage of grains and seed	5.1 Confirm arrangements for appropriate segregation of grain and seed 5.2 Confirm site transfer arrangements 5.3 Inspect conveying equipment and identify and report any items requiring maintenance or repair 5.4 Apply enterprise biosecurity policies as required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBC303A Prepare to receive grains/seeds.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC303 Prepare to receive grains and seeds

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and assess risks in grain/seed receival area
- operate and maintain of grain/seed testing equipment
- inspect and clean receival and storage areas and equipment
- source grower/supplier information
- identify grain/seed types
- use personal protective equipment
- identify defects such as split grains/seeds, undersize, chaff, weed seeds
- prepare the site and maintain hygiene
- prepare testing equipment
- liaise with growers and/or contractors
- maintain segregation of grains/seeds and arrange storage
- follow work health and safety policies in the context of own work
- follow enterprise biosecurity policies in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- grain/seed receival processes and industry practice
- calibration requirements for testing equipment
- types of testing equipment such as protein, oil content, moisture etc
- requirements for segregation, traceability and hygiene
- impact of residues including chemical
- seed and grain industry grains receival standards and quality assurance requirements

- legislation, regulations and policies for Work Health and Safety and biosecurity
- segregation strategies/methods
- conflict and dispute resolution.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC309 Undertake preparation of land for agricultural crop production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to select materials and equipment from crop production plan and prepare the land for an agricultural crop.

The unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine requirements for land preparation	1.1 Confirm work requirements from crop production plan with supervisor 1.2 Confirm method of land preparation and order of work from crop production plan 1.3 Identify work health and safety hazards, assess risk and implement

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	controls according to workplace health and safety procedures 1.4 Select, check, use and maintain personal protective equipment (PPE)
2. Prepare for land preparation	2.1 Select vehicles, equipment, machinery or technology required for land preparation according to crop production plan 2.2 Inspect vehicles, equipment and machinery for operational use and report faults to supervisor 2.3 Clean vehicles, equipment and machinery according to workplace biosecurity and hygiene procedures 2.4 Check and calibrate equipment and machinery according operator instructions and crop production plan specifications 2.5 Record maintenance and servicing activity according to workplace record keeping procedures
3. Implement land preparation activities	3.1 Verify timelines, resources and quality standards specified in crop production plan 3.2 Clear land of unwanted debris and waste according to crop production plan, biosecurity and environmental procedures 3.3 Implement weed and pest control measures specified in crop production plan 3.4 Apply fertilisers, ameliorants, or pre-planting treatments according to crop production plan 3.5 Identify and respond to potential implications of land preparations on environment according to workplace environmental procedures 3.6 Operate vehicles and equipment efficiently and safely according to operator instructions and crop production plan specifications 3.7 Monitor vehicle and equipment performance and adjust for discrepancies
4 Complete land preparation operations	4.1 Clean and store vehicles, equipment and machinery according to workplace biosecurity and hygiene procedures 4.2 Dispose of waste according to workplace environmental procedures 4.3 Maintain records and documentation according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret manufacturer specifications, work and maintenance plans, safety data sheets (SDS) and crop standards
Writing	<ul style="list-style-type: none"> Complete records and documents relevant to crop production and site preparation
Numeracy	<ul style="list-style-type: none"> Calculate areas, volumes and ratios relevant to the preparation of site and for incorporation of fertilisers, ameliorants and treatments

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC309 Undertake preparation of land for agricultural crop production	AHCBC305 Undertake preparation of land for agricultural crop production	<p>Edited Application for clarity</p> <p>Consolidated and re sequenced Elements and Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified and terminology updated</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC309 Undertake preparation of land for agricultural crop production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared land for at least one agricultural crop and has:

- interpreted and implemented crop production activities according to plans, specifications, crop quality standards and work procedures
- fitted and used PPE
- conducted accurate measurements for materials and land specifications
- adjusted, calibrated and maintained cultivation equipment
- conducted pre- and post-operational checks on tools, vehicles and equipment
- used tools, machinery and equipment safely incorporating technology to improve efficiency during land preparation
- followed workplace health and safety, biosecurity and environmental procedures and practices
- cleaned and stored vehicles, equipment and machinery
- disposed of waste
- maintained records and documentation.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles of soils preparation and effect on crop establishment including expected standards for different crop types
- soil types and impact of methods for land preparation for crop production, including:
 - cultivation
 - deep ripping
 - spading

- mouldboard ploughing
- minimum tillage and direct seeding
- environmental issues relating to soil preparation activities for cropping, including:
 - drainage and irrigation systems
 - soil nutrition and amelioration
 - waste disposal procedures
 - disposal or incorporation of preceding crops
 - legality and impact of land clearing
- principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
 - integrated pest and weed management techniques
- a range of pre-planting chemical or organic treatments, their purpose and method of application
- safe operation and maintenance of land preparation equipment
- work health and safety procedures and principles, including:
 - manual handling
 - exposure to hazardous substances
 - working safely around farm machinery
 - fire risk and control strategies
 - power lines and elevated equipment safety
- workplace biosecurity and environmental policies.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm or an environment that accurately represents workplace conditions
- relationships
 - supervisor
- resources, equipment and materials:
 - site preparation tools, machinery and equipment
 - fertilisers, ameliorants and treatments
 - personal protective equipment (PPE)

- specifications:
 - workplace policies and procedures
 - manufacturer operating instructions for tools, equipment and machinery
 - workplace plans and specifications

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC310 Maintain pastures and crops for livestock production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain pastures and crops for livestock production.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

Operating machinery carries risk and candidates should observe all enterprise and manufacturer's requirements.

This unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor & assess agricultural pasture and crop condition, growth and requirements	1.1 Monitor pasture and crop growth, nutrient status and health regularly and record observations 1.2 Report deviation from expected growth and vigour 1.3 Identify, monitor and report weeds, pests and diseases 1.4 Monitor soil fertility and plant nutrition where required 1.5 Follow directions to establish sites for regular measurement of soil moisture where required. 1.6 Measure moisture levels and calculate soil water percentage using soil probe or other measuring tools 1.7 Report observations of pasture and crop ripening to manager to determine the timing of harvest
2. Undertake pasture and crop health operations	2.1 Identify work health and safety hazards and implement appropriate controls 2.2 Select, use and maintain appropriate personal protective equipment 2.3 Contribute to an Integrated pest and plant health strategy to address pasture / crop health and growth issues 2.4 Select and use equipment to apply treatments where required 2.5 Follow label instructions and any specialist advice 2.6 Apply specialist sprays appropriately for growth stages 2.7 Apply technology to ensure most efficient performance of operations 2.8 Conduct any required chipping or spot spraying 2.9 Assess, record and report pasture and crop growth stages and keys 2.10 Apply water as required in irrigated situations 2.11 Consider adverse environmental impacts when performing all applications
3. Complete cleaning and hygiene operations	3.1 Clean and maintain equipment appropriately 3.2 Dispose of all containers, leftover fluids, waste and debris from the maintenance and servicing work appropriately 3.3 Follow enterprise biosecurity procedures 3.4 Complete all required records and documentation appropriately
4. Implement grazing strategies	4.1 Contribute to an integrated pest management program using livestock to conduct stubble and fallow weed control 4.2 Implement appropriate grazing program to maintain pasture and

Element	Performance criteria
	crop production for grazing 4.3 Respond to changes in quantity and quality of available pasture and crop with appropriate grazing management

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - no equivalent.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBAC310 Maintain pastures and crops for livestock production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- detect differences and variations in pasture and crop growth
- report/communicate such differences to the supervisor/farm owner
- observe and report on health, nutrition and growth of the pasture and crop
- monitor pests and disease in pastures and crops
- assess pastures and crop maturity
- apply sprays and fertilizers as directed
- measure soil moisture and relate data to crop requirements
- apply technology to ensure most efficient performance of operations
- monitor the productivity and feed intake of grazing livestock
- assess the impact of grazing on pasture and crop productivity
- follow enterprise work health and safety and animal welfare policies and procedures.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- potential hazards associated with the operation of basic tools, equipment and machinery
- general machine maintenance procedures
- machinery operating principles and safe operating methods
- role of technology in improving efficiency
- environmental impacts associated with the operation of machinery and equipment
- organisation recording and reporting procedures
- symptoms of pasture and crop lacking health and vigour
- signs of pest and disease infestation, moisture stress and nutrient deficiencies

- hygiene requirements for equipment that comes into contact with the pastures and crops
- types and uses of herbicides, insecticides and other pesticides and alternative pest control methods (non-chemical)
- work health and safety and pesticides, legislation
- different livestock grazing habits
- enterprise sustainability practices.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC311 Conserve forage

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare paddocks and storage facilities for forage conservation. It includes processing and harvesting forage crops and placing them into storage. The process also includes managing risks associated with forage conservation activities.

The unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for forage conservation	1.1 Confirm forage conservation options from production plan 1.2 Identify risk factors for spoilage in forage conservation 1.3 Confirm paddock conditions for suitable forage production 1.4 Prepare machinery and equipment or technology for forage

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>production according to production plans and biosecurity procedures</p> <p>1.5 Ensure clear access to paddocks for harvesting and transport machinery</p> <p>1.6 Prepare storage facility for selected forage conservation method</p> <p>1.7 Identify work health and safety hazards, assess risks and implement controls according to workplace health and safety policies, including selection of personal protective equipment</p>
2. Prepare paddocks for forage conservation	<p>2.1 Close paddock to stock access according to production plan</p> <p>2.2 Report growth stage of crop for harvest to supervisor</p> <p>2.3 Monitor paddock for pest control and biosecurity for threats to forage bulk and quality</p>
3. Make forage	<p>3.1 Implement work health and safety procedures for forage conservation</p> <p>3.2 Monitor weather conditions affecting forage harvest</p> <p>3.3 Identify and assess moisture content of forage material</p> <p>3.4 Mow, condition, tedder and rake swaths according to weather conditions and forage drying targets</p>
4. Harvest and store forage	<p>4.1 Select and use forage harvest equipment efficiently according to production plan</p> <p>4.2 Monitor harvest equipment for mechanical performance and resolve, repair or report wear or damage according to workplace procedures</p> <p>4.3 Prepare forage for storage according to forage storage and production plan</p> <p>4.4 Load and transport forage safely to forage storage site according to storage plan</p> <p>4.5 Place forage into storage facility to minimise spoilage and potential fire risk</p> <p>4.6 Collect samples and perform quality tests of stored forage according to workplace procedures</p>
5. Complete operations	<p>5.1 Complete records according to workplace procedures</p> <p>5.2 Dispose of waste and debris according to workplace and environmental procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.3 Clean and maintain machinery and ancillary equipment according to manufacturer instructions 5.4 Inspect stored forage facilities for environmental impact and report to supervisor according to workplace and environmental procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret plans and procedures for forage crop conservation. Interpret manufacturer specifications, work and maintenance programs, and safety data sheets (SDS) relevant to forage crop conservation
Oral Communication	<ul style="list-style-type: none"> Reporting to supervisor on crop growth stages
Numeracy	<ul style="list-style-type: none"> Use and recognise the numerical relationships for adjustments and settings on harvesting and handling equipment and their effective operation

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC311 Conserve forage	AHCBC301 Conserve forage	Edited Application for clarity Split Element 3 to create new Element for clarity Consolidated and re-sequenced Performance Criteria for clarity Added requirement to sample and test stored	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		forage PC 4.6 Foundation Skills refined Performance Evidence and Knowledge Evidence clarified and terminology updated Amended structure of Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC311 Conserve forage

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared at least two of the following forms of forage:

- hay
- wilted silage (baleage or haylage)
- bulk chopped silage
- green chop

There must also be evidence that the individual has:

- interpreted and implemented a forage conservation production plan
- prepared paddocks for forage conservation
- prepared forage for harvest, prepared storage facilities and stored forage according to production plan
- maintained records according to workplace procedures
- prepared, operated and maintained forage preparation and harvesting equipment or technology
- assessed workplace health and safety risks and implemented controls according to workplace health and safety policies
- selected and used personal protective equipment
- harvested forage efficiently according to production plan
- followed workplace biosecurity and environmental policies and procedures
- completed records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of forage systems and methods including:
 - hay, wilted silage (baleage haylage), bulk chopped silage, green chop

- factors affecting the quality of forage
- dry matter content and testing
- hygiene and biosecurity requirements
- manufacturer specifications
- forage production equipment and machinery, including:
 - range and functions of silage and haymaking machinery and equipment
 - operation and safety
 - preparation for use
 - cleaning and biosecurity
 - licensing requirements on public land
- common weeds, pests and diseases associated with crops and pastures
- principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
- workplace health and safety risks associated with conservation of forage, including:
 - types and application of personal protective equipment (PPE)
 - impact of moisture on combustion and fires in hay stacks
 - fire/explosion from dust in enclosed spaces
 - potential contact with overhead power lines
 - personal exposure to noise and dust and the need for PPE
 - animal health factors
 - working at heights and in confined spaces with storage bins
- potential risks of forage conservation on the environment
- record keeping systems for forage conservation.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm with paddocks of forage or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - forage plants ready for preparation and harvesting
 - tools, equipment or technology and machinery
 - personal protective equipment (PPE)
- relationships:
 - supervisor

- specifications:
 - workplace policies, procedures, processes for forage conservation
 - manufacturer operating instructions for tools, machinery and equipment or technology
 - use of forage specifications
- timeframes:
 - within a time period required to preserve forage quality.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BAC312 Test and grade grains and seeds on receipt

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare test equipment, sample and perform receipt tests on delivered grains and seeds, prepare samples for despatch for further tests and prepare for grains and seeds storage.

The unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare sampling and testing equipment for use	1.1 Clean, maintain, test and calibrate testing and sampling instruments according to manufacturer instructions 1.2 Identify and report faulty sampling and testing equipment 1.3 Identify work health and safety hazards, assess the risk and implement controls according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2 Identify grains on receipt	2.1 Inspect load to confirm commodity type 2.2 Identify presence of contaminants 2.3 Record supplier information according to workplace procedures
3. Collect grains samples for testing	3.1 Collect sample for testing according to workplace sampling procedures and industry standards 3.2 Prevent mixing or contamination of samples 3.3 Label and prepare samples for testing according to workplace procedures and industry standards 3.4 Record sample information according to workplace procedures
4 Perform initial tests on samples	4.1 Handle samples during testing to prevent cross contamination 4.2 Operate testing equipment to perform required tests according to manufacturer instructions, workplace procedures and industry standards 4.3 Record results of test outcomes according to procedures 4.4 Determine the level of defects and contaminants from visual comparison with industry reference material 4.5 Compare test results with specifications to determine grade of sample 4.6 Accept or reject receipt of commodity according to workplace policies and procedures 4.7 Communicate outcome of tests and acceptance/rejection of delivery to client
5 Despatch samples to testing facilities	5.1 Pack and label samples according to sampling procedures 5.2 Record testing requirements according to workplace procedures 5.3 Despatch samples to testing facility
6. Prepare for storage of grains and seed	6.1 Conduct segregation arrangements of grain and seed according to storage plan and biosecurity policies and procedures 6.2 Complete required site transfer arrangements 6.3 Inspect conveying equipment and identify and report faulty equipment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret instructions, policies and procedures for sampling and testing of grains and seeds
Writing	<ul style="list-style-type: none"> Record and complete workplace records, sample labels and test results using clear language, and industry terminology
Oral communication	<ul style="list-style-type: none"> Participate in verbal exchanges using collaborative and inclusive techniques including active listening and questioning to convey outcome of receipt process to client
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations for sample tests and interpret results to determine if product is to be received or rejected

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC312 Test and grade grains and seeds on receipt	AHCBC304 Test grains and seeds on receipt	<p>Changed Title and edited Application for clarity</p> <p>Consolidated and re sequenced Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC312 Test and grade grains and seeds on receipt

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has sampled and tested grains or seed on receipt of delivery on at least one occasion, including:

- identified work health and safety hazards, assessed risks and implemented controls
- identified grain and seed types on delivery
- sampled grains and seeds including:
 - collected representative sample
 - packaged sample to prevent cross contamination
 - recorded and labelled samples according to procedures
- identified defects in grain including:
 - split grains and seeds
 - undersize
 - chaff
 - weed seeds and other contaminants
 - damage
- read, interpreted and applied seed and grain sampling and testing standards
- dispatched and stored grains and seeds samples and maintained hygiene
- conducted sampling and initial testing
- operated testing equipment which must include:
 - manual tests
 - electronic test equipment
- maintained records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- safe operating procedures for handling and storing grain, including:
 - working at heights and confined spaces with storage bins
 - power lines and elevated equipment safety
 - storage dust and potential for fire and explosions
- grain/seed testing processes including testing and calibrating sampling instruments
- industry standards, codes of practice and quality assurance requirements for grains and seeds
- testing procedures and parameters for grains, including:
 - protein
 - weight
 - oil content
 - moisture
 - defects
 - sprouts
- testing procedures and parameters for seed, including:
 - genetic purity
 - cultivar
 - dead
 - abnormal
 - hard seed
 - germination potential
 - contamination with foreign matter
- analysis and consequence of test result
- segregation strategies/methods and hygiene management
- record keeping strategies and importance for traceability
- impact of residues including chemical
- enterprise biosecurity policies and procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm or seed handling/processing facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - delivery vehicle with seed or grain

- tools for sampling grains/seeds
- seed and grain test equipment
- personal protective equipment
- specifications:
 - workplace policies, procedures and delivery documents and forms
 - manufacturer operating instructions for specific equipment, machinery
 - workplace specifications for seed/grain quality standards
- relationships:
 - client/delivery person.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC313 Establish pastures and crops for livestock production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare and establish pasture and crops for livestock and implement grazing strategies for livestock production.

The unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for pasture and crop establishment	1.1 Confirm the pasture and crop establishment program with supervisor 1.2 Conduct pre-treatment of seed prior to sowing according to program 1.3 Select sowing methods for crop and pasture species

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Apply fertilisers according to production program 1.5 Select, check and operate machinery and equipment, digital technology and personal protective equipment (PPE) 1.6 Identify work health and safety hazards, assess risk and implement controls
2. Implement pasture and crop establishment program	2.1 Prepare machinery and equipment or technology according to program 2.2 Calibrate machinery and equipment to delivery specified rates of application of seed and treatments 2.3 Sow the pasture crop according to specifications and program requirements 2.4 Conduct pasture and crop sowing procedures using equipment and time efficiently 2.5 Apply fertilisers and treatments according to program
3. Implement grazing strategies during establishment	3.1 Implement stubble and fallow weed control using livestock according to grazing and crop establishment program 3.2 Implement controlled grazing of crops and pastures during pasture and crop establishment according to grazing strategy 3.3 Implement grazing management according to sustainable land management practices

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret plans and strategies for crop establishment and grazing procedures
Numeracy	<ul style="list-style-type: none"> Calculate rates of application of seed, treatments and fertilisers, and calibrate equipment and machinery to deliver specified rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC313 Establish pastures and crops for livestock production	AHCBC302 Establish pastures and crops for livestock production	<p>Edited Application for clarity</p> <p>Minor edits and sequencing changes to Performance Criteria</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified and terminology updated</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC313 Establish pastures and crops for livestock production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has established at least one pasture and one crop for grazing or fodder for livestock and has:

- interpreted and implemented crop and pasture production plan
- selected personal protective equipment (PPE) for the job task
- selected plant species, sowing method and application to achieve optimal yield
- selected and operated machinery and equipment or technology for establishing crops and pasture, including:
 - demonstrated safe operation and working around machinery
 - used digital technologies of equipment and machinery to improve efficiencies
- calibrated each of the following types of equipment according to specifications set in the crop establishment program:
 - boom spray
 - drill
 - fertiliser spreader
- identified pests, diseases and weeds
- implemented pest and weed control strategies without damage to crop or pasture
- mixed and treated seed safely according to crop and pasture production plan
- assessed existing pastures and crops to maximise livestock production
- sowed and monitored new pastures and crops
- identified seed and seedling stages of pasture and crop species
- implemented grazing systems including weed and stubble control
- followed work health and safety and environmental policies and procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- pastures and crops used for pasture, their establishment and management, including:
 - advantages and disadvantages of pasture and crop establishment programs
 - types of grasses, legumes and crops
 - types of seed inoculants and fertilizers
 - paddock preparation
 - maintenance and establishment activities
 - livestock grazing strategies and determining feed on offer (FOO)
 - timing of pasture and crop establishment
 - seed and fertilizer placement for optimal germination and growth
- pests, diseases and weed control strategies in pastures and fodder crops, including:
 - identifying common pests, diseases and weeds
 - chemical control
 - cultural practices
 - grazing management
 - integrated pest management
- equipment and machinery used in crop and pasture establishment, including:
 - types and selection of equipment, including personal protective equipment (PPE)
 - safe operation while using or working around farm equipment
- principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
- workplace health and safety policies and procedures, including:
 - safe use of chemicals
 - use and maintenance of personal protective equipment (PPE)
 - farm fire safety with dried crops and stubble and accumulation in equipment
 - power lines and elevated equipment safety
- procedures for minimising environmental impact.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm or an environment that accurately represents workplace conditions
- resources, equipment or technology and materials:
 - livestock for grazing
 - equipment or technology and machinery for preparing and sowing pasture seed and crops
 - personal protective equipment (PPE)
- specifications:
 - workplace policies, procedures, processes
 - safety data sheets for treatments
 - workplace plans and specifications
- relationships:
 - supervisor(s)
- timeframes:
 - according to specified timeframes and efficiencies.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC314 Prepare to receive grains and seeds

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to clean inspect and prepare grain storage facilities, handling equipment and machinery and check testing equipment for accuracy and prepare ready for use.

The unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication. However, all work in confined spaces must comply with state and federal legislation requirements.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to work safely	1.1 Identify hazards, assess risk and implement controls in the grain handling facility 1.2 Select, check and use personal protective equipment (PPE) according to workplace health and safety procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Implement hygiene procedures in receival storage facilities	2.1 Inspect receival area and storage facility for contaminants and biosecurity risk 2.2 Clean receival area and storage facility 2.3 Inspect facilities for faults and report maintenance and repair requirements according to workplace procedures
3. Prepare testing equipment for use	3.1 Identify and assemble testing equipment according to manufacturer instructions and workplace procedures 3.2 Inspect testing equipment and identify and report items requiring maintenance or repair 3.3 Check equipment accuracy and arrange for calibration according to workplace procedures and industry standards 3.4 Clean testing equipment according to manufacturer instructions and industry standards
4. Prepare to provide service to growers or suppliers	4.1 Collate documentation for client/supplier according to workplace procedures 4.2 Conduct preliminary inspection of grain or seed for defects and contamination according to receivals quality standards and report non-compliance according to workplace procedures 4.3 Update and store records and documentation according to workplace procedures
5. Prepare for storage of grains and seed	5.1 Confirm arrangements for seeds and grains requiring segregation in storage 5.2 Confirm site transfer arrangements with supplier/grower 5.3 Confirm site hygiene and biosecurity requirements with supplier/grower 5.4 Inspect conveying equipment for faults and report maintenance and repair requirements to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret manufacturer specifications, work and maintenance programs, and safety data sheets (SDS) relevant to forage crop conservation Check delivery documentation Interpret industry seeds and grain quality standards and applied to receival processes
Writing	<ul style="list-style-type: none"> Update documents and records of receival procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC314 Prepare to receive grains and seeds	AHCBC303 Prepare to receive grains and seeds	<p>Edited Application for clarity</p> <p>Consolidated and re sequenced Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBAC314 Prepare to receive grains and seeds

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion prepared grain or seed receival facilities and has:

- identified hazards, assess risks and implemented controls in grain/seed receival area
- checked and maintained grain/seed testing equipment
- identified and applied industry quality standards relevant to seed and grain storage
- inspected and cleaned storage areas, seed and grain handling equipment according to workplace hygiene and biosecurity procedures
- conducted preliminary inspection, and identified and reported defects according to quality standards and workplace procedures
- assembled and prepared testing equipment
- identified grain/seed types and classification and maintained segregation and organised storage
- collated documentation for client/supplier
- liaised with growers and/or contractors, including:
 - sourced grower/supplier information
 - completed, collated and stored documentation
 - resolved conflict and disputes according to procedures
- followed work health and safety procedures, including use of personal protective equipment (PPE)

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- grain/seed identification, receival processes and industry practice
- grain handling machinery and equipment, including:

- hoppers, bins, bags and temporary storage
- grain transfer equipment including, augers and other grain conveyance systems
- work health and safety, including:
 - broadacre farm hazards, risks and controls
 - working at heights and confined spaces with storage bins
 - power lines and elevated equipment safety
- testing equipment including:
 - types of testing equipment used
 - adjustments and calibration requirements
- requirements for seed segregation, traceability, hygiene and biosecurity
- impact of residues on storage including chemicals
- seed and grain industry standards and quality assurance requirements for receivals
- preliminary inspections requirements and expected standards, including:
 - biological contaminants including pests, diseases, weeds, foreign seeds, split grains/seeds, undersize, chaff
 - physical contaminants soil, stones and other debris
- legislation, regulations and policies for workplace health and safety and biosecurity
- conflict and dispute resolution
- working in confined spaces, the dangers and what permits they may require to do so
- record keeping procedures for seed storage.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm, grain/seed handling/processing plant or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools, equipment and machinery
 - personal protective equipment (PPE)
- specifications:
 - specific workplace policies, procedures and forms
 - manufacturer operating instructions for equipment and machinery
 - workplace instructions
- relationships:
 - client(s)/delivery people

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC315 Establish agricultural crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare and safely operate equipment and sow/plant an agricultural crop following specifications in a crop production plan.

The unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for agricultural crop establishment	1.1 Confirm crop establishment requirements with crop production plan 1.2 Ensure soil and weather conditions are within planned sowing/planting parameters 1.3 Confirm soil test results and identified soil amendment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.4 Confirm pests, weeds and disease treatments specified in crop production plan 1.5 Identify implication of sowing/planting operations on environment, assess risk and implement controls according to workplace environmental procedures 1.6 Confirm personal protective equipment (PPE) required and utilise 1.7 Prepare and implement contingency plans for unsuitable weather conditions
2. Prepare machinery and equipment or technology and sow/plant crop	2.1 Prepare machinery and equipment or technology according to crop production plan and biosecurity procedures 2.2 Attach and calibrate equipment according to crop production specifications and operator instructions 2.3 Identify work health and safety hazards, assess risk and implement controls according to workplace procedures 2.4 Operate seeding/planting machinery efficiently according to crop production plan
3. Complete seeding operations	3.1 Maintain seeding/planting records according to workplace procedures 3.2 Clean, check, and store machinery and equipment or technology according to manufacturer specifications, biosecurity and workplace procedures 3.3 Report machinery and equipment or technology faults according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret plans and strategies for crop establishment Interpret manufacturer specifications, work and maintenance

Skill	Description
	plans, and safety data
Numeracy	<ul style="list-style-type: none"> Calculate rates of application of seed, treatments and fertilisers, and calibrate equipment and machinery to deliver specified rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC315 Establish agricultural crops	AHCBC306 Establish agricultural crops	<p>Edited Application for clarity</p> <p>Amalgamation, editing and changes to sequencing of Elements and Performance Criteria</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified and terminology updated</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC315 Establish agricultural crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has established at least two agricultural crops and has:

- confirmed crop establishment requirements with crop production plan
- identified health and safety hazards, assessed the risk and implemented controls
- sown seed and applied soil fertilisers/treatments at the required placement and rate
- coordinated weeds, pest and disease controls with sowing, including:
 - identified types of weeds, pests and diseases harmful to crop establishment
 - selected and applied controls
- prepared and safely operated machinery and equipment or technology, including:
 - performed pre-operational and safety checks
 - maintained machinery and equipment
 - calibrated according to planned outcomes
 - attached and detached supplementary equipment
 - recognised and reported machinery faults and perform minor repairs
 - cleaned, secured and stored machinery and equipment
 - selected and used personal protective equipment (PPE)
- maintained accurate records for the following:
 - equipment or technology faults and servicing
 - workplace hazards and incidents
 - crop establishment operations
- used equipment or technology safely and efficiently to perform the following operations:
 - applied soil remediation
 - applied pre-planting treatments
 - sowed/planted the crop

- applied fertilisers/soil amendments
- monitored environmental impact of establishing crop
- prepared and implemented contingency plans for unsuitable weather conditions
- followed workplace health and safety, environmental and biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- crop types, preparation of seeds, seeding methods and application techniques
- fertiliser types, rates of application and crop nutrient requirements
- effects of weather conditions both normal and adverse, on seeding and fertilising applications
- operating principles and operating methods for machinery and equipment, including:
 - pre-operational and safety checks, servicing and maintenance procedures for seeding machinery and equipment
 - principles of weight distribution with regard to load shifting and vehicle movement
 - adverse weather conditions and machinery operation
- sustainable land management and soil conservation techniques, including:
 - stubble management
 - minimum till
 - no-till
- principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
 - integrated pest and weed management techniques
- procedures for cleaning, securing and storing machinery, equipment and materials
- workplace policies regarding seeding/planting operations, and recording and reporting routines
- workplace health and safety policies and procedures including:
 - use chemicals and fertilizers
 - personal protective equipment (PPE) and when and how it should be used
 - relevant state/territory legislation and regulations
 - farm fire safety with dried crops, stubble and accumulation in equipment
 - power lines and elevated equipment safety
- licensing requirements and the use and control of machinery and equipment on public land

- workplace biosecurity and environmental policies.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seeds, fertilisers and treatments
 - tools, equipment and machinery for preparing and sowing crops
 - personal protective equipment (PPE)
- specifications:
 - workplace policies, procedures, processes
 - safety data sheets for fertilisers and treatments
 - manufacturer specifications
 - workplace plans and specifications
- relationships:
 - supervisor
- timeframes:
 - according to specified timeframes and efficiencies.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC316 Maintain agricultural crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to monitor and assess broadacre crop health and condition and implement crop maintenance procedures.

The unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Monitor & assess agricultural crop condition, growth and requirements	1.1 Monitor crop health and record observations according to crop production plan 1.2 Report deviation from expected growth and vigour to supervisor 1.3 Identify, monitor and report weeds, pests and diseases 1.4 Measure soil moisture and determine soil water requirements according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Report observations of crop ripening to supervisor to determine the timing of harvest
2. Undertake crop health operations	<p>2.1 Identify work health and safety procedures and hazards, assess risk and implement controls according to workplace policies</p> <p>2.2 Select, check use and maintain personal protective equipment (PPE)</p> <p>2.3 Select and use appropriate machinery, equipment or technology according to manufacturer specifications</p> <p>2.4 Apply specialist treatments at each growth stage according to label instructions and advice</p> <p>2.5 Conduct chipping or spot spraying of declared weed infestation where specified in crop management plan</p> <p>2.6 Assess, record and report crop growth stages, crop harvest indicators and milestones according to workplace procedures</p> <p>2.7 Assess soil moisture and implement procedures to mitigate water stress according to crop production plan</p>
3. Complete cleaning and hygiene operations	<p>3.1 Clean equipment according to hygiene and biosecurity procedures</p> <p>3.2 Check and maintain machinery, equipment or technology performance according to workplace procedures and manufacturer specifications</p> <p>3.3 Dispose of waste according to workplace procedures and environmental polices</p> <p>3.4 Maintain records and documentation according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Interpret plans and procedures for maintaining crops
Numeracy	<ul style="list-style-type: none"> Calculate rates of application of seed, treatments and fertilisers, and calibrate equipment and machinery to deliver specified rates Calculate soil moisture and crop water demand

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC316 Maintain agricultural crops	AHCBC307 Maintain agricultural crops	<p>Edited Application for clarity</p> <p>Changes to sequencing and editing of Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified and terminology updated</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC316 Maintain agricultural crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion maintained an agricultural crop from post seeding to pre harvest and has:

- detected differences and variations in crop growth and reported outcomes to supervisor
- observed and reported health of the crop, including:
 - monitored pests and diseases
 - assessed crop maturity
 - applied treatments and fertilizers according to crop production plan
- measured soil moisture and assessed crop water requirements
- maintained records and documentation
- checked and maintained machinery, equipment or technology
- followed workplace health and safety procedures, including use of personal protective equipment (PPE)
- followed biosecurity and environmental procedures and policies.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislative requirements, manufacturer instructions and workplace procedures/instructions
- potential hazards associated with the operation of basic tools and equipment
- general machine maintenance procedures
- machinery operating principles and safe operating methods
- environmental impacts associated with the operation of machinery and equipment
- principles of precision agriculture and the role of technology in improving efficiencies, including:

- self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
- digital and remote sensors
- remote piloted systems
- controlled traffic farming (CTF) principles and impacts
- variable rate technology (VRT)
- soil moisture testing, assessment and crop water requirements, including types and application of irrigation systems used in broadacre farming
- workplace recording and reporting procedures
- health and vigour of developing crop, including:
 - symptoms of crop lacking health and vigour
 - signs of pest and disease infestation
 - moisture stress
 - nutrient deficiencies
- hygiene and biosecurity requirements for agricultural crops and equipment
- types and uses of herbicides, insecticides and other pesticides and alternative pest control methods (non-chemical), including:
 - integrated pest and weed management techniques
 - pesticide policies and procedures
 - legislative requirements
- workplace health and safety, including:
 - broadacre farm hazards, risks and controls
 - power lines and elevated equipment safety
 - farm fire safety for dried crops, stubble and accumulation in equipment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools, machinery and equipment or technology
 - soil moisture testing probes
 - fertilisers, ameliorants and treatments
 - personal protective equipment (PPE)
- specifications:
 - workplace policies and procedures
 - manufacturer operating instructions for tools, equipment and machinery
 - workplace plans and specifications.

- relationships:
 - supervisor(s).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BAC317 Undertake agricultural crop harvesting activities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare equipment and resources for crop harvesting, determine crop readiness for harvest and harvest a crop safely and efficiently.

The unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to harvest agricultural crops	1.1 Determine requirements for work according to harvest strategy and crop production plan 1.2 Identify work health and safety hazards, assess risk and implement controls according to workplace procedures 1.3 Select, check, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>(PPE)</p> <p>1.4 Complete pre-harvest treatments to crop according to harvest strategy and crop production plan</p> <p>1.5 Sample crop for moisture content and report to supervisor to assess timing of harvest</p> <p>1.6 Identify hygiene requirements for the crop and paddock according to harvest strategy, standards and storage plan</p>
2. Prepare the harvesting equipment	<p>2.1 Clean harvesting machinery and equipment or technology according to hygiene, biosecurity and fire mitigation standards</p> <p>2.2 Assess and service machinery and equipment and make adjustments and repairs as required and according to manufacturer specifications</p> <p>2.3 Record maintenance and servicing activities according to procedures</p>
3. Harvest crops	<p>3.1 Harvest crop according to harvest strategy for each paddock,</p> <p>3.2 Operate harvesting machinery and ancillary equipment efficiently for conditions to ensure fire prevention measures are implemented</p> <p>3.3 Maintain equipment hygiene and biosecurity procedures during crop harvest</p> <p>3.4 Check and adjust harvester and ancillary equipment to ensure efficient and safe operation</p>
4. Complete harvesting operations	<p>4.1 Clean and store equipment, attachments and other ancillary equipment according to hygiene and biosecurity procedures</p> <p>4.2 Apply treatments to crop according to harvest strategy</p> <p>4.3 Dispose waste according to workplace and environmental procedures</p> <p>4.4 Ensure harvesting equipment or technology is moved between sites and on public property according to workplace procedures and regulatory requirements</p> <p>4.5 Maintain records and documentation of harvest according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret work plans and strategies to elicit harvesting work requirements and activities
Numeracy	<ul style="list-style-type: none"> Calculate rates of application for pre-harvest crop treatments where specified in crop harvest plan Perform calculations for calibrating and setting machinery for harvest operations Calculate harvested yield rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC317 Undertake agricultural crop harvesting activities	AHCBC308 Undertake agricultural crop harvesting activities	<p>Edited Application for clarity</p> <p>Changes to sequencing and editing of Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified and terminology updated</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC317 Undertake agricultural crop harvesting activities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has harvested at least one agricultural crop and has:

- sampled crops to assess readiness for harvest, including:
 - moisture content
 - maturity/ripeness of the crop
- implemented crop pre-treatment procedure
- used and maintained personal protective equipment (PPE)
- operated crop harvesting machinery and equipment, including:
 - handled and manoeuvred harvesting equipment or technology
 - used technology to improve efficiency
 - implemented pre-and post-operational checks on tools, harvesting machinery and equipment
 - performed routine, service and maintenance procedures on tools, harvesting machinery and equipment
 - transported, cleaned and stored harvesting equipment
 - monitored efficiency of harvesting equipment
 - made adjustments to settings to improve harvest efficiency
- implemented procedures for seed handling, hygiene and biosecurity
- maintained records and documentation
- identified health and safety hazards, assessed risk and implement safety procedures for harvest tasks including:
 - implemented fire prevention measures
 - performed harvesting safely.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- manufacturer specifications and workplace procedures
- operation of crop harvesting machinery and equipment, including:
 - safety and use of equipment
 - handling and manoeuvring of harvesting equipment
 - pre-and post-operational checks on tools, harvesting machinery and equipment
 - routine, service and maintenance procedures for tools, harvesting machinery and equipment
- principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF)
- principles and impacts pre-harvest treatments and their application in broadacre crops, including:
 - windrowing
 - swathing
 - chemical desiccants
- crop features and recognition of readiness for harvesting, including:
 - sampling crops
 - assessing samples for harvesting
 - post-harvest treatments of crops
- workplace, federal and international standards for harvested crops
- procedures for seed handling and hygiene
- workplace health and safety procedures including:
 - broadacre farm hazards, risks and controls
 - working near harvesting machinery and equipment
 - working at heights and confined spaces with storage bins
 - power lines and elevated equipment safety
 - fire risk for equipment and stored crop
- workplace environmental and biosecurity policies and practices.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in on broadacre farm with paddocks of agriculture crop ready for harvest or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - harvestable crop
 - harvesting tools, equipment or technology and machinery
 - personal protective equipment (PPE)
 - crop sampling equipment
- specifications:
 - workplace policies, procedures, processes for harvesting
 - manufacturer operating instructions for tools, equipment and machinery
 - crop harvest specifications
- relationships:
 - supervisor(s).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBAC401 Manage pastures for livestock production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage pastures for livestock production.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop a pasture	1.1 Assess pasture types on property and seasonal production

Element	Performance criteria
management program	<p>potential and limitations</p> <p>1.2 Confirm or modify livestock production and enterprise objectives to develop production targets achievable by each pasture type</p> <p>1.3 Assess grazing and rest period requirements of pasture types for pasture quality, quantity and persistence considerations</p> <p>1.4 Assess nutrient requirements for pastures to determine appropriate fertiliser and soil ameliorant program</p> <p>1.5 On properties / paddocks with irrigation, determine appropriate irrigation schedules for each soil and pasture type using assessed water requirements, rainfall, Readily Available Water and evapo-transpiration data</p> <p>1.6 Identify and plan grazing and fodder conservation strategies</p> <p>1.7 Determine infrastructure and resources required to support grazing management</p> <p>1.8 Identify and account for budgetary constraints appropriately</p> <p>1.9 Develop appropriate pasture management program</p> <p>1.10 Identify hazards in pasture management and assess risks</p>
2. Implement pasture management program	<p>1.1 Identify work health and safety hazards and implement controls</p> <p>1.2 Monitor pasture capacity appropriately</p> <p>1.3 Implement planned strategic grazing to reduce or eradicate areas of weed infestation and maintain ground cover</p> <p>1.4 Determine fertiliser and soil ameliorant applications and rates appropriate to pasture type, soil analysis and production targets, and applied accordingly</p> <p>1.5 On properties / paddocks with irrigation, monitor soil moisture and schedule watering</p> <p>1.6 Apply technology to ensure most efficient performance of operations</p> <p>1.7 Develop and implement appropriate processes to minimise waste, soil degradation and environmental impacts</p>
3. Monitor pasture growth and fodder production	<p>3.1 Determine longer term trends in weed, pest and disease incidence and implement any identified changes to control measures</p> <p>3.2 Monitor soil structure and risks of erosion, determine changes to cultural practices, grazing management and drainage to improve soil quality</p> <p>3.3 On properties with irrigation, check and maintain irrigation and drainage systems</p> <p>3.4 Monitor grazing management to ensure sustainable pasture and optimal livestock production levels</p> <p>3.5 Identify feed surpluses and deficiencies and rectify appropriately</p> <p>3.6 Monitor pasture maturity and conduct seed harvesting to meet any</p>

Element	Performance criteria
	marketing and production targets
4. Review production level	4.1 Monitor pasture yields and evaluate against forecast production levels 4.2 Evaluate grazing programs for sustainability of the land and pasture resource, and livestock profitability 4.3 Collect and maintain physical and financial records of production for analysis and evaluation of production performance

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBA401A Manage pastures for livestock production.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC401 Manage pastures for livestock production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine fertiliser, soil ameliorants and biological inputs required to support production
- set objectives and milestones for pasture production
- calculate costs
- determine soil quality and land use capability
- monitor the productivity and feed intake of grazing livestock
- develop grazing strategies and plan infrastructure required
- assess the impact of grazing on pasture productivity and resilience
- identify pasture species and estimate dry matter production of pasture
- assess options to control weed infestation
- identify strategies for pest and disease control
- establish production targets for each pasture type in an enterprise
- develop a pasture management program to meet production targets and enterprise objectives
- carry out strategic grazing to reduce or eradicate areas of weed infestation
- monitor soil health and grazing management to ensure sustainable pasture and optimal livestock production levels
- monitor pasture yields and evaluate against forecast production levels
- correct use of technology to improve efficiency
- maintain relevant physical and financial records for pasture and livestock production
- implement work health and safety policies and procedures
- implement enterprise environmental management and sustainability practices.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- land and soil conditions
- pasture species and growing requirements
- pasture grazing strategies
- nutrient requirements and soil fertility
- environmental management strategies in land use
- safe handling processes for fertilisers
- infestation patterns for different types of weed
- role of technology in improving efficiency
- work health and safety legislative and enterprise requirements
- relevant environmental codes of practice, legislation and regulations relating to farm production.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA402 Plan a pasture establishment program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan a pasture establishment program.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine requirements of the	1.1 Assess existing pasture for retention or removal

Element	Performance criteria
pasture establishment program	1.2 Identify appropriate pasture species and cultivars that are best suited to soil, climate, seasonal conditions and livestock goals and calculate, cost and confirm availability with suppliers 1.3 Select appropriate pasture establishment procedures that are consistent with seasonal factors, site and soil characteristics, production plans and the resources and equipment available 1.4 Assess technology to ensure most efficient performance of operations 1.5 Plan post-planting care according to production needs, enterprise standards and site capabilities. 1.6 Identify and plan for plant germination and nutrient requirements, taking into account soil characteristics 1.7 Identify, cost and confirm availability of resources, tools, equipment and machinery required for planting and post-planting care with suppliers, contractors and appropriate personnel 1.8 Identify work health and safety hazards associated with the pasture establishment program, assess risks and develop appropriate controls
Prepare and document the pasture establishment program	2.1 Prepare detailed plans based on the requirements of the pasture establishment program and production requirements 2.2 Produce plan which can be readily interpreted and understood by on-site personnel appropriately 2.3 Develop on-site planting procedures and schedules and post-planting care of pasture and communicate to staff 2.4 Plan for contingencies and identify applicable alternative strategies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBC402A Plan a pasture establishment program.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC402 Plan a pasture establishment program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine requirements of the pasture establishment program
- research suitable pasture species for the site and proposed land use
- prepare and document the pasture establishment program
- develop strategies for weed, pest and disease control
- assess pastures for production potential
- assess site factors
- select suitable pasture species and cultivars
- identify threats to pasture establishment including weeds, pests and diseases
- determine resources and equipment for planting and post-planting care
- prepare pasture establishment plans to meet livestock production plans and schedules
- demonstrate correct use of technology to improve efficiency
- implement enterprise work health and safety policies in the context of the work team
- implement sustainability practices in the context of the work team.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- pasture varieties and their characteristics, requirements and production potential
- establishment techniques of specific pasture species and cultivars
- advantages and disadvantages of a range of pasture establishment procedures
- maintenance requirements and practices for specific pasture species and cultivars after initial establishment
- livestock production systems and their integration with pasture production

- planning process, including costing and scheduling of works
- plant identification of pasture and weed species
- role of pasture in sustainable land use
- role of technology in improving efficiency
- environmental impacts of pasture establishment.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA403 Supervise agricultural crop establishment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to supervise agricultural crop establishment, including planning and scheduling plantings based on the planting plan.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Source information for input to planting plan	1.1 Identify and obtain documents relating to crop production 1.2 Identify competing demands on human and physical resources

Element	Performance criteria
	<p>that may affect planting</p> <p>1.3 Identify the specific target area, or paddock, for planting from the production or management plan</p> <p>1.4 Obtain paddock history to identify crop and pasture rotation, and potential weed, pest & disease issues</p> <p>1.5 Obtain and evaluate soil test results to determine appropriate soil treatments</p> <p>1.6 Assess and account for trash levels and seedbed conditions</p>
<p>2. Prepare planting plan</p>	<p>2.1 Determine the agricultural crop and method(s) of planting to be used from the organisations production or management plan and availability</p> <p>2.2 Assess and calculate the resources required for the planting operations from the area to be sown, the method of planting to be used, and the available timelines</p> <p>2.3 Assess technology to ensure most efficient performance of operations</p> <p>2.4 Set target dates for planting, including the sequencing for planting across paddocks or crop areas, in line with the overall production or management plan</p> <p>2.5 Select the chemical applications that are required prior to and post planting and organise to occur appropriately</p> <p>2.6 Prepare the plan to ensure that any potential detrimental environmental impacts are minimised or eliminated, including the proper disposal of containers, drums and other waste</p> <p>2.7 Identify and assess hazards, and safe work practices for planting are implemented and overseen with staff</p> <p>2.8 Identify, arrange and obtain required approvals for the planting operations</p> <p>2.9 Determine measurable indicators, specifications and targets, based on the production or management plan and the method, resources and seed to be used</p>
<p>3. Determine scheduling and key responsibilities</p>	<p>3.1 Determine appropriate planting schedule</p> <p>3.2 Determine key responsibilities for required specific preparatory processes</p> <p>3.3 Determine key responsibilities for specific implementation processes</p> <p>3.4 Determine and implement appropriate recordkeeping processes, including the type, format, frequency and detail of any reporting required by both managers and operators</p> <p>3.5 Document the plan, including scheduling and key responsibilities</p>
<p>4. Monitor and adjust the</p>	<p>4.1 Ensure adherence to monitoring points outlined in the</p>

Element	Performance criteria
planting plan	implementation plan 4.2 Conduct checks to ensure that work health and safety procedures and site environmental requirements are being observed and followed 4.3 Communicate with operational staff and any contractors 4.4 Conduct checks to ensure that the required documentation is completed clearly and accurately during the progress of the planting process 4.5 Determine and implement any required corrective action or amendment to the planting plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBA403A Supervise agricultural crop establishment.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA403 Supervise agricultural crop establishment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and oversee safe operating procedures
- identify the seasonal conditions which affect crop establishment
- plan and schedule planting including amending plans during the operations
- recognise poor growth and lack of vigour caused by nutrient deficiency and incorrect planting depth
- observe, identify and react appropriately to environmental implications and work health and safety hazards
- plan the planting operation including timing and resources required
- correct use of technology to improve efficiency
- carry out pest, weed and disease control either pre or post planting if required
- supervise staff and monitor the planting operation
- implement work health and safety policies in the context of the work team.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- equipment that is required for a range of tillage methods, and pest and weed control prior to planting
- crop establishment requirements
- equipment servicing requirements
- role of technology in improving efficiency
- integrated pest and weed management techniques
- environmental controls and codes of practice applicable to the enterprise

- legislation, codes of practice and enterprise procedures for work health and safety and environmental management
- management practices and processes to minimise environmental impacts such as noise, soil degradation, and debris from planting operations.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA404 Plan and implement agricultural crop maintenance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan and implement agricultural crop maintenance.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine condition of	1.1 Measure and assess soil moisture and calculate soil water

Element	Performance criteria
agricultural crops	percentage 1.2 Calculate water requirements to soil analysis data, standing crop, and forecast weather conditions 1.3 Assess nutrient requirements and availability for crops and identify deficiencies 1.4 Identify factors affecting crop capacity 1.5 Assess technology to ensure most efficient performance of operations 1.6 Identify work health and safety hazards in crop maintenance and assess risks
2. Determine pest control	2.1 Assess evidence of pests and disease and determine appropriate integrated control measures 2.2 Locate and identify areas of weed infestation for reduction or eradication 2.3 Select appropriate integrated control methods 2.4 Schedule suitable control methods appropriately 2.5 Maintain records on severity of infestations and treatments used
3. Manage crop health	3.1 Implement work health and safety controls 3.2 Monitor crop to maintain water and nutritional requirements for optimal production 3.3 Implement sustainable land management practices appropriately 3.4 Monitor weed and pest levels and modify the control program as required 3.5 Assess, document and analyse benefits from soil and plant inputs and treatments 3.6 Monitor and document cropping programs 3.7 Document and record relevant data for continual analysis and effective crop management

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBAC404A Plan and implement agricultural crop maintenance.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA404 Plan and implement agricultural crop maintenance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- refer to records of, and assess, soil health and nutrient status
- dispatch soil samples to laboratories
- carry out a soil health appraisal
- identify likely threats to crop from pests, weeds and diseases
- recognise damage to crop caused by weeds, pests or diseases
- recognise poor growth and lack of vigour in crop caused by nutrient deficiency
- record monitoring results
- plan and implement integrated control strategies to address nutrient deficiencies, disease outbreaks, pest and weed infestations
- accurately measure soil moisture and estimate irrigation needs if required
- apply pesticides or fertility treatments as required
- apply correct use of technology to improve efficiency
- communicate with industry, suppliers and other personnel
- read and interpret Safety Data Sheets (SDSs), production plans and analysis results
- estimate and measure pest control treatments
- assess crop needs accurately
- carry out crop cultural practices and treatments
- monitor and assess crop maturity
- ascertain water requirements from survey advice and weather forecasts
- measure soil moisture and interpret data accurately
- determine time of harvest with specialist advice
- implement work health and safety policies in the context of the work team
- implement enterprise sustainability practices.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- crop growth stages and keys
- crop growth requirements compared to soil nutrient status
- fertiliser and soil ameliorant types and application times, methods and rates
- chemical use if applicable
- factors leading to development of chemical resistance
- role of technology in improving efficiency
- integrated pest management strategies
- life-cycles of pest, diseases and weeds
- work health and safety legislative requirements
- relevant codes of practice with regard to the use and control of agricultural chemicals
- legislation and codes of practice with regard to environmental protection.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA405 Supervise agricultural crop harvesting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to supervise agricultural crop harvesting.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for harvesting	1.1 Assess crop maturity and quality in readiness for harvesting

Element	Performance criteria
	1.2 Determine pre-harvest treatments for the control and eradication of pests and implement appropriately 1.3 Identify and comply with licence or permit requirements 1.4 Assess insurance requirements and plan and implement required risk management strategies 1.5 Identify work health and safety hazards and assess risks in crop harvesting
2. Determine harvest strategy	2.1 Estimate and calculate optimum timing to carry out harvest according to crop maturity assessment 2.2 Assess resource requirements appropriate to the size of the crop and estimated timing of harvest 2.3 Assess technology to ensure most efficient performance of operations 2.4 Arrange and confirm required labour and equipment to carry out harvesting operations within budgetary constraints 2.5 Identify and arrange appropriate requirements for fire prevention and control
3. Coordinate the harvest strategy	3.1 Implement work health and safety controls 3.2 Implement appropriate communication strategies 3.3 Implement harvesting operations and adjust as required according to weather, equipment and staff requirements 3.4 Coordinate and monitor equipment operation 3.5 Identify and control existing and potential biosecurity hazards appropriately
4. Complete harvest operation	4.1 Identify appropriate storage resources and strategies for drying grain 4.2 Segregate grain quality of grain to marketing grades and monitor for moisture content according to classification standards 4.3 Evaluate harvesting operations and outcomes against harvest strategy 4.4 Document and record information for continual analysis and effective planning management

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBAC405A Supervise agricultural crop harvesting.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA405 Supervise agricultural crop harvesting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- organise and schedule the maintenance of plant and equipment
- establish strategies, procedures and controls for crop harvesting
- negotiate and arrange contracts and agreements
- implement safe workplace and positive environmental practices
- deal with weather and other contingencies
- establish strategies, procedures and controls for crop harvesting, including fire prevention and control plans
- correct use of technology to improve efficiency
- negotiate and arrange contracts and agreements
- estimate crop yields
- maintain budgetary controls
- assess crop maturity and quality in readiness for harvesting
- arrange storage and delivery requirements
- segregate grain for quality and monitor for moisture content
- implement work health and safety policies in the context of the work team
- implement biosecurity policies in the context of the work team.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- crop maturity and yield potential
- grain or seed quality
- functions and limitations of harvesting equipment

- role of technology in improving efficiency
- crop measurement techniques and parameters
- grain market information and sources
- location and relative skills and abilities of available contractors
- weather conditions which may affect the harvest
- relevant legislation, codes of practice and enterprise requirements for Work Health and Safety, contractor engagement, environment and pesticides
- environmental controls and codes of practice applicable to harvesting operations
- enterprise biosecurity policies.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA408 Manage agricultural crop production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage agricultural crop production.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who demonstrate deep knowledge in a specific technical area, take personal responsibility and exercise autonomy in undertaking complex work. They organise the work of self and others and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine	1.1 Select plant varieties that are best suited to soil, climate, seasonal

Element	Performance criteria
<p>requirements for an agricultural crop establishment program</p>	<p>conditions and marketing goals</p> <p>1.2 Determine required irrigation schedules where required for each soil and crop type based on assessed water requirements, rainfall and evapo-transpiration data</p> <p>1.3 Assess nutrient requirements for crops to determine appropriate fertiliser program</p> <p>1.4 Assess technology to ensure most efficient performance of operations</p> <p>1.5 Identify and maintain budgetary constraints</p> <p>1.6 Develop a crop establishment program appropriate to the crop production plan</p> <p>1.7 Identify work health and safety hazards and develop control strategies in establishing agricultural crops</p>
<p>2. Implement crop maintenance</p>	<p>2.1 Implement strategic grazing to reduce or eradicate areas of weed infestation</p> <p>2.2 Determine fertiliser applications and rates appropriate to crop type and applied accordingly</p> <p>2.3 Determine crop nutrient requirements to ensure sustainability and achievement of yield</p> <p>2.4 Monitor soil moisture and adjust watering schedule if appropriate</p> <p>2.5 Determine and implement processes to minimise waste and soil degradation appropriately</p>
<p>3. Monitor an agricultural crop through to harvest</p>	<p>3.1 Determine longer term trends in weed, pest and disease incidence, and implement any necessary changes to control measures</p> <p>3.2 Monitor soil structure and erosion and determine necessary changes to cultural practices, grazing management and drainage</p> <p>3.3 Check and maintain irrigation and drainage systems</p> <p>3.4 Monitor grazing management to ensure crop production levels</p> <p>3.5 Monitor crop maturity and undertake harvesting to meet marketing and production targets</p>
<p>4. Implement the harvest strategy</p>	<p>4.1 Follow the harvesting plan to apply pre-harvest pest control treatments where weather patterns permit</p> <p>4.2 Ensure adherence to all work health and safety and environmental requirements throughout the application of pre-harvest treatments and throughout the harvest</p> <p>4.3 Ensure that all required labour and equipment is ready and available at the scheduled place and time</p> <p>4.4 Commence the harvest at the scheduled time</p> <p>4.5 Follow the order of the harvest described in the harvesting plan</p> <p>4.6 Monitor harvesting operations and adjust to allow for weather,</p>

Element	Performance criteria
	contracting and equipment maintenance needs 4.7 Instruct truck, tractor and harvester operators on procedures to deliver each crop load at maximum quality
5. Record production	5.1 Maintain appropriate records of production for analysis and evaluation of production performance

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - no equivalent.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA408 Manage agricultural crop production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply environmental protection strategies in land use
- set objectives and milestones for a cropping program
- determine soil quality and land use capability
- determine crop nutrient requirements and fertiliser requirements
- measure and assess quantities of fertiliser to meet plant requirements
- predict patterns of weed infestation
- manage irrigation processes to avoid soil degradation if applicable
- demonstrate use of technology to improve efficiency
- prepare budgets
- develop a cropping program for an enterprise
- plan for crop establishment
- monitor growing crops, provide inputs and carry out cultural practices as required
- develop a plan for the crop harvest
- monitor crop yields and evaluate production performance
- implement work health and safety policies in the context of the work team
- implement enterprise environmental sustainability practices in the context of the work team.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- land and soil conditions
- effects of soil characteristics on nutrient availability

- role of technology in improving efficiency
- budgeting and financial analysis techniques
- environmental protection strategies
- cultivation requirements for different types of crop
- safe handling processes for fertilisers
- infestation patterns for different types of weed
- integrated strategies for the management of pests, weeds and diseases
- work health and safety legislative requirements
- environmental legislation and codes of practice, relating to farm production.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC409 Provide advice on agronomic products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify customer needs and provide advice on agronomic products.

The unit applies to individuals who apply specialist skills and knowledge to providing advice on agronomic products, including fertilisers. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish customer needs	1.1 Use interpersonal skills to engage customer and identify needs 1.2 Handle customer enquiries courteously and promptly according to workplace procedures and legislative requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Match available products to customer needs and ecological considerations
2. Research and provide product advice	2.1 Research and update knowledge and understanding of agronomic products and related products from authoritative sources 2.2 Research local workplace and district requirements for agronomic products 2.3 Provide advice to customer in a timely and professional manner according to workplace procedures and legislative requirements 2.4 Exhibit or demonstrate products safely to customer according to workplace procedures and legislative requirements 2.5 Organise product trials when required 2.6 Address customer concerns and questions and suggest alternative or additional products to meet requirements 2.7 Provide safety information to the customer for recommended products

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about agronomic and related product range, and legislative requirements
Oral communication	<ul style="list-style-type: none"> Use clear language with customers to gather information and match products to customer needs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCBAC409 Provide advice on agronomic products	AHCMER404 Provide advice on agronomic products	Unit code and unit sector changed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC409 Provide advice on agronomic products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has provided advice on agronomic products and related products on at least three occasions, and has:

- engaged with and advised customer on the range of products available for the purpose and growing environment of the client
- complied with relevant legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- represented the workplace in a professional manner when dealing with customers
- researched sources of agronomic information to retain technical currency in all aspects of agronomy relevant to local district requirements
- applied workplace procedures for providing advice on agronomic products and related products
- demonstrated agronomic or related products
- applied workplace health and safety procedures for the safe handling of agronomic and related products.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- local workplace, district and customer agronomic requirements
- legislative requirements in sales environments, including fair trading, trade practices and sales of goods legislation and public liability
- agronomic products, including fertilisers and crop seeds, and their uses
- industry terminology for agronomic products and related products
- legislative requirements relevant to fertilisers and certified seeds
- workplace procedures for providing advice on agronomic products and related products
- workplace health and safety procedures for the safe handling of products.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - agronomic products and related products
- specifications:
 - legislative requirements relevant to sales environments, including fair trading, trade practices and sales of goods legislation and public liability
 - legislative requirements relevant to fertilisers and certified seeds
 - workplace procedures relevant to providing advice on agronomic products and related products
 - workplace health and safety procedures for the safe handling of agronomic and related products
- relationships:
 - customers.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC410 Plan and implement a pasture establishment program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to plan and oversee the implementation of a pasture establishment program.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine requirements for pasture establishment program	1.1 Assess pasture site for current condition and suitability for replacement 1.2 Identify pasture species and cultivars suitable to soil, climate, seasonal conditions and livestock goals 1.3 Identify and select pasture establishment procedures consistent

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>with site parameters</p> <p>1.4 Assess and program equipment and technologies to ensure most efficient performance of operations</p> <p>1.5 Determine post-planting care according to production needs, enterprise standards and site capabilities</p> <p>1.6 Identify and assess plant germination and nutrient requirements according to soil characteristics</p> <p>1.7 Identify, cost and confirm availability of materials and resources</p> <p>1.8 Identify health and safety hazards, assess risk and develop controls</p>
2. Develop plan for pasture establishment program	<p>2.1 Collate identified production requirements for pasture establishment and prepare detailed plans</p> <p>2.2 Develop and document procedures for work team to follow</p> <p>2.3 Develop on-site planting procedures and schedules</p> <p>2.4 Develop post-planting procedures for pasture care</p> <p>2.5 Plan for contingencies and identify alternative strategies</p>
3. Oversee implementation of pasture establishment program	<p>3.1 Communicate procedures to work team</p> <p>3.2 Monitor implementation of pasture establishment program</p> <p>3.3 Implement contingencies and alternate strategies as planned conditions change</p> <p>3.4 Record progress and outcomes of pasture establishment during implementation according to workplace procedures</p>
4. Review pasture establishment program	<p>4.1 Collate records of implemented pasture establishment program</p> <p>4.2 Reconcile planned program outcomes against actual outcome</p> <p>4.3 Review and document changes to pasture establishment program for future implementation</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Research and analyse documentation for pasture species to identify suitable species for a defined site and purpose
Writing	<ul style="list-style-type: none"> Develop and document plans and procedures for work team using clear and easily understood language to convey explicit information, requirements, recommendations and performance targets.
Oral Communication	<ul style="list-style-type: none"> Use collaborative and inclusive language and techniques including active listening, questioning and reading of verbal and non-verbal signals to convey and clarify procedural information and confirm work team understanding
Numeracy	<ul style="list-style-type: none"> Use formulae and numerical information to calculate financial data and interpret basic statistical and analytical data Apply basic financial modelling skills to identify, analyse and evaluate budgetary information, time durations and resource allocations and scheduling

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC410 Plan and implement a pasture establishment program	AHCBC402 Plan a pasture establishment program	<p>Title change</p> <p>Edited Application for clarity</p> <p>Changes to sequencing and amendments to Performance Criteria for clarity</p> <p>Added Elements and Performance Criteria</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified and terminology updated</p> <p>Amended structure of Assessment Conditions</p>	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC410 Plan and implement a pasture establishment program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion prepared and planned a pasture establishment program and has:

- determined a pasture establishment program consistent with the following parameters:
 - seasonal conditions
 - site and soil characteristics
 - production plans
 - additional available resources and equipment
- identified a suitable pasture species for the site and proposed land use and selected suitable species and cultivars
- prepared and documented a pasture establishment program which must include:
 - tools, equipment and machinery or technology required for planting
 - post-planting treatments
 - identification of suppliers, contractors and other personnel
 - materials and consumables
 - procedures for work team to easily follow
 - soil moisture management
- assessed site pasture for production potential
- assessed site factors influencing production
- identified threats to pasture establishment, including:
 - weeds
 - pests
 - diseases
- developed strategies for weed, pest and disease control
- determined resources and equipment for planting and post-planting care
- prepared plans, procedures and schedules for pasture establishment

- planned appropriate use of technology to improve efficiency
- incorporated and implemented workplace health, safety, environmental and animal welfare policies in plans and procedures
- implemented, monitored and recorded outcomes of pasture establishment program
- reviewed and documented changes to pasture establishment program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- selection and use of pasture varieties, including:
 - characteristics
 - requirements
 - production potential
- pasture establishment techniques of specific species and cultivars
- advantages and disadvantages of a range of pasture establishment procedures
- maintenance requirements and practices for specific pasture species and cultivars after initial establishment
- livestock production systems and their integration with pasture production
- planning process, including:
 - costing
 - scheduling of works
- preparation and documentation of procedures
- identification of pasture problems and threats, including:
 - weed species
 - vertebrate and invertebrate pests
 - diseases
 - soil conditions
 - integrated pest and weed management techniques
- role of pasture in sustainable land use
- soil moisture management strategies for pastures
- principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
- workplace health and safety, legislative requirements and enterprise policies and procedures, including:
 - safety in the workplace

- chemical and hazardous substances
- fire safety
- personal protection
- environmental impacts of pasture establishment
- reviewing plans and programs, including:
 - monitoring implementation and importance of records
 - assessing programs in need of change
 - updating and changing programs and their related procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm with pasture suitable for livestock production or an environment that accurately represents workplace conditions
- relationships
 - work team
- resources, equipment and materials:
 - planning and project management tools
 - word processing equipment for documentation
- specifications:
 - workplace policies, procedures and processes
 - safety data sheets
 - workplace production plans, specifications and financial budget formats
 - legislation and codes of practice relevant to livestock production.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC411 Manage pastures for livestock production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to develop and implement a pasture management program for livestock production. It includes assessing the suitability of land for pasture and grazing.

The unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess pasture and property for livestock production	1.1 Assess pasture types on property and seasonal production potential and limitations 1.2 Confirm or modify livestock production and workplace objectives to develop production targets achievable for pasture type 1.3 Assess grazing and rest period requirements of pasture type

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Assess nutrient and soil biological requirements for pastures to determine fertiliser and amelioration program
2. Develop a pasture management program	2.1 Determine objectives and milestones for pasture production and in doing so, consider the role of technology in improving efficiencies 2.2 Determine water demand and availability for each soil type and pasture species 2.3 Identify and plan grazing and fodder conservation strategies 2.4 Determine infrastructure and resources required to support grazing management 2.5 Identify and account for budgetary constraints according to financial plan 2.6 Document pasture management program according to workplace procedures
3. Implement pasture management program	3.1 Identify health and safety hazards, assess risk and implement controls according to workplace procedures 3.2 Monitor pasture capacity according to planned use 3.3 Implement strategic grazing for weed control to maintain ground cover and soil condition 3.4 Determine and apply fertiliser and soil amelioration according to fertiliser and amelioration program 3.5 Monitor soil moisture and implement strategies to manage water requirement according to workplace conditions 3.6 Develop and implement procedures to minimise waste, soil degradation and environmental impact
4. Monitor pasture growth and fodder production	4.1 Determine longer term trends in weed, pest and disease incidence and implement changes to control measures 4.2 Monitor soil structure and erosion risk and consider changes to cultural practices, grazing management and drainage and use of technology to mitigate risk 4.3 Check and maintain water resources and drainage systems according to workplace conditions 4.4 Monitor grazing management to ensure sustainable pasture and optimal livestock production levels 4.5 Identify feed availability and manage according to workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	procedures 4.6 Monitor pasture maturity and conduct seed harvesting according to marketing and production targets
5. Review production level	5.1 Monitor pasture yields and assess against forecast production levels 5.2 Evaluate grazing programs for sustainability of land and pasture resource, and livestock profitability 5.3 Collect and maintain records of production according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and analyse plans and strategies and consolidates information into actions for pasture and livestock management
Writing	<ul style="list-style-type: none"> Maintain physical and financial records of production to assist in reviewing production targets Develop procedures for specific audiences using clear and detailed language in order to convey explicit information, requirements and recommendations for livestock and pasture management
Numeracy	<ul style="list-style-type: none"> Use formula and numerical information to calculate financial data and interpret basic statistical and analytical data Apply basic financial modelling skills to identify, analyse and evaluate budgetary information, time durations and resource allocations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC411 Manage pastures for livestock production	AHCBC401 Manage pastures for livestock production	<p>Edited Application for clarity</p> <p>Changes to sequencing and editing of Performance Criteria, including splitting Element 1 into 2 for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified and terminology updated</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC411 Manage pastures for livestock production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion managed a broadacre pasture for livestock production and has:

- determined soil quality and land use capability
- determined fertiliser, ameliorants and biological inputs required to support production using the following:
 - pasture type
 - soil analysis
 - production targets
- set objectives and milestones for pasture production
- calculated costs of production
- determined pasture water requirements using each of the following:
 - pasture species demand
 - local rainfall
 - water reserves and availability
 - evapo-transpiration data
 - irrigation potential
- assessed grazing and rest periods for pasture types after assessing:
 - pasture quality
 - quantity
 - coverage and persistence
- monitored the productivity and feed intake of grazing livestock
- developed grazing strategies and planned infrastructure required
- assessed the impact of grazing on pasture productivity and resilience
- identified pasture species and estimated dry matter production of pasture
- assessed options to control weed infestation

- identified strategies for pest and disease control
- established production targets for each pasture type on property
- developed a pasture management program according to production targets and workplace objectives
- implemented grazing program to reduce or eradicate areas of weed infestation
- monitored soil health and grazing management to ensure sustainable pasture and optimal livestock production levels
- monitored pasture yields and evaluated against forecast production levels
- considered how technology can be used to improve efficiency
- maintained records for analysis of pasture and livestock production, including:
 - physical
 - financial
- implemented workplace health, safety, and environmental policies and procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- livestock production systems and property requirements
- land and soil conditions and assessment
- pasture species and their growing requirements, including water
- pasture grazing strategies
- basic budgeting and the cost of production, including:
 - basic financial analysis
 - estimating costs
 - importance of financial records
- soil nutrient and fertility, including:
 - interpretation of soil analysis reports
 - pasture nutrient requirements
 - impact of soil biological processes
- environmental management strategies in land use and the impact of practices, including:
 - soil moisture and erosion control
 - chemical and waste contamination
 - weed and pasture impact on adjoining properties
- weed control strategies, including:
 - infestation patterns for different types of weed
 - grazing methods used to control species
 - impact of weeds on productivity and livestock health
 - integrated pest and weed management techniques
- principles of precision agriculture and the role of technology in improving efficiencies, including:

- self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
- digital and remote sensors
- remote piloted systems
- controlled traffic farming (CTF) principles and impacts
- variable rate technology (VRT)
- water management for pastures, including:
 - drainage systems and maintenance
 - soil moisture retention strategies
 - irrigation systems for broadacre farms and pastures
- workplace health and safety, legislative requirements and workplace policies and procedures, including:
 - safe handling
 - chemical and hazardous substances
 - fire safety
 - personal protection
 - working near power lines with elevated equipment
- codes of practice, legislation and regulations relating to farm production, including:
 - environmental
 - animal welfare and ethics
 - health and safety.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on broadacre farm with land suitable for pasture and livestock production or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - livestock
 - tools, equipment or technology
 - chemicals and consumables for fertilising and treating pasture
- specifications:
 - workplace policies, procedures and processes
 - manufacturer operating instructions for tools and equipment
 - access to safety data sheets, workplace production plans, specifications and financial budgets
 - legislation and codes of practice relevant to livestock production.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA412 Supervise agricultural crop establishment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to supervise agricultural crop establishment, including planning and scheduling seeding/planting based on the crop production plan.

The unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Source and assess information for input to crop establishment program	1.1 Obtain and review crop production plan and related documentation 1.2 Assess competing demands on human and physical resources affecting crop establishment 1.3 Assess the role of technology in improving efficiencies 1.4 Determine specific target area, or paddock, for crop from crop

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	production plan 1.5 Review historical records of target area for potential impact on crop establishment program 1.6 Access and evaluate soil test and results to determine soil treatments for crop 1.7 Assess and account for rubbish levels and crop growing conditions
2. Prepare crop establishment program	2.1 Identify the crop and method of establishment from crop production plan 2.2 Assess and calculate the resources required for crop establishment operations 2.3 Set target dates and sequencing for crop establishment according to crop production plan 2.4 Select and organise treatments according to crop production plan 2.5 Identify health and safety hazards, assess risk and develop controls procedures 2.6 Identify and obtain approvals for planting operations from key stakeholders 2.7 Document measurable performance indicators, specifications and targets, for crop establishment according to workplace and industry standards
3. Determine scheduling and key responsibilities	3.1 Determine planting schedule from identified target dates and sequencing 3.2 Determine work team responsibilities for specific tasks and actions 3.3 Develop record keeping and reporting procedures for crop establishment key performance indicators 3.4 Document crop establishment program according to workplace procedures
4. Monitor and adjust the crop establishment program	4.1 Communicate work procedures and performance outcomes to work team and contractors 4.2 Monitor implementation of crop establishment against key performance indicators 4.3 Monitor work team performance against health, safety and environmental procedures 4.4 Monitor compliance with record keeping and reporting procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.5 Review and reconcile crop establishment records and reports against key performance indicators</p> <p>4.6 Implement corrective action for non-compliance with key performance indicators</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify, collate and analyse documentation for crop and its establishment for a defined site and purpose
Writing	<ul style="list-style-type: none"> Develop and document plans and procedures for work team using clear and easily understood language in order to convey explicit information, requirements, recommendations and performance targets
Oral Communication	<ul style="list-style-type: none"> Use collaborative and inclusive language and techniques including active listening, questioning and reading of verbal and non-verbal signals to convey and clarify procedural information, confirm work team understanding and compliance with specified procedures
Numeracy	<ul style="list-style-type: none"> Use formula and numerical information to determine timing of crop and establish work schedules

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBA412 Supervise agricultural crop establishment	AHCBA403 Supervise agricultural crop establishment	<p>Edited Application for clarity</p> <p>Minor changes to Performance Criteria for clarity</p>	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Foundation Skills refined Performance Evidence and Knowledge Evidence clarified and terminology updated Amended structure of Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBAC412 Supervise agricultural crop establishment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion supervised the establishment of a crop and has:

- identified hazards, assessed risks and documented controls and monitored team adherence to safety procedures
- identified resources required for establishing a crop
- reviewed historical records for paddock, including:
 - previous crop species grown
 - crop rotation
 - weed, pest and disease impacts
- identified the seasonal conditions affecting crop establishment
- documented crop establishment program which must include:
 - pre-planting and post planting tillage method/s
 - planting method
 - timelines and schedules
 - key work team and contractor responsibilities
- recognised crop establishment performance issues, including:
 - poor growth and lack of vigour
 - nutrient deficiencies
 - incorrect planting depth
 - pest, weed and disease control for pre or post planting
- identified and established record keeping processes which must include:
 - type of records to maintain
 - format of record
 - frequency records to be kept
 - details of reporting responsibilities

- assessed the role of technology in improving efficiencies
- supervised work team and crop establishment against key performance indicator and implemented corrective action.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- equipment required for a range of crop establishment methods, including:
 - tillage, no-till and minimum till techniques and consequences
 - pre-planting pest and weed control
 - primary soil preparation including deep and sub soil
 - secondary tillage
 - seasonal influences
 - seeding and/or planting preparation for crop species
- machinery and equipment required and its performance, including:
 - servicing and maintenance requirements
 - safe operation
 - impact on planting site
- principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
- environmental controls and codes of practice applicable to crop and paddock
- legislation, codes of practice and workplace procedures for work health and safety and environmental management
- crop and seed standards and certification requirements
- management practices and processes to minimise environmental impacts, including:
 - noise
 - soil degradation
 - debris from planting operations
 - chemical use and environmental impact
 - integrated pest and weed management techniques
 - rubbish removal
- workplace health and safety, legislative requirements and workplace policies and procedures, including:
 - safety in the workplace

- chemical and hazardous substances
- fire safety
- personal protection
- power lines and elevated equipment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on broadacre farm or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - planning and project management tools
 - word processing for documentation
- specifications:
 - workplace policies, procedures and processes
 - safety data sheets
 - workplace production plans and specifications
 - legislation and codes of practice relevant to crop production
 - industry standards for crop production
- relationships:
 - work team and contractors
- timelines:
 - to be specified in schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA413 Plan and implement agricultural crop maintenance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to assess the condition for a broadacre crop and plan and implement control and maintenance activities.

The unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine condition of agricultural crops	1.1 Measure and assess soil moisture and calculate soil water percentage 1.2 Calculate water requirements from soil analysis data, standing crop, and forecasted weather conditions 1.3 Assess nutrient requirements and availability for crops and identify deficiencies

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Communicate with industry, suppliers and work team to identify factors affecting crop growth and crop load potential</p> <p>1.5 Identify health and safety hazards, assess risk and develop and implement controls procedures</p>
2. Determine pest control	<p>2.1 Assess evidence of pests and disease and determine control measures</p> <p>2.2 Locate and identify areas of weed infestation for control or eradication</p> <p>2.3 Select control methods according to workplace management strategies</p> <p>2.4 Schedule suitable control methods according to crop production plan</p> <p>2.5 Maintain records on infestations and treatments used</p>
3. Manage crop health	<p>3.1 Monitor crop to maintain water and nutritional requirements for optimal production</p> <p>3.2 Implement sustainable land management practices</p> <p>3.3 Monitor weed and pest levels according to crop production plan</p> <p>3.4 Assess, document and analyse benefits from soil and plant inputs and treatments</p> <p>3.5 Monitor and document cropping programs</p> <p>3.6 Document and record data for continual analysis and effective crop management</p>
4. Review agricultural crop maintenance program	<p>4.1 Collate records of crop maintenance</p> <p>4.2 Reconcile planned crop maintenance outcomes against targets</p> <p>4.3 Review and document changes to crop maintenance program, including the role of technology in improving efficiencies for future implementation</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret safety data sheets (SDSs), production plans and analysis results Identify, collate and analyse historical records and documentation for previous crops to input into maintenance plan
Oral Communication	<ul style="list-style-type: none"> Use collaborative and inclusive language and techniques including active listening, questioning and reading of verbal and non-verbal signals to convey and clarify procedural information, confirm work team understanding and compliance with specified procedures and eliciting information from specialists and suppliers

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBA413 Plan and implement agricultural crop maintenance	AHCBA404 Plan and implement agricultural crop maintenance	<p>Edited Application</p> <p>Added new Element</p> <p>Minor changes and consolidation of Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence updated and terminology updated</p> <p>Amended structure of Assessment Conditions</p>	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC413 Plan and implement agricultural crop maintenance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, planned and implemented an agricultural crop maintenance program for a broadacre crop and has:

- reviewed and assessed historical data to input into crop maintenance plan, including:
 - soil health, moisture and nutrition
 - weather conditions
 - crop growth and load potential
 - proximity and history of previous crops
- identified likely threats to crop from pests, weeds and diseases, including recognised damage to crop caused by weeds, pests or diseases
- recognised poor growth and lack of vigour in crop caused by nutrient deficiency
- assessed crop needs, monitored crop and recorded results
- planned and implemented control strategies for the following:
 - nutrient deficiencies
 - disease outbreaks
 - pest and weed infestations
- measured soil moisture and estimated water needs
- applied pesticides or nutrient treatments
- communicated with industry, suppliers and work team
- planned and monitored crop water requirements, including:
 - measure soil moisture and interpreted data
 - determined water requirements from survey advice and weather forecasts
- monitored and assessed maturity of crop
- determined time of harvest with specialist advice
- considered the role of technology in improving efficiencies
- identified hazards, assessed risks and implemented controls

- documented relevant crop management data
- implemented workplace environmental practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- crop growth stages and keys
- crop growth requirements compared to soil nutrient status
- soil moisture and management strategies for broadacre crops, including:
 - working with natural rainfall and soil moisture
 - water storages and irrigation practices
 - measuring soil moisture and determining crop moisture requirements
- fertiliser and soil ameliorant types and application times, methods and rates
- factors leading to development of chemical resistance
- principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
- life-cycles of pest, diseases and weeds
- pests, diseases and weeds control strategies, including:
 - chemical
 - mechanical
 - biological
 - integrated pest and weed management techniques
- workplace health and safety, legislative requirements and workplace policies and procedures, including:
 - safety in the workplace
 - chemical and hazardous substances
 - fire safety
 - personal protection
 - power lines and elevated equipment safety
- environmental protection legislation and codes of practice.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on broadacre farm with an existing crop or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - crop
 - planning and project management tools
 - tools, equipment and machinery
 - personal protective equipment
 - chemicals and consumables for fertilising and treating pasture
- specifications:
 - workplace policies, procedures and processes
 - safety data sheets
 - workplace production plans and specifications
 - legislation and codes of practice relevant to crop production
 - industry standards for crop production
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA414 Supervise agricultural crop harvesting

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to assess crop harvesting condition and resource requirements, plan a strategy for harvest operations and supervise the harvesting of an agricultural crop.

The unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for harvesting	1.1 Assess crop maturity and quality standards required in preparation for harvesting 1.2 Assess the role of technology in improving efficiencies 1.3 Determine and implement pre-harvest treatments according to crop production plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify and comply with licence or permit requirements 1.5 Check insurance requirements are in place and implement risk management strategies 1.6 Identify health and safety hazards, assess risk and develop and implement controls procedures
2. Prepare a harvesting plan	2.1 Assess optimum timing for harvest according to crop maturity assessment 2.2 Assess resource requirements for size of crop and estimated timing of harvest 2.3 Identify storage resources and strategies for handling harvested crop 2.4 Identify potential disruptions to harvest operations and prepare contingency procedures 2.5 Identify and arrange fire prevention and control procedures according to risk assessment 2.6 Develop work team communications procedures for harvesting operations
3. Implement harvest plan	3.1 Arrange and confirm labour and equipment resources for harvesting operations within budgetary constraints 3.2 Communicate harvesting plan and communication procedures to work team and contractors 3.3 Implement harvesting operations and contingencies procedures according to impact of weather, equipment or technology and work team performance 3.4 Coordinate and monitor equipment performance 3.5 Control contamination and biosecurity threats according to workplace procedures and quality standards
4. Complete harvest operation	4.1 Assess crop quality and segregate according to marketing grades 4.2 Monitor moisture content according to industry classification standards 4.3 Assess and reconcile harvesting operations and outcomes against harvest strategy 4.4 Record information on harvesting operations according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify, collate and analyse documentation for crop and harvest requirements for incorporation in harvest plan
Oral Communication	<ul style="list-style-type: none"> Use collaborative and inclusive language and techniques including active listening, questioning and reading of verbal and non-verbal signals to convey and clarify information, confirming work team understanding and compliance with harvesting procedures
Numeracy	<ul style="list-style-type: none"> Use formulae and numerical information to determine timing of harvest and establish volumes of harvested crop for transport and storage requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC414 Supervise agricultural crop harvesting	AHCBC405 Supervise agricultural crop harvesting	<p>Edited Application for clarity</p> <p>Minor changes and consolidation of Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified and terminology updated</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA414 Supervise agricultural crop harvesting

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion planned and supervised the harvest of a broadacre agricultural crop and has:

- organised and scheduled maintenance of plant and equipment or technology
- assessed the use of technology in improving efficiencies
- established strategies, procedures and controls for crop harvesting
- arranged and confirmed labour and equipment resources for crop harvesting
- checked to ensure insurance requirements are in place and implemented risk management strategies
- implemented safe workplace and environmental practices
- considered and implemented contingencies
- developed crop harvesting plan, procedures and controls
- implemented and supervised health and safety procedures during harvesting operations, including:
 - fire prevention and control plans
 - personal safety
 - safe use of equipment
- estimated crop yield and storage requirements
- maintained budgetary controls
- assessed crop maturity and quality in readiness for harvesting
- arranged storage and delivery requirements
- communicated with work team and contractors
- implemented work health and safety and biosecurity procedures during harvest operations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- harvesting strategies for various agricultural crops
- quality standards for harvested crops, including:
 - standards for food safety
 - national and international seed certification standards
 - silos and grain storage standards for harvested crops
 - standards for handling genetically modified (GM) crops
- resource requirements for harvesting, including:
 - machinery and equipment
 - crop storage
 - human resources
 - materials and consumables
- crop features and recognition of readiness for harvesting, including:
 - sampling crops
 - crop measurement techniques and parameters
 - assessing samples for harvesting
 - post-harvest treatments of crops
 - crop maturity and yield potential
 - grain or seed quality
 - grain market information and sources
- pre-harvest treatments for the control and/or eradication of pests and disease
- operation of crop harvesting machinery and equipment, including:
 - functions and limitations of harvesting equipment
 - safety and use of equipment
 - handling and manoeuvring of harvesting equipment
 - pre- and post-operational checks on tools, harvesting machinery and equipment
 - routine, service and maintenance procedures for tools, harvesting machinery and equipment
- principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, global navigation satellite systems (GNSS) and laser technologies
 - remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
- federal and international standards for harvested crops
- procedures for crop handling and hygiene
- workplace health and safety procedures including:

- hazards and risk assessment
- machinery hazards
- fire risk for equipment and stored crop
- working at heights and confined spaces with storage bins
- power lines and elevated equipment safety
- workplace environmental and biosecurity policies and procedures
- location and relative skills and abilities of available contractors
- weather conditions affecting harvest operations
- relevant legislation, codes of practice and workplace requirements, including:
 - workplace health and safety
 - contractor engagement
 - pest control and chemical use
- environmental controls and codes of practice applicable to harvesting operations
- workplace biosecurity policies and procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm with maturing crop or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - crop nearing maturity
 - planning and project management tools
 - harvesting tools, equipment or technology and machinery
 - crop sampling equipment
- specifications:
 - workplace policies, procedures and processes
 - workplace harvesting plans and specifications
 - legislation and codes of practice relevant to crop harvesting
 - industry standards for crop quality and condition for sale
- relationships:
 - work team and contractors
- timelines:
 - specified in harvest plan to preserve quality.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC415 Maintain grain quality in storage

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to maintain grain quality in storage and includes assessing and maintaining hygiene in grain storage areas, as well as monitoring the grain for deterioration, pests and contamination.

The unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

Licensing or certification for the use of fumigants and poison baits is strictly controlled in Australian states and territories. Users must check with their relevant regulatory authority before use.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Maintain hygiene in storage areas	1.1 Test storage conditions and facilities for compliance with grain storage hygiene standards 1.2 Identify, report or repair damage and faults to storage areas according to workplace procedures 1.3 Apply treatments to storage facilities to ensure hygiene standards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>are maintained according to grain storage program</p> <p>1.4 Maintain storage environment according to biosecurity procedures</p> <p>1.5 Record application of treatments according to workplace procedures</p>
2. Monitor grain quality from arrival to dispatch	<p>2.1 Collect samples of grain and refer for testing prior to storage</p> <p>2.2 Sample grain at a frequency specified in sampling procedures to ensure compliance with purity standards</p> <p>2.3 Check grain quality at time of dispatch against records at point of storage for consistency</p> <p>2.4 Take, prepare and forward test samples for analysis according to workplace procedures and industry standards</p> <p>2.5 Maintain records of grain storage movement according to grain storage program</p> <p>2.6 Research and recommend technology, systems or practices to improve or maintain grain storage quality</p> <p>2.7 Implement work health and safety policies for activities around the grain storage facilities</p>
3. Monitor and maintain grain condition in storage	<p>3.1 Check stored grain for contaminants and deterioration according to workplace procedures and schedules</p> <p>3.2 Check grain in long-term storage for quality factors and viability according to workplace procedures and schedules</p> <p>3.3 Collect, prepare and send samples of grain for laboratory testing according to industry quality assurance and laboratory standards</p> <p>3.4 Create and maintain records of grain tests and inspections according to grain storage program.</p> <p>3.5 Monitor condition of stored grain according to schedule and methods specified in grain storage program</p> <p>3.6 Implement corrective action to maintain grain quality standards according to workplace procedures</p> <p>3.7 Ensure grain storage activities and facilities management are conducted according to grain storage program</p>
4. Control weeds and pests in storage area	<p>4.1 Monitor grain according to the monitoring points, targets and methods outlined in the grain storage program</p> <p>4.2 Collect samples of grain to test for pest infestation</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.3 Prepare and forward sample for analysis according to workplace procedures and industry standards</p> <p>4.4 Control pests in storage according to grain storage program</p> <p>4.5 Apply fumigants and treatments in enclosed stored grain and surrounding environment according to pest management strategy and grain storage program</p> <p>4.6 Identify and control sources of infestation according to the pest management strategy and biosecurity procedures in grain storage program</p> <p>4.7 Create and maintain records of treatments to grain and storage facilities according to grain storage program</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Research and analyse journals, documentation and digital media to identify new technologies and procedures for grain storage
Writing	<ul style="list-style-type: none"> Design and develop records and recordkeeping procedures for grain storage activities using clear and easily understood language

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC415 Maintain grain quality in storage	AHCBC406 Maintain grain quality in storage	<p>Edited Application for clarity</p> <p>Minor change to Element 2 for clarity</p> <p>Changes and consolidation of Performance Criteria</p>	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		for clarity Foundation Skills refined Performance Evidence and Knowledge Evidence clarified Amended structure of Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBAC415 Maintain grain quality in storage

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion monitored, and maintained the quality of grain in storage and has:

- sampled grain delivered for storage, and conducted basic grain quality analysis
- created, maintained and used clear and traceable records during grain storage, including:
 - application of treatments to stored grain and facilities
 - movement of grain while in storage
 - inspections, sampling and testing of grain
 - chemicals and treatments used and the applicable withholding periods
- inspected and tested silos for hygiene, contamination and damage
- identified insects, pests and other factors affecting grain quality
- treated grain and grain storage facilities and surrounds including:
 - planned and scheduled weed, pest and disease control
 - setup and operated fumigation and pesticide application equipment
 - set up and operate inert atmosphere equipment
 - handled and mixed chemicals for baiting, fumigation, spraying, and other forms of treatment
- interpreted and monitored information on pests
- calculated mass and volumes of grain and grain storage facilities
- monitored and maintained hygiene and control of pests and contaminants
- investigated and recommend options for technology, systems or practices required to improve grain quality.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types, levels and control methods for a range of pests and contaminants
- permanent and temporary storage configurations and operations, including:
 - silos
 - storage bags
 - sheds and bunkers
 - underground pits
- chemical handling and dangerous goods requirements
- range of applicable pesticides, their uses, application methods and handling requirements
- grain commodity types, varieties and grades, marketing requirements and options for grain growers
- handling requirements for gas cylinders
- insect life cycles and optimum conditions for development
- Integrated Pest Management (IPM) principles and the procedures used within the organisation
- legislative requirements, codes of practice and workplace procedures relating to:
 - the storage and quality of grains
 - the purchase, transport, storage, use and disposal of pesticides and fumigants
 - work health and safety and environment
- sampling and classification requirements of grains
- common grain pests and their general control methods, including:
 - vertebrate
 - non-vertebrate
- equipment used in grain storage facilities and its safe use
- site safety hazards and management practices and processes, including:
 - minimise noise
 - odours
 - debris from grain storage operations
 - dust and fire risk
 - working at heights and confined spaces with storage bins
 - power lines and elevated equipment safety.
- chemical handling and dangerous goods requirements
- industry hygiene and quality standards
- developments and options available for maintaining or improving the quality of grain during storage
- workplace biosecurity policies and procedures
- record keeping systems and mandatory traceability requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a farm, grain processing plant or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - grain storage facilities
 - digital or analogue record keeping system
 - chemicals, fumigants and measuring and application equipment
- specifications:
 - specific workplace policies, procedures and forms
 - manufacturer operating instructions for equipment and machinery
 - safety data sheets (SDS)
 - workplace instructions

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BAC416 Save, prepare and store agricultural seed

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to determine the seed to be saved, save seed from harvest, and prepare and store agricultural seed for sowing or sale.

The unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

Licensing or certification for the use of fumigants and poison baits is strictly controlled in Australian states and territories. Users must check with their relevant regulatory authority before use.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select seed from agricultural crops	1.1 Calculate the quantity of seed required for future season's crops 1.2 Calculate the area of crop needed to produce the required quantity of seed 1.3 Select a portion of current crop to be used as future crop seed 1.4 Check and record the soil type in selected portion of crop

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.5 Identify equipment to be used in seed movement, testing and storage</p> <p>1.6 Implement measures to improve seed and plant health, vigour and uniformity within the selected area</p> <p>1.7 Identify treatments required for crop and subsequent detrimental environmental impact</p> <p>1.8 Implement workplace health, safety and biosecurity policies and procedures</p>
2. Evaluate and grade seed	<p>2.1 Assess grain variety for its location, soil, and current workplace marketing requirements' suitability following harvest</p> <p>2.2 Research information regarding new varieties or trial results for input into management decision-making</p> <p>2.3 Grade the seed to the required size</p> <p>2.4 Apply fungicidal and insecticidal dressings to the seed according to workplace procedures</p> <p>2.5 Collect, prepare and forward test samples according to laboratory procedures and industry standards</p> <p>2.6 Collect and maintain records, and report outcomes according to workplace procedures</p>
3 Store seed	<p>3.1 Select and prepare facilities for hygienic storage of seed</p> <p>3.2 Transfer seed to storage facility according to workplace and biosecurity procedures</p> <p>3.3 Ensure seed is stored under conditions that maintain quality, viability and purity</p> <p>3.4 Check seed in long-term storage for quality factors and viability according to schedule specified in seed storage program</p> <p>3.5 Collect, prepare and forward seed samples for laboratory testing and analysis according to laboratory and sampling procedures</p> <p>3.6 Create and maintain records of seed storage, tests and inspections according to seed storage program</p> <p>3.7 Monitor condition of storage facilities using schedule and methods specified in seed storage program</p> <p>3.8 Implement corrective action to maintain seed quality and biosecurity</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Collect and deliver seed	4.1 Collect or deliver seed according to agreed terms and conditions and biosecurity procedures 4.2 Ensure seed sold or purchased conforms to local State and Federal legislative and regulatory requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Analyse seed variety trial results, journals, documentation and digital media to identify new seed varieties suitable for future crops
Writing	<ul style="list-style-type: none"> Create, develop and maintain accurate records for seed selection, preparation and storage

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC416 Save, prepare and store agricultural seed	AHCBC407 Save, prepare and store agricultural seed	Edited Application for clarity Minor changes and consolidation of Performance Criteria for clarity Foundation Skills refined Performance Evidence and Knowledge Evidence clarified Amended structure of Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC416 Save, prepare and store agricultural seed

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion stored agricultural seed for sowing future crop or sale and has:

- selected and applied seed tests to determine seed quality including:
 - moisture
 - protein
 - falling numbers
 - screenings
 - damaged seed
- sampled seed according to laboratory procedures
- applied pre and post-harvest treatments for seed
- identified and utilised equipment required for seed movement, testing and storage
- identified varieties from growth patterns
- identified weed seeds and contaminants
- identified pests in stored grain and initiated control measures
- performed the following calculations for seed storage:
 - volume of seed required
 - capacity of storage available and required for seed storage
 - area of crop required to produce seed based on health, vigour and grain size
 - ratios of chemical use
- created and maintained records for traceability, including:
 - results of test on seeds
 - seed provenance and varieties
 - pest control measures
 - seed storage locations and movement
 - application of treatments to stored grain and facilities

- movement of grain while in storage
- inspections, sampling and testing of grain
- graded and tested seed and interpreted results
- collected and maintained records
- stored and maintained the quality of seed for use in following season
- implemented workplace health, safety, biosecurity and environmental policies.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- seed varieties and their identification
- seed treatment and cleaning measures
- tests commonly performed on seeds for storage and quality assessment, including:
 - moisture
 - protein
 - falling numbers
 - screenings
 - damaged seed
 - seed health tests
- sources of seed to purchase and expected terms, conditions and standards
- inoculation treatments and seed dressings used to protect seed and promote seed germination
- records and documentation required for traceability and handling of seed
- storage techniques and requirements for seed and grain including:
 - silo
 - storage bags
 - sheds and bunkers
 - underground pits
- biosecurity controls and codes of practice
- relevant legislation and regulations relating to:
 - health and safety
 - contractor engagement
 - chemical use and application
 - vehicle and plant operation and use
 - use, handling and sale of seed
- national and international standards for commercial seed production
- site workplace health and safety management practices and procedures, including:
 - minimise noise
 - odours
 - debris from grain storage operations

- dust and fire risk
- working at heights and confined spaces with storage bins
- power lines and elevated equipment safety.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm or grain processing plant, or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seed and storage facilities
 - tools, equipment and machinery for transporting and transferring seed
 - personal protective equipment
 - digital or analogue record keeping system
 - chemicals and measuring and application equipment
- specifications:
 - specific workplace policies, procedures and forms
 - manufacturer operating instructions for equipment and machinery
 - safety data sheets (SDS)
 - workplace instructions
 - terms and conditions for supply or purchase of seed

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA417 Manage agricultural crop production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to determine crop requirements, implement a crop growing and maintenance program and harvest an agricultural crop.

The unit applies to individuals who demonstrate deep knowledge in a specific technical area, take personal responsibility and exercise autonomy in undertaking complex work. They organise the work of self and others and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine requirements for an agricultural crop establishment program	1.1 Select plant varieties best suited to soil, climate, seasonal conditions and marketing goals 1.2 Determine available soil moisture and water requirement for crop 1.3 Assess available water reserves and develop a water management

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	plan for crop production 1.4 Determine crop nutrient requirements to achieve required yield according to environmental procedures 1.5 Determine fertiliser program from crop nutrient requirements 1.6 Assess technology to ensure most efficient performance of operations 1.7 Identify and maintain budgetary requirements 1.8 Develop a crop establishment program according to crop production plan 1.9 Identify health and safety hazards, assess risk and develop and implement controls procedures
2. Implement crop maintenance	2.1 Implement strategies to reduce or eradicate weed infestation 2.2 Apply fertilisers at rates specified in fertiliser program 2.3 Monitor soil moisture and implement water management plan to maintain crop 2.4 Determine and implement processes to minimise waste and soil degradation according to environmental management policies
3. Monitor an agricultural crop through to harvest	3.1 Determine trends in weed, pest and disease incidence, and implement control measures 3.2 Monitor soil structure and erosion and implement changes to production practices according to production plan 3.3 Check and maintain irrigation and drainage systems 3.4 Monitor crop maturity and undertake harvesting to meet marketing and production targets
4. Implement the harvest strategy	4.1 Apply pre-harvest pest control treatments conditional on weather according to harvesting plan and environmental procedures 4.2 Ensure required labour and equipment is ready and available at the scheduled place and time 4.3 Communicate crop harvest procedures and performance expectations to harvesting and transport operators 4.4 Implement crop harvest order and procedures as scheduled in harvesting plan 4.5 Monitor harvesting operations and implement contingencies for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	weather, contracting and equipment maintenance
5. Record production	5.1 Maintain records of crop production according to workplace procedures 5.2 Store records according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Use collaborative and inclusive techniques including active listening and questioning and reading of verbal and non-verbal signals to convey and clarify work requirements and performance expectations
Numeracy	<ul style="list-style-type: none"> Use formula and numerical information to calculate financial data and interpret basic statistical and analytical data Apply basic financial modelling skills to identify, analyse and evaluate budgetary information, time durations and resource allocations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC417 Manage agricultural crop production	AHCBC408 Manage agricultural crop production	Edited Application for clarity Changes to sequencing and editing of Performance Criteria for clarity Foundation Skills refined Performance Evidence and	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Knowledge Evidence clarified and terminology updated Amended structure of Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC417 Manage agricultural crop production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion planned, implemented and monitored the production of a broadacre agricultural crop from planting to harvest and has:

- applied environmental protection strategies for land use
- set objectives and milestones for a cropping program
- determined soil quality and land use capability
- determined crop nutrient requirements and developed and implemented a fertiliser program
- predicted weed infestations and implemented control strategies
- monitored and managed crop water requirements avoiding soil degradation
- demonstrated use of technology to improve efficiency
- prepared budgets for the production cycle
- developed and implemented plans, programs and monitoring procedures for:
 - cropping
 - crop establishment and maintenance
 - harvesting
 - environmental management and minimising waste
- checked and maintained irrigation and drainage systems
- assessed crop yields and evaluated production performance
- implemented workplace health, safety policies
- communicated with harvesting and transport operators on issues related to crop harvest procedures and performance expectations
- monitored and implemented workplace health, safety and environmental policies and procedures
- recorded and stored crop production records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- agricultural crops and their cultural requirements
- land and soil conditions and assessment, including:
 - soil nutrient and fertility
 - interpretation of soil conditions and analysis
 - crop nutrient requirements
 - impact of soil biology on soil condition and nutrient availability
 - effects of soil characteristics on nutrient availability
 - soil moisture and impact on crop development
- managing water reserves, including:
 - strategies for retaining natural soil moisture
 - irrigation strategies for broadacre crops
 - maintaining reserves of water for irrigation
- precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
- budgeting and financial analysis techniques, including:
 - basic financial analysis
 - estimating costs
 - importance of financial records
- environmental protection strategies
- pest and weed management and control strategies, including:
 - weeds and infestation patterns and methods of control
 - use of strategic grazing
 - cultural and mechanical controls
 - integrated pest management strategies
- work health and safety legislative requirements, including:
 - safe handling
 - chemical and hazardous substances
 - fire safety
 - personal protection
 - working at heights and confined spaces with storage bins
 - power lines and elevated equipment safety

- environmental legislation and codes of practice, relating to crop production.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm suitable for agricultural crop production or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - agricultural crop
 - chemicals and consumables for fertilising and treating crops
- specifications:
 - workplace policies, procedures and processes
 - safety data sheets
 - workplace production plans, specifications and financial budgets
 - legislation and codes of practice relevant to agricultural crop production.
- relationships:
 - harvesting and transport operators
- timelines:
 - specified in schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA503 Manage integrated crop and pasture production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage integrated crop and pasture production.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who demonstrate deep knowledge in a specific technical area, take personal responsibility and exercise autonomy in undertaking complex work. They organise the work of self and others and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop a pasture and	1.1 Establish production targets for each crop and pasture type

Element	Performance criteria
crop program	<p>consistent with marketing and enterprise objectives</p> <p>1.2 Select plant varieties that are best suited to soil, climate, seasonal conditions and marketing goals</p> <p>1.3 Determine irrigation schedules, where required, for each soil and crop or pasture type based on assessed water requirements, rainfall and evapo-transpiration data</p> <p>1.4 Assess nutrient requirements for crops and pastures to determine appropriate fertiliser program</p> <p>1.5 Assess technology to ensure most efficient performance of operations</p> <p>1.6 Identify and maintain budgetary constraints appropriately</p> <p>1.7 Develop a pasture and crop program to meet production targets and enterprise objectives</p> <p>1.8 Identify work health and safety hazards in crop & pasture management and develop control strategies</p>
2. Implement pasture and crop management program	<p>2.1 Implement pasture and crop program and monitor pasture capacity appropriately</p> <p>2.2 Implement planned strategic grazing, where necessary, to reduce or eradicate areas of weed infestation</p> <p>2.3 Determine and conduct fertiliser applications and rates appropriate to crop or pasture type</p> <p>2.4 Apply crop and pasture nutrient requirements to ensure achievement of yield and sustainability of pasture</p> <p>2.5 Monitor soil moisture schedule watering, and adjust as required</p> <p>2.6 Determine and implement appropriate processes to minimise waste, soil degradation and environmental standards</p>
3. Monitor crop or pasture growth and fodder production	<p>3.1 Determine longer term trends in weed, pest and disease incidence and implement any necessary control measures changes</p> <p>3.2 Monitor soil structure and erosion, determine and implement any necessary changes to cultural practices, grazing management and drainage</p> <p>3.3 Check and maintain irrigation and drainage systems</p> <p>3.4 Monitor grazing management</p> <p>3.5 Integrate livestock into the cropping cycle through grazing of pastures returning to crop, stubbles and crop residues, and dual purpose crops</p> <p>3.6 Identify feed surpluses and deficiencies and take appropriate action</p> <p>3.7 Monitor crop or pasture maturity is monitored and conduct harvesting to meet marketing and production targets</p>
4. Review production	4.1 Monitor pasture and crop yields and evaluate against forecast

Element	Performance criteria
level	production levels 4.2 Evaluate efficiency and effectiveness of grazing and cropping programs and document for future best practice 4.3 Evaluate production performance of each enterprise and document for management program review 4.4 Maintain appropriate production records for production performance analysis and evaluation

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBC503A Manage integrated crop and pasture production.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA503 Manage integrated crop and pasture production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- measure and assess quantities of fertiliser
- apply environmental protection strategies in land use
- set objectives and milestones
- determine soil quality and land use capability
- predict patterns of weed infestation
- design irrigation processes to avoid soil degradation
- apply correct use of technology to improve efficiency
- assess financial strategies and prepare budgets
- develop a pasture and crop program to meet production targets and enterprise objectives
- maintain the productivity of crops and pastures in a farming system
- monitor soil structure and erosion and make required changes to cultural practices and grazing management
- implement grazing strategies to optimise pasture and livestock production levels and support the cropping program
- evaluate grazing and cropping programs for efficiency and effectiveness
- use physical and financial records of production to evaluate production performance
- implement work health and safety policies in the context of the work team.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- land and soil conditions
- effects of nutrients of soil types

- crop and pasture production financial analysis techniques
- environmental standards
- cultivation requirements for different types of crop
- safe handling processes for fertilisers
- role of technology in improving efficiency
- infestation patterns for different types of weed
- work health and safety legislation codes of practice and enterprise procedures.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA506 Manage the harvest of crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage the harvest of crops.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

Harvesting crops carries risk of fire. All harvesting activities shall be conducted appropriate to relevant regulations, legislation and guidelines as determined by the relevant fire authority.

This unit applies to individuals who demonstrate deep knowledge in a specific technical area, take personal responsibility and exercise autonomy in undertaking complex work. They organise the work of self and others and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine crop quality	1.1 Assess the potential crop yield using measurements made in the field 1.2 Test and assess the potential quality of the crop using quality parameters before harvest 1.3 Estimate the value of each crop using the measurements taken and assessments made before harvest
2. Determine crop readiness	2.1 Refer pre-harvest samples to the laboratory or marketing agent to determine the potential quality of the crop 2.2 Monitor weather patterns estimate the rate of ripening 2.3 Monitor crop maturity and estimate when the crop will be at its optimum and harvest commencement 2.4 Assess the incidence of pests and determine the requirement for, and the type of, pre-harvest treatment 2.5 Select pre-harvest treatments to ensure that the crop meets market requirements 2.6 Ensure adherence to all work health and safety and environmental requirements throughout the application of pre-harvest treatments
3. Assess the need for insurance	3.1 Confirm any commitments to insure the crop 3.2 Estimate the crop value 3.3 Insure the crop, if appropriate 3.4 Analyse, assess and implement appropriate strategies to manage financial risk
4. Plan harvest strategy	4.1 Estimate the appropriate harvest commencement date and the time span 4.2 Calculate equipment and labour resources required for harvest from the size of the crop and harvest time limitations 4.3 Analyse equipment and labour resources required against those available within the enterprise, and determine the amount of labour and equipment to be contracted 4.4 Assess technology to ensure most efficient performance of operations 4.5 Plan for and order any equipment preparation required prior to harvest 4.6 Plan application of required pre-harvest pest control treatments appropriately 4.7 Determine and arrange required licenses, permits and notifications

Element	Performance criteria
	4.8 Determine and describe the order of the harvest in the plan
5. Plan for work health and safety hazard management	5.1 Communicate with all harvesting personnel and ensure awareness of work health and safety hazards that may be present, their responsibilities for action, and the systems that are in place to deal with such hazards 5.2 Implement suitable controls to reduce work health and safety hazard risks 5.3 Monitor, identify and assess work health and safety hazards at each stage of the harvesting process
6. Plan for fire prevention and control	6.1 Evaluate the property and identify fire risks and hazards 6.2 Develop a fire prevention and control strategy that addresses the identified risks and hazards, including measures to be taken 6.3 Assess the fire prevention and control strategy, and the specific measures to be taken 6.4 Prepare appropriate fire breaks as identified in the strategy 6.5 Ensure that sufficient firefighting equipment meets appropriate fire authority standards or guidelines is available as prescribed in the strategy 6.6 Implement appropriate community fire control practices
7. Decide on storage and delivery requirements	7.1 Allocate crop storage facilities, and plan and arrange for immediate delivery of the crop to packing sheds, the bulk handling system, or other purchasers 7.2 Ensure that silos, storage bins and other containers are located to enable efficient harvesting and transport operations 7.3 Identify any work health and safety hazards from silo operation and implement risk minimisation practices 7.4 Plan storage for flexible marketing and distribution initiatives 7.5 Evaluate resources required for crop transport, engage contractors where required 7.6 Identify strategies and resources to dry crops appropriately
8. Manage harvest operations	8.1 Ensure harvest plan is adhered to 8.2 Ensure adherence to all work health and safety and environmental requirements 8.3 Monitor harvest operations to ensure efficient and timely completion 8.4 Monitor crop quality against the harvesting plan as the crop is harvested and segregate into the various marketing grades 8.5 Store each crop grade as determined by the harvesting plan 8.6 Implement enterprise biosecurity policies
9. Record production	9.1 Maintain appropriate records of production for analysis and

Element	Performance criteria
level and review cropping strategies	evaluation of production performance 9.2 Monitor and evaluate crop yields against forecast production levels

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBA506A Manage the harvest of crops.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC506 Manage the harvest of crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan and implement harvesting operations, including amendment of these during the operation itself
- organise and schedule the maintenance of plant and equipment
- establish processes or strategies, procedures and controls for crop harvesting
- demonstrate correct use of technology to improve efficiency
- interpret, analyse and extract information from a range of sources and discussions
- assess potential yields
- negotiate and arrange contracts and agreements
- explain, and deliver instructions about the plans and scheduling of the harvest operations to both staff and contractors, as well as suppliers, customers, and neighbours
- observe, identify and react appropriately to environmental implications and work health and safety hazards
- estimate crop yield and value and monitor for harvest readiness
- plan for the resources that will be required for harvest
- negotiate insurance and equipment supply contracts
- develop risk management procedures for work health and safety, climate and fire risk
- organise for the logistics of the harvesting operation including harvesting, storage and delivery
- keep grain batches separate and monitor for pests or spoilage
- implement work health and safety policies in the context of the work team
- implement enterprise biosecurity policies
- implement enterprise environmental sustainability practices.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- capability and use of harvesting equipment
- role of technology in improving efficiency
- crop measurement techniques and parameters
- market information and sources
- contracting requirements for crop insurance
- management of the moisture content of crops, including drying and aeration
- storage options and local storage availability
- bushfire prevention and control legislation
- bushfire prevention and control strategies and equipment
- contact details for local fire services
- weather conditions which may affect the harvest
- relevant legislation and regulations relating to WHS, contractor engagement, chemical use and application, and vehicle and plant use
- environmental controls and codes of practice applicable to the business and to the harvesting operations
- sound management practices and processes to minimise noise, odours, and debris from the harvesting operations
- enterprise biosecurity policies and environmental sustainability practices.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA507 Develop production plans for crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop production plans for agricultural and horticultural crops.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who demonstrate deep knowledge in a specific technical area, take personal responsibility and exercise autonomy in undertaking complex work. They organise the work of self and others and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Select crop species and	1.1 Establish production targets for each crop type, consistent with

Element	Performance criteria
variety	<p>marketing and enterprise objectives</p> <p>1.2 Assess and select crop types and varieties for their market potential and gross margin returns for the farm environment</p> <p>1.3 Select most profitable cultural practices and rotations, consistent with disease and pest management strategies, available machinery resources, and management for sustainability of resources</p> <p>1.4 Assess technology to ensure most efficient performance of operations</p> <p>1.5 Identify production risks for each crop and determine strategies to address these</p> <p>1.6 Identify environmental risks and develop appropriate strategies</p>
2. Establish yield potential and quality specification for crop	<p>2.1 Source relevant benchmark yields, where available, to assist setting target yields</p> <p>2.2 Analyse past production records and determine the key determinants of yield</p> <p>2.3 Use appropriate available models for calculating water use efficiency or other key determinants of yield to assist in setting target yields</p> <p>2.4 Establish quality specifications and target yields for all crops</p>
3. Prepare crop program	<p>3.1 Assess proposed crop land areas for nutrient, pest and disease status, water reserves, tillage requirements, and other factors before selecting crop variety</p> <p>3.2 Use records of chemical use for planning to reduce chemical resistance</p> <p>3.3 Select crop variety and plan paddock preparation, planting, fertilising and other treatments</p> <p>3.4 Determine optimum timing of planting, applications and treatments and prepare calendar of operations</p> <p>3.5 Determine cash flow budget for the cropping program</p>
4. Review production plan	<p>4.1 Plan logistical arrangements related to harvesting, transportation, marketing and other key production cycle operations</p> <p>4.2 Plan and check machinery and equipment requirements for the crop production cycle</p> <p>4.3 Assess work health and safety requirements of the production plan</p> <p>4.4 Identify and plan labour requirements for the crop production cycle</p> <p>4.5 Identify seed, fertiliser, pest and disease treatments and other input requirements</p> <p>4.6 Establish record keeping system provide data for the analysis of crop performance, and to meet other statutory requirements including records of chemical use</p>

Element	Performance criteria
	4.7 Review and amend production plan and documented as a final plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBA507A Develop production plans for crops.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA507 Develop production plans for crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare budgets and gross margins
- source and interpret relevant benchmark information from consultants or peers
- assess proposed crop land areas for nutrient status by sampling and testing soils and plant tissue
- analyse past production records
- select crop species and variety
- source and interpret relevant benchmark information
- select crop species and variety and determine yield potential for crop
- demonstrate correct use of technology to improve efficiency
- prepare crop programs
- review, amend and document the production plan
- prepare budgets and gross margins
- source and interpret relevant benchmark information
- prepare individual paddock plans and a whole farm cropping plan
- assess work health and safety implications of the plan.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- determinants of crop yield
- cultural practices related to cropping
- role of technology in improving efficiency
- market prices, gross margins, cash flow budgets

- benchmark performance indicators
- disease and pest management for relevant crops
- machinery and equipment requirements for cropping
- record keeping systems.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BAC509 Plan and manage long-term weed, pest and disease control in crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to source information for weed, pest and disease control planning, determine long-term control strategies, provide input to other planning processes, determine scheduling and key responsibilities, monitor, adjust and evaluate control strategies and record results.

The unit applies to individuals who apply specialised skills and knowledge to the planning and management of long-term weed, pest and disease control in crops, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad acre cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1.Source information for input to weed, pest and	1.1 Identify and access historical data, including recent data from organisational records for input to weed, pest and disease control

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
disease control planning	planning 1.2 Research and collate information from other workplaces within the district 1.3 Use information regarding the characteristics of the crop planned for, or under production 1.4 Research and collate information regarding the local geography, soil and climatic conditions 1.5 Consider and document the environmental and biosecurity implications of pesticide or herbicide use, alternative methods and non-chemical preventative methods 1.6 Assess technology to ensure most efficient performance of operations 1.7 Assess information including agrochemical resistance strategies and determine potential key information for input to planning decisions 1.8 Assess crop end use and agrochemical maximum residue limits (MRL) for domestic and export, primary and secondary product outcomes 1.9 Select agrochemical based on crop end use MRL, seasonal restrictions and buyer specifications
2.Determine long-term weed, pest and disease control strategies	2.1 Analyse information gathered for suitable methods 2.2 Consider methods of control, including their impacts and off target risks 2.3 Evaluate weeds, pests and diseases, and beneficial flora and fauna as indicators of farming system health 2.4 Determine strategies for weed, pest and disease control to integrate the most suitable control methods with the proposed crops and the existing geography 2.5 Identify environmental controls and include in the plan 2.6 Identify workplace health and safety hazards, assess risks and incorporate suitable controls into the plan
3.Provide input to other planning processes	3.1 Incorporate selected weed, pest and disease control strategies into other organisational planning processes 3.2 Collect and use information regarding other planning processes in the weed, pest or disease control plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.3 Communicate information appropriately about the range of planning processes
4. Determine scheduling and key responsibilities	<p>4.1 Determine appropriate scheduling for weed, pest and disease control</p> <p>4.2 Determine legal and key responsibilities for specific implementation processes</p> <p>4.3 Determine record keeping requirements and implement appropriate procedures</p> <p>4.4 Document the plan, including scheduling, legal and key responsibilities ensuring it includes the type, format, frequency and detail of any reporting required by both managers and operators</p>
5. Monitor and adjust weed, pest or disease control strategies	<p>5.1 Evaluate the effectiveness of the weed, pest and disease control strategies at key points, and implement any necessary adjustments</p> <p>5.2 Identify, monitor and assess environmental impacts and workplace health and safety hazards relating to weed, pest and disease control throughout the implementation process</p> <p>5.3 Identify and implement necessary modifications to the strategy</p> <p>5.4 Implement workplace biosecurity policies</p>
6. Evaluate weed, pest and disease control strategies and record result	<p>6.1 Analyse data, observations, and documentation from the implementation against the plan appropriately</p> <p>6.2 Prepare recommendations for future strategies</p> <p>6.3 Prepare a report that documents the implementation of the strategies including any difficulties or issues faced</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff, contractors and suppliers, using clear language to communicate weed, pest and disease plan

Skill	Description
Numeracy	<ul style="list-style-type: none"> Access and analyse data for input to weed, pest and disease control planning Document costs of implemented strategy
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility Monitor self and others adherence to workplace requirements including safety requirements
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information within work team

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC509 Plan and manage long-term weed, pest and disease control in crops	AHCBC505 Plan and manage long-term weed, pest or disease control in crops	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA509 Plan and manage long-term weed, pest and disease control in crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has planned and managed two long-term weed, pest and disease control in crops operations on at least two occasions and has:

- monitored information on pest and weed numbers, density and control
- analysed and extracted information from a range of sources and discussions
- planned and managed long-term weed, pest and disease control including developing a plan and amending the plan during the operations
- established processes or strategies, procedures and controls for long-term weed, pest and disease control
- considered the impacts and risks associated with long-term weed, pest and disease control methods
- demonstrated use of technology to improve efficiency
- assessed crop end use and agrochemical maximum residue limits (MRL) and selected appropriate agrochemical
- explained, and delivered instructions about the plans and scheduling of the weed, pest and disease control operations to both staff and contractors, as well as suppliers and customers
- recognised poor growth and lack of vigour caused by weeds, pests and disease rather than nutrient deficiency, with consideration to biosecurity
- evaluate and adjust appropriately to environmental implications and workplace health and safety hazards
- interpreted information on pest and weed numbers, density and control
- used records and observations to evaluate and report on weed, pest and disease control strategies
- planned land use incorporating long term weed, pest and disease control strategies
- followed workplace health and safety and biosecurity policies.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- pest and weed species, including their life cycles and reproduction or multiplication capability
- pest, weed and disease control strategies including integrated pest management
- effects on crops of weeds, pests or diseases including:
 - competitive effects on crop yield
 - threshold levels
 - effects of alternative methods of control
- role of technology in improving efficiency
- agrochemical MRL for domestic and export, primary and secondary product outcomes
- relevant legislation and regulations relating to:
 - workplace health and safety
 - environment and biosecurity
 - contractor engagement
 - chemical use and application
 - vehicle and plant use
- environmental controls and codes of practice applicable to the workplace, and to the weed, pest and disease control operations
- sound management practices and processes to minimise noise, odours, and debris from weed, pest and disease control operations
- workplace biosecurity policies.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - historical data and organisational records
 - information regarding the characteristics of the crop planned for, or under production
 - information regarding the local geography, soil and climatic conditions
 - information regarding pesticide or herbicide use, alternative methods and non-chemical preventative methods
- specifications:
 - pesticide or herbicide application machinery and equipment operation and maintenance manuals and manufacturer specifications
 - agrochemical MRL for domestic and export, primary and secondary product outcomes
 - legislative and regulatory requirements applicable to pesticide or herbicide application

- industry and workplace biosecurity procedures applicable to pesticide or herbicide application
- relationships:
 - managers, operators and contractors
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC510 Manage integrated crop and pasture production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop and implement a pasture and crop management program, monitor crop and pasture growth and fodder production, and review production outcomes.

The unit applies to individuals who apply specialised skills and knowledge to the management of integrated crop and pasture production, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a pasture and crop program	1.1 Establish production targets for each crop and pasture type consistent with market and production constraints, and marketing and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>workplace objectives</p> <p>1.2 Select plant varieties that are best suited to soil, climate, seasonal conditions and marketing goals for crop or pasture</p> <p>1.3 Determine longer term trends in weed, pest and disease incidence and evaluate any necessary control measures, including integrated weed management strategies</p> <p>1.4 Assess soil moisture, rainfall patterns, decile probability, evaporation, wind and moisture requirements for growth</p> <p>1.5 Assess nutrient requirements for crops and pastures to determine appropriate fertiliser programs</p> <p>1.6 Assess technology to ensure efficient performance of operations</p> <p>1.7 Identify and maintain budgetary constraints</p> <p>1.8 Develop a pasture and crop program to meet production targets and workplace objectives</p> <p>1.9 Identify workplace health and safety hazards in crop and pasture management, and develop control strategies</p>
2. Implement pasture and crop management program	<p>2.1 Implement and monitor pasture and crop program to ensure capacity and development is as planned</p> <p>2.2 Implement planned weed, pest and disease control</p> <p>2.3 Determine and conduct fertiliser and pesticide applications and rates appropriate to crop or pasture type</p> <p>2.4 Apply crop and pasture nutrient requirements to ensure achievement of yield and sustainability of pasture</p> <p>2.5 Evaluate in-season soil moisture and review crop and pasture production potential</p> <p>2.6 Determine and implement processes to minimise waste and soil degradation, and meet environmental and sustainability standards</p>
3. Monitor crop and pasture growth and fodder production	<p>3.1 Monitor soil structure, water infiltration and erosion in accordance with workplace procedures and biosecurity requirements</p> <p>3.2 Monitor grazing management</p> <p>3.3 Integrate livestock into the cropping cycle through grazing of pastures returning to crop, stubbles and crop residues, and dual purpose crops</p> <p>3.4 Measure, identify and calculate feed surpluses and deficiencies</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>and take appropriate action</p> <p>3.5 Monitor crop and pasture maturity and conduct harvesting to maximise quality and volume of harvesting efficiency</p> <p>3.6 Determine if cultural practices, grazing management are conducive to production requirements and implement changes to practices where necessary</p>
4. Review production outcomes	<p>4.1 Monitor pasture and crop yields and evaluate against production targets and determine possible reasons for variance</p> <p>4.2 Evaluate efficiency and effectiveness of grazing and cropping programs and document for future best practice</p> <p>4.3 Evaluate workplace production performance and document for management program review</p> <p>4.4 Maintain appropriate production and operations records for production performance analysis and evaluation</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding the growing requirements of the crop and pasture Identify and interpret marketing and workplace objectives
Writing	<ul style="list-style-type: none"> Develop and maintain a fertiliser and pesticide program, and production and operations records
Numeracy	<ul style="list-style-type: none"> Access and interpret budget data Calculate feed surpluses and deficiencies, including biomass Access and analyse data for input to fertiliser and pesticide program, pasture and crop program, production and operations records

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC510 Manage integrated crop and pasture production	AHCBC503 Manage integrated crop and pasture production	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC510 Manage integrated crop and pasture production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed integrated crop and pasture production on at least one occasion, and has:

- determined fertiliser and pesticide application rates
- applied correct use of technology to improve efficiency
- identified financial strategies and maintained budgetary constraints
- developed a pasture and crop program to meet production targets and workplace objectives
- developed and implemented relevant workplace health and safety procedures
- monitored soil structure and erosion and made required changes to cultural practices and grazing management
- evaluated grazing and cropping programs for efficiency and effectiveness.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- land and soil capability, and marketing constraints and their impact on sustainable production
- establishment and cultivation requirements for different types of crop
- infestation patterns and control measures for different types of weeds, including integrated weed management strategies
- the use of soil nutrients to improve crop production
- role and assessment of technology in improving efficiency and competitiveness
- relevant workplace health and safety legislation, regulations and workplace procedures
- types of fertilisers and pesticides, their use, application and safe handling processes
- environmental standards applicable to managing integrated crop and pasture production

- methods for measuring crop and pasture development, capacity and quality.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - workplace budget, marketing and objectives
- specifications:
 - workplace health and safety legislation, regulations and workplace procedures applicable to managing integrated crop and pasture production
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BAC511 Plan and manage a stored grain program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan, implement and manage a grain storage program, and maintain records of stored grain movement.

This unit applies to individuals who apply specialised skills and knowledge to the planning and management of a stored grain program, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan grain storage program	1.1 Collect and analyse workplace documentation and financial information to develop the storage program 1.2 Identify, record and assess available storage facilities for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>suitability and capacity</p> <p>1.3 Calculate and analyse projected grain production and delivery quantities, types and timeframes against storage capacity</p> <p>1.4 Arrange and estimate cost of temporary storage</p> <p>1.5 Evaluate the benefits, risks and costs of storing grain and compare to immediate sale of grain</p> <p>1.6 Estimate timeframes and scheduling for delivery of grain to on-site and off-site storage facilities</p> <p>1.7 Prepare program plan to include plans for annual, seasonal and short-term periods, appropriate to achieving workplace goals and objectives</p> <p>1.8 Document program plan, including scheduling and key responsibilities, and reporting type, format, frequency and detail required by managers and operators</p>
2. Plan integrated pest control for the storage area	<p>2.1 Organise grain testing and sampling for pest infestation</p> <p>2.2 Record and analyse results of samples and tests for pest infestation</p> <p>2.3 Develop and implement an integrated pest management (IPM) program including monitoring points, to control grain insects and other pests in storage</p> <p>2.4 Confirm pest control strategies meet end-use requirements and customer expectations</p> <p>2.5 Determine appropriate record keeping requirements and procedures to ensure compliance with applicable regulations</p> <p>2.6 Document the program, including scheduling and key responsibilities, including the type, format, frequency and detail of any reporting required by both managers and operators</p>
3. Implement workplace health and safety program for grain storage area	<p>3.1 Identify workplace health and safety hazards within and surrounding the grain storage area</p> <p>3.2 Develop, document and implement workplace health and safety procedures to reduce or eliminate risks</p> <p>3.3 Communicate workplace health and safety procedures</p> <p>3.4 Check the program describes the personal protective equipment and safety gear required to be used around the storage facilities</p> <p>3.5 Determine workplace health and safety record keeping requirements, and implement procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.6 Confirm the program includes the type, format, frequency and detail of any reporting required by both managers and operators
4. Manage the grain storage program	<p>4.1 Implement the grain storage program in accordance with workplace requirements and workplace health and safety procedures</p> <p>4.2 Schedule and organise activities for efficient transport and storage of the grain</p> <p>4.3 Implement pest control strategies according to the IPM program</p> <p>4.4 Confirm personal protective equipment and safety gear is provided to all people operating around the storage facilities</p> <p>4.5 Conduct checks to ensure that the grain performance indicators, targets and specifications, including grain stored for seed, are being met, and make amendments to the program where necessary</p> <p>4.6 Communicate regularly with operational personnel throughout the storage, transport, sampling and chemical application operations to ensure efficient and safe operation and progress</p> <p>4.7 Minimise environmental and biosecurity impacts of grain storage and movement activities according to workplace environmental and biosecurity procedures</p> <p>4.8 Identify existing and potential grain storage problems and investigate likely causes</p> <p>4.9 Consider and recommend alternative solutions to appropriate personnel</p>
5. Maintain records of stored grain movement	<p>5.1 Create, maintain and store records and documentation as described in the grain storage program, the IPM program, and workplace health and safety requirements</p> <p>5.2 Complete appropriate records and documentation throughout the storage program in accordance with workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with operational and appropriate personnel, using clear language to ensure efficient and safe operation and progress of grain storage program
Numeracy	<ul style="list-style-type: none"> Calculate and analyse grain production and delivery quantities, including bulk density and capacity calculations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC511 Plan and manage a stored grain program	AHCBC504 Plan and manage a stored grain program	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC511 Plan and manage a stored grain program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned and managed a stored grain program on at least one occasion, and has:

- planned for grain storage and transportation needs based on grain production estimates
- planned, scheduled, monitored and amended plans for operations
- supervised personnel to monitor transport, storage, sampling and pest control procedures
- implemented an integrated pest management (IPM) program for grain storage
- established procedures and controls for implementation by others
- maintained grain storage records
- supervised procedures to manage workplace health and safety risk for the storage site, including working at heights and confined spaces
- developed and implemented workplace health and safety procedures, including working at heights and confined spaces
- administered and coordinated operations on a site
- explained and delivered instructions about the plans and scheduling of the grain storage operations to personnel
- implemented workplace environmental and biosecurity procedures, including hygiene procedures for handling different grades and varieties of grains.
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Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- storage layout and operations, configuration, and maintenance procedures
- integrated pest and weed management techniques
- workplace internal and external reporting and recording requirements

- relevant legislation and regulations relating to chemical use and application, site management and vehicle and plant use
- safe working practices, especially in confined spaces and at heights
- relevant workplace health and safety legislation and regulations
- sound management practices and processes to minimise noise, odours and debris from grain storage operations
- organisational priorities and policies in relation to:
 - production planning
 - chemical use
 - quality
 - personnel
 - operations
- grain quality requirements, including grain stored for seed
- workplace environmental and biosecurity procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - workplace documentation and financial information applicable to the storage program
- specifications:
 - chemical use and application, site management and vehicle and plant use legislation and regulations applicable to planning and managing a stored grain program
 - workplace health and safety legislation and regulations applicable to planning and managing a stored grain program
 - workplace environmental and biosecurity procedures applicable to planning and managing a stored grain program
- relationships:
 - appropriate personnel
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC512 Develop production plans for crops or pastures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to select and establish species, variety, yield potential and quality specification of crop or pasture, prepare a crop or pasture program, and review crop or pasture production plans.

The unit applies to individuals who apply specialised skills and knowledge to the development of crop or pasture production plans, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select plant species and variety	1.1 Establish production targets for each crop or pasture type, consistent with marketing and workplace objectives

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Assess and select plant types and varieties for their market potential and gross margin returns for the farm environment</p> <p>1.3 Select cost-effective cultural practices and rotations, consistent with disease and pest management strategies, available machinery resources and sustainable management of resources</p> <p>1.4 Assess technology to ensure most efficient performance of operations</p> <p>1.5 Identify production risks and determine strategies to minimise risk for each plant type selected</p> <p>1.6 Identify and assess environmental and biosecurity risks, and develop risk controls and procedures</p>
2. Establish yield potential and quality specification for crop	<p>2.1 Source relevant benchmark yields to assist in setting target yields</p> <p>2.2 Analyse past production records and determine the key determinants of yield</p> <p>2.3 Use available models for calculating water use efficiency or other key determinants of yield to assist in setting target yields</p> <p>2.4 Establish quality specifications and target yields for all crops or pastures</p>
3. Prepare crop or pasture program	<p>3.1 Assess proposed land areas for nutrients, pest and disease status, water reserves, tillage requirements and other factors that may affect crop or pasture production</p> <p>3.2 Use records of chemical use for planning to reduce chemical resistance where required</p> <p>3.3 Confirm crop or pasture varieties and plan paddock preparation, planting, fertilising and other treatments</p> <p>3.4 Determine optimum timing of planting, applications and treatments, and prepare calendar of operations</p> <p>3.5 Determine cash flow and budget for the crop or pasture program</p>
4. Review production plans	<p>4.1 Plan logistical arrangements related to harvesting, transportation, marketing and other key production cycle operations</p> <p>4.2 Plan and check machinery and equipment requirements and availability for the production cycle</p> <p>4.3 Assess workplace health and safety requirements of the production plan</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.4 Identify and plan labour requirements for the production cycle 4.5 Identify seed, fertiliser, pest and disease treatments and other input requirements 4.6 Establish record keeping system to provide data for the analysis of crop or pasture performance, and to meet other statutory requirements, including records of chemical use 4.7 Review and amend crop or pasture production plans, and document final plan

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for crop or pasture production plans
Writing	<ul style="list-style-type: none"> Develop crop or pasture yield and quality specifications, and chemical use records
Numeracy	<ul style="list-style-type: none"> Calculate water use, target yields, cash flow and budget

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC512 Develop production plans for crops or pastures	AHCBC507 Develop production plans for crops	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC512 Develop production plans for crops or pastures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed and reviewed production plans for crops or pastures on at least two occasions, and has:

- prepared budgets and gross margins
- assessed use of technology to improve efficiency
- assessed environmental and biosecurity risks, and developed controls and procedures
- sourced and interpreted relevant benchmark information
- analysed past production records
- selected crop or pasture species and variety, and determined yield potential for crop or pasture
- assessed proposed land areas for nutrient status
- assessed relevant workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- market prices, gross margins, cash flow budgets
- cultural practices, characteristics and variability related to crops or pastures
- machinery and equipment requirements for selected crops or pastures
- role of technology in improving efficiency
- relevant workplace health and safety and environmental protection legislation, regulations, codes of practice and workplace procedures
- determinants of crop or pasture yield
- benchmark performance indicators
- models for calculating water efficiency
- disease and pest management selection for relevant crops or pastures

- crop or pasture performance record keeping systems.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - benchmark yields, past production records and chemical use records
- specifications:
 - workplace health and safety and environmental protection legislation, regulations, codes of practice and workplace procedures applicable to developing crop or pasture production plans
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBA513 Apply plant biology to agronomic practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to apply introductory plant biology, including plant taxonomy, plant morphology and plant physiology, to a wide range of agronomic practices.

The unit applies to individuals who apply specialised skills and knowledge to the application of plant biology to agronomic practice, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Apply plant taxonomy to agronomic practices	1.1 Identify botanical terminology of plant taxonomy, including plant kingdom divisions, major plant families and genera for plant

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	classification 1.2 Apply the rules of plant nomenclature when naming plants 1.3 Identify the external features of plants, including leaves, stems, flowers and fruits 1.4 Identify a range of plants used in agronomy to species level, using plant botanical key and other references where required 1.5 Use botanical terminology to discuss plant taxonomy in agronomic practices with appropriate personnel
2. Identify plant functions and their impact on growth	2.1 Investigate and identify plant cell structures, their functions and the organisation of cells into primary tissues 2.2 Research the structure and functions of leaves, stems, root and flowers in relation to agronomic practices 2.3 Identify the processes and outcomes of photosynthesis, respiration and transpiration
3. Apply knowledge of plant morphology to agronomic practices	3.1 Research, analyse and document specialist botanical knowledge of plant morphology, including leaf, root, stem, flower and seed characteristics from development to maturity for crop and pasture management 3.2 Use botanical terminology when discussing plant morphology and growth stages 3.3 Identify critical growth stages for crop and pasture monitoring, nutrient assessment and spray applications

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with appropriate personnel, using clear language to discuss plant taxonomy, morphology and critical growth stages

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC513 Apply plant biology to agronomic practices	AHCBC508 Apply plant biology to agronomic practices	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBAC513 Apply plant biology to agronomic practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has applied plant biology to agronomic practices on at least two occasions, and has:

- identified plants according to accepted taxonomic classifications
- used appropriate authoritative references and resources for plant classification
- used an appropriate botanical key to identify a variety of plant species, including:
 - natives
 - introduced plants
 - crops or pastures
- described plant taxonomy, morphology and critical growth stages
- applied scientific concepts of plant biology to agronomic practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles of agronomy and agronomic practices, including:
 - plant taxonomy
 - plant nomenclature
 - plant physiology
 - plant morphology
 - relationship to plant development
 - farming systems
 - weeds as indicators of soil conditions
 - characteristics of plants at various growth stages, from germination to maturity.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plants
 - botanical key
- relationships:
 - appropriate personnel
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC514 Design and manage a crop or pasture nutrition program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to review, test and analyse site characteristics, determine plant nutrient requirements, design a nutrient management plan, and monitor and evaluate a crop or pasture nutrition program and nutrient management plan.

The unit applies to individuals who apply specialised skills and knowledge to the design and management of a crop or pasture nutrition program, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review, test and analyse site characteristics	<p>1.1 Review workplace crop or pasture production plan in consultation with land manager to determine production, economic output and environmental goals for assessment and development of nutrition program</p> <p>1.2 Access and review climate, environmental and site data</p> <p>1.3 Determine soil, plant and water tests for plant species and climatic conditions according to industry accepted standards and workplace requirements</p> <p>1.4 Develop soil, plant and water testing program that includes visual inspection, sampling, field testing, off-site analysis, task responsibilities, scheduling and desired information outcomes</p> <p>1.5 Implement and monitor a soil, plant and water testing program</p> <p>1.6 Supervise liaison with outside testing agencies and take remedial action where necessary</p> <p>1.7 Determine characteristics, condition and nutritional status of soil and plant species by analysing and comparing data against industry accepted standards</p>
2. Determine plant production system nutrient requirements	<p>2.1 Identify plant species nutrition requirements during growing cycle from published data, historical records, current site data, experience and workplace guidelines</p> <p>2.2 Identify appropriate soil conditions and nutrient availability for plant production according to workplace crop or pasture production plan</p> <p>2.3 Calculate capital and maintenance nutrient applications using nutrient planning tools</p> <p>2.4 Determine potential seasonal variations requirements</p> <p>2.5 Document nutrition program according to analysis of plant production nutrient requirements</p>
3. Design a nutrient management plan	<p>3.1 Identify criteria for determining and selecting fertiliser and soil amendment products</p> <p>3.2 Calculate application rates according to soil, plant and water test results, plant requirements, growth stage, manufacturer specifications and workplace crop or pasture production plan</p> <p>3.3 Select application methods and timings to ensure effective and efficient product formulation and to minimise loss</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.4 Identify and cost resource requirements for program, and confirm availability of suppliers, contractors and appropriate personnel</p> <p>3.5 Calculate cost-effective unit cost, total costs and estimated returns of soil management and amendment, and provision of plant nutrients</p> <p>3.6 Identify and apply applicable compliance requirements of legislation and regulations</p> <p>3.7 Identify and assess workplace health and safety, environmental hazards and risks, and environmental and biosecurity impacts of nutrition program</p> <p>3.8 Develop and document workplace health and safety and environmental and biosecurity controls to minimise risks, impacts and poor nutrient management practices according to workplace environmental and biosecurity procedures</p> <p>3.9 Document workplace nutrient management plan according to analysis of nutrient management requirements</p>
4. Monitor and evaluate nutrition program and nutrient management plan	<p>4.1 Monitor and evaluate nutrition program and nutrient management plan implementation and results, and produce according to industry accepted standards and workplace requirements</p> <p>4.2 Review and refine nutrition program in response to changing conditions</p> <p>4.3 Identify non-compliance with documented nutrient management plan, and determine remedial actions</p> <p>4.4 Document remedial action to improve plant nutrition, and report to relevant personnel</p> <p>4.5 Record nutrition program results, and incorporate changes to nutrient management plan and nutrition program for future season application</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for crop or pasture nutrition program and nutrient management plan
Oral communication	<ul style="list-style-type: none"> Use clear communication with relevant personnel to discuss and report plant nutrition remedial action

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC514 Design and manage a crop or pasture nutrition program	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA514 Design and manage a crop or pasture nutrition program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has designed and managed a crop or pasture nutrition program on at least one occasion, and has:

- reviewed and analysed workplace crop or pasture production plan, findings on plant structure, biology and nutritional requirements, nutrients available from fertilisers, soils and soil amendments
- documented a nutrition program and nutrient management plan, including remedial actions
- calculated fertiliser and soil amendment application rates
- identified nutrition program resource requirements, and calculated cost and estimated returns
- identified and complied with legislation and regulations requirements applicable to designing and managing a crop or pasture nutrition program
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- developed and documented relevant workplace health and safety and environmental and biosecurity controls to minimise risks, impacts and poor nutrient management practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principals of workplace crop or pasture production plan
- site evaluation techniques, including methods of sampling and analysing soils and other growth media
- characteristics and variability of soil and uses of soil amendments and additives to enhance available nutrition for specific crops

- characteristics of plants at various growth stages, including nutritional requirements and demands
- plant nutritional requirements of selected crop species
- organic matter, pests and disease, and nutrient interactions in soil and nutrient cycle
- soil amendments commonly required to treat soil problems experienced by workplace
- nutrients and water required by plants grown within workplace, and effects of nutrient deficiency and toxicity on individual plant species and varieties, including visual symptoms
- processes and techniques for preparing, costing and documenting a plant nutrition program
- common and compound fertiliser products and soil ameliorants available to workplaces, including analysis, solubility, salt index, application rates, method, timing and costs
- methods of nutrient uptake by plants and favourable conditions for effective uptake to occur
- legislation and regulations requirements relevant to designing and managing a crop or pasture nutrition program
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to designing and managing a crop or pasture nutrition program.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - climate, environmental and current site data
 - species published data and historical records
 - soil, plant and water samples and testing equipment
 - plant identification keys and booklets
 - test results
 - soil amendment product specifications and performance data
 - fertiliser labels, product cards and material safety data sheets (MSDS)
- specifications:
 - workplace crop or pasture production plan
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to designing and managing a crop or pasture nutrition program
 - legislation and regulations requirements relevant to designing and managing a crop or pasture nutrition program
- relationships:

- staff, managers, suppliers, contractors, consultants, appropriate personnel and customers
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC515 Manage forage conservation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to plan, prepare and administer a crop for forage conservation, including, resourcing, budgeting and overseeing its implementation.

The unit applies to individuals who demonstrate deep knowledge in a specific technical area, take personal responsibility and exercise autonomy in undertaking complex work. They organise the work of self and others and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan for forage conservation	1.1 Determine end use requirements of forage conservation in farm production system 1.2 Determine forage conservation options and cost benefit 1.3 Select location for forage crop according to variety and target

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>growth stage</p> <p>1.4 Determine machinery and equipment required for forage crop production</p> <p>1.5 Determine supporting technology required to enable efficient performance of operations</p> <p>1.6 Plan and prepare storage facilities or system for selected forage conservation method</p> <p>1.7 Identify potential environmental impact of forage conservation activities and develop controls to mitigate damage</p> <p>1.8 Determine cost of production and prepare working budget</p> <p>1.9 Determine contractor support and negotiate contracts according to production system requirements and budget constraints</p> <p>1.10 Identify workplace health and safety hazards, assess risks and develop control strategies</p>
2. Prepare paddocks for forage conservation	<p>2.1 Determine crop cultural management requirements for crop</p> <p>2.2 Identify optimum time for harvest of key species</p> <p>2.3 Monitor and control weeds, pests and diseases</p> <p>2.4 Coordinate safe access to paddocks for harvesting and transport machinery</p>
3. Oversee forage harvesting operations	<p>3.1 Establish dry matter targets for selected method of forage conservation</p> <p>3.2 Monitor seasonal and current weather conditions to determine optimum time for harvest to ensure quality</p> <p>3.3 Assess condition and dry matter content of crop during harvesting operation</p> <p>3.4 Select harvesting and conditioning machinery based on weather conditions and forage drying targets</p> <p>3.5 Communicate work activities and performance targets to work team and contractors</p> <p>3.6 Check harvesting activities are conducted in a safe, controlled and efficient manner</p> <p>3.7 Verify forage storage system is implemented according to storage plan</p> <p>3.8 Confirm health, safety and quality of forage requirements are</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	implemented according to workplace procedures
4. Complete operation	4.1 Maintain records according to quality assurance requirements and industry practice 4.2 Check waste is disposed of to minimise environmental impact according to environmental policies 4.3 Verify machinery and ancillary equipment is cleaned and serviced according to manufacturer instructions and biosecurity procedures 4.4 Conduct quality checks of stored forage 4.5 Monitor and minimise environmental impact of forage conservation activities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and extract information for planning forage conservation from complex texts, reports, maps and plans including legislation and regulations, policies and procedures to formulate organisational strategies
Oral Communication	<ul style="list-style-type: none"> Express complex information in a simple, clean and effective manner when negotiating contracts and informing work teams and contractors of work requirements and performance targets
Numeracy	<ul style="list-style-type: none"> Use highly-developed numeracy skills to interpret complex financial information and perform calculations to translate estimates of operational costs and scheduling for inclusion in forage crop management plan and budget

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC515 Manage forage conservation	AHCBC502 Manage forage conservation	Edited Application for clarity Change to sequencing and editing of Performance Criteria for clarity Foundation Skills refined Performance Evidence and Knowledge Evidence clarified Amended structure of Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA515 Manage forage conservation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion, planned, prepared and administered a full cycle of forage crop for conservation and has:

- assessed and selected a forage conservation system for farm
- developed a cost benefit analysis for forage conservation options
- identified resource requirements and produced a budget including:
 - crop inputs
 - harvest area
 - machinery and contractors
 - labour
 - storage type and sites
- determined cultural requirements and timing of crop, including:
 - crop species/variety
 - fertilisers and amelioration
 - irrigation
 - pest and weed control
 - grazing regimen
- planned and monitored harvesting operations
- conducted quality checks of stored forage
- selected forage conservation machinery and technologies for efficient forage crop harvesting
- managed harvest operations, forage preparation and storage of forage according to plan
- communicated work activities and performance targets to work team and contractors
- ensured waste is disposed ethically to reduce environmental impact
- maintained records of operations

- monitored the implementation of workplace health, safety, biosecurity and environmental policies.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- forage conservation options and cost benefit analysis
- silage and hay conservation systems, including:
 - baling
 - wrapping
 - compacting
 - sealing
 - final storage
- factors affecting the quality of silage and hay
- dry matter content, quality, hygiene and biosecurity requirements
- range and functions of silage and haymaking machinery and equipment and the technologies that support efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - controlled traffic farming (CTF) principles and impact
 - variable rate technology (VRT)
 - remote piloted systems
 - digital and remote sensing and monitoring
- weeds, pests and diseases associated with crops and pastures, including:
 - infestation patterns and methods of control
 - cultural and mechanical controls
 - integrated pest management strategies
- types and application of personal protective equipment
- work health and safety legislation and regulations, including:
 - licensing requirements in relation to forage operations
 - chemical and hazardous substances
 - fire safety and management
 - personal protection
 - working at heights and confined spaces with storage bins
 - power lines and elevated equipment safety
 - forage handling, loading, transported and storage
- risk factors affecting production and harvesting, including:
 - human and animal health
 - weather and impact on crop quality and harvesting
 - environmental including, nutrient levels at field out areas and effluent run-off

- irrigation, soil moisture and erosion
- workplace and industry biosecurity and environmental policies and practices.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm suitable for forage conservation crop production or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - forage conservation crop
 - chemicals and consumables for fertilising and treating crops
 - computer or analogue financial models and formats
- specifications:
 - workplace policies, procedures and processes
 - safety data sheets
 - legislation and codes of practice relevant to forage conservation crop production.
- relationships:
 - work team and contractors.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBC516 Manage the harvest of crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to plan a harvesting strategy, determine the readiness, quantity and value of the crop and plan and oversee the harvest of a crop.

The unit applies to individuals who demonstrate deep knowledge in a specific technical area, take personal responsibility and exercise autonomy in undertaking complex work. They organise the work of self and others and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine crop quality	1.1 Assess potential crop yield from data collected in the field 1.2 Test and assess crop quality in the field according to workplace and industry standards 1.3 Estimate the pre-harvest value of crop from tests and assessments

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Determine crop readiness	<p>2.1 Refer pre-harvest samples to laboratory or marketing agent to determine potential crop quality</p> <p>2.2 Monitor weather conditions to estimate rate of ripening</p> <p>2.3 Monitor crop maturity and estimate optimal crop harvest commencement period</p> <p>2.4 Assess incidence of pests and determine pre-harvest treatment requirements</p> <p>2.5 Select pre-harvest treatments to ensure crop meets market requirements and industry standards</p> <p>2.6 Check adherence to work health and safety and environmental requirements throughout the application of pre-harvest treatments</p>
3. Assess the need for insurance	<p>3.1 Confirm commitments to insure the crop</p> <p>3.2 Estimate crop value</p> <p>3.3 Insure crop according to estimates and commitments</p> <p>3.4 Analyse, assess and implement strategies to manage financial risk</p>
4. Plan harvest strategy	<p>4.1 Estimate harvest commencement date and timing</p> <p>4.2 Determine equipment, technologies, and labour resources required for harvest</p> <p>4.3 Reconcile required equipment and labour against available resources and determine contract requirements</p> <p>4.4 Plan and organise equipment preparation prior to harvest</p> <p>4.5 Plan application of required pre-harvest pest control treatments according to crop assessment</p> <p>4.6 Determine and arrange required licenses, permits and notifications</p> <p>4.7 Determine and document order of harvest in harvest plan</p>
5. Plan for work health and safety hazard management	<p>5.1 Communicate workplace health and safety procedures to harvesting workforce</p> <p>5.2 Implement controls to reduce work health and safety hazard and risks</p> <p>5.3 Monitor, identify and assess health and safety hazards and risks for each stage of harvesting process</p>
6. Plan for fire	6.1 Evaluate the property and identify fire hazards and risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
prevention and control	<p>6.2 Develop a fire prevention and control strategy to manage fire risk</p> <p>6.3 Monitor implementation of fire prevention and control strategy and amend according to prevailing conditions</p> <p>6.4 Prepare fire breaks specified in fire prevention and control strategy</p> <p>6.5 Check firefighting equipment complies with fire authority requirements and fire prevention and control strategy</p> <p>6.6 Implement community fire control practices</p>
7. Decide on storage and delivery requirements	<p>7.1 Allocate crop storage facilities, and plan and arrange delivery of crop according to harvesting plan</p> <p>7.2 Check temporary silos, storage bins and other containers are located for efficient harvesting and transport operations</p> <p>7.3 Identify work health and safety hazards and assess risk from silo operation and implement controls</p> <p>7.4 Plan storage for flexible marketing and distribution initiatives</p> <p>7.5 Review planned crop transport resources against actual and amend workforce/contractor needs accordingly</p> <p>7.6 Identify strategies and resources to dry crops according to harvest plan</p>
8. Manage harvest operations	<p>8.1 Monitor performance of harvest plan and implement contingencies to address inconsistencies</p> <p>8.2 Monitor adherence to health, safety and environmental procedures and implement remedial action for breaches</p> <p>8.3 Monitor harvest operations to ensure efficient and timely completion</p> <p>8.4 Monitor crop quality during crop harvest and segregate and store into marketing grades according to harvesting plan</p> <p>8.5 Implement enterprise biosecurity policies</p>
9. Record production level and review cropping strategies	<p>9.1 Maintain records of harvest according to workplace procedures</p> <p>9.2 Monitor and evaluate crop yields against forecast production levels</p> <p>9.3 Review harvest plan and production outcomes and recommend changes to production plan</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and extract information for managing harvest operations from complex texts, reports, maps and plans including legislation and regulations, policies and procedures to formulate organisational plans
Writing	<ul style="list-style-type: none"> Write detailed plans and procedural texts, including contingencies, for agricultural workforce and contractors for the purpose of informing on harvesting activities and performance targets, taking into account the needs of a culturally and linguistically diverse workforce
Oral Communication	<ul style="list-style-type: none"> Establish and maintain complex and effective communications when negotiating contracts and informing work teams and contractors of work requirements and performance targets
Numeracy	<ul style="list-style-type: none"> Use highly-developed numeracy skills to interpret complex financial information and perform calculations to translate estimates of operational costs and scheduling for inclusion in harvest management plans and costings

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC516 Manage the harvest of crops	AHCBC506 Manage the harvest of crops	<p>Edited Application for clarity</p> <p>Change to sequencing, consolidation and editing of Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBC516 Manage the harvest of crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared and overseen the harvest of an agricultural crop on at least one occasion and has:

- planned and implemented harvesting operations
- organised and scheduled the selection, maintenance and use of technologically efficient harvesting plant and equipment
- established processes or strategies, procedures and controls for crop harvesting
- assessed crop quality, quantity and value of potential yields
- planned and negotiated workforce, contracts and agreements
- communicated instructions, plans, scheduled and performance targets to key stakeholders
- observed, identified and respond to environmental implications and work health and safety issues according to policies and procedures
- assessed financial risk and implemented insurance processes to mitigate risk
- developed management procedures for health, safety, climate and fire risk
- organised logistical requirements for harvesting operations, including:
 - harvesting
 - storage and delivery
 - licenses, permits and notifications
 - reconciliation of equipment and labour against available resources and contract requirements
 - temporary silos, storage bins and other containers for efficient harvesting and transport operations
 - contingencies to address harvest plan inconsistencies
 - records of harvest
- assess and classify crop grades and segregate crops for storage according to marketing plan and industry standards
- manage crop pre-harvest and post-harvest pest and spoilage controls

- implemented workplace health, safety, biosecurity and environmental policies.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- range and functions of harvesting machinery and equipment
- precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
 - capability and use of harvesting equipment
 - yield mapping
- crop quality and quantity measurement and assessment techniques and parameters
- crop market information and sources
- contracting requirements
- financial risk management including:
 - valuing crops
 - assessing financial risk
 - mitigating risk and insuring crops
- management and maintenance of harvested crop including:
 - moisture content, including drying and aeration
 - pest management and treatments
 - storage options and availability
- managing fire risk on farms, including:
 - harvesting equipment and fire risk
 - stubble and crop waste management
 - fire prevention and control strategies and equipment
 - contacting and arranging support from fire services
- weather conditions and their impact of crop harvesting and storage
- legislation, regulations and industry standards relating to health, safety, contractor engagement, crop treatments, biosecurity and harvesting plant use
- environmental controls and codes of practice applicable to harvesting operations
- management policies and procedures for health and safety, including:
 - licensing requirements harvesting operations
 - use of chemicals and hazardous substances
 - personal protection
 - harvesting, handling, loading, transport and storage

- working at heights and confined spaces with storage bins
- power lines and elevated equipment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a broadacre farm suitable for harvesting a crop or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - crop nearing maturity
 - planning and project management tools
 - safety equipment
 - crop sampling and assessment equipment and procedures
- specifications:
 - workplace policies, procedures and processes
 - legislation and codes of practice relevant to crop quality, and storage
- relationships:
 - work team and contractors.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER301 Work effectively in an emergency disease or plant pest response

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency covers the skills and knowledge required to work effectively within own area of responsibility while responding to an emergency disease or plant pest incursion.

The unit applies to personnel who have been appointed or engaged to undertake a role within an emergency disease or plant pest incursion response.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They provide and communicate solutions to a range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Identify information required	1.1 Access information about emergency disease or plant pest and appropriate response to apply during an emergency response 1.2 Use information to address specific work needs and identify further information requirements 1.3 Identify and access information and resources required from stakeholders
2. Carry out work	2.1 Communicate with stakeholders according to organisational procedures 2.2 Carry out work activities to conform to relevant legislation, regulations, procedures and codes of practice appropriate to work area and level of responsibility 2.3 Identify hazards and risks relevant to specific work being undertaken and respond as required
3. Manage own work	3.1 Interpret work instructions and seek clarification if inconsistencies are noted 3.2 Assess workload and prioritise competing demands to achieve personal, team and organisational goals and objectives 3.3 Communicate the need for physical and human resources clearly to appropriate person 3.4 Perform own role, responsibilities and duties in a positive manner to promote cooperation within the workplace 3.5 Respect the importance of own and others' roles in achieving organisational goals 3.6 Recognise personal symptoms of stress and its potential to impact on performance and take action to minimise negative effects 3.7 Report undue personal stress to appropriate person
4. Comply with biosecurity requirements	4.1 Identify biosecurity procedures relevant to own work area 4.2 Maintain personal protective equipment and fomites according to biosecurity procedures 4.3 Report biosecurity breaches immediately to appropriate person 4.4 Complete biosecurity records according to work area requirements
5. Adapt to change as required	5.1 Identify and assess any need for change in own work practices to reflect critical emergency issues or emerging trends 5.2 Discuss and seek agreement with senior staff if changes are required 5.3 Change own work practices where required and according to agreed arrangements 5.4 Apply a flexible approach that takes account of changing priorities and circumstances when implementing instructions for

Element	Performance criteria
	changes to work practices 5.5 Monitor change to determine the effectiveness of revised work practices and advise senior staff members of findings

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHC BIO301A Work effectively in an emergency disease or plant pest response.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER301 Work effectively in an emergency disease or plant pest response

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- access and use information to determine appropriate response, work needs, and information and resources to be accessed from stakeholders
- carry out work activities to conform with national plan
- communicate with stakeholders
- identify hazards and risks
- manage own work load and priorities
- interpret work instructions and seek clarification as needed
- recognise and respond to personal stress
- promote cooperation and respect within work team
- communicate the need for physical and human resources
- comply with biosecurity requirements for personal protective equipment and fomites, reporting biosecurity breaches and completing records
- adapt to and monitor change
- complete biosecurity records.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- AUSVETPLAN or PLANTPLAN, relevant standards, guidelines and protocols, and Nationally Agreed Standard Operating Procedures (NASOP) relating to an emergency disease or plant pest incursion response
- organisational procedures for communication in an emergency response
- common physical and human resources needed in an emergency response
- common work health and safety, and biosecurity hazards in an emergency response

- personal protective equipment, and fomites relevant to emergency response
- signs of personal stress and potential impact on response
- techniques for prioritising work activities and time management
- techniques for managing own responses to change, and to personal stress
- communication principles for working effectively in teams, and reporting information
- records required to be kept during an emergency response.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER302 Work effectively in a biosecurity emergency response

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to work in an emergency environment where there is a response to a biosecurity threat.

The unit applies to individuals who have been appointed or engaged to undertake and support an emergency response. They work under broad supervision and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify information required for emergency	1.1 Access information for emergency response 1.2 Apply information to emergency response work tasks according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
response	legislative, regulatory and biosecurity codes of practice
2. Perform work in an emergency response environment	<p>2.1 Access and interpret work instructions and seek clarification from supervisor if unclear</p> <p>2.2 Assess workload and prioritise competing demands to achieve work team and workplace goals and objectives</p> <p>2.3 Assess and communicate with team resource requirements according to workplace resourcing procedures</p> <p>2.4 Identify hazards, assess risks and implement controls according to workplace health and safety procedures</p> <p>2.5 Recognise and respond to stress of individuals within work team</p> <p>2.6 Promote a positive and cooperative work team environment</p> <p>2.7 Adhere to time frames outlined in response plan</p>
3. Comply with biosecurity requirements	<p>3.1 Access and implement workplace biosecurity procedures</p> <p>3.2 Maintain personal protective equipment according to biosecurity procedures</p> <p>3.3 Maintain fomites according to biosecurity procedures</p> <p>3.4 Report breaches in biosecurity procedures to site supervisor</p> <p>3.5 Complete biosecurity records according to workplace procedures</p>
4. Review performance and implement change	<p>4.1 Review work team performance during emergency response</p> <p>4.2 Identify and assess changes in work practices to reflect performance issues</p> <p>4.3 Seek approval for changes in work practice according to workplace approvals procedures</p> <p>4.4 Implement approved changes in work practice</p> <p>4.5 Monitor and assess effectiveness of changes in work practice and report findings according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Evaluate and integrate emergency response information from a range of sources into response work tasks and activities
Oral Communication	<ul style="list-style-type: none"> Select and use appropriate communication strategies to establish and maintain a supportive and positive environment under stressful emergency response conditions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBER302 Work effectively in a biosecurity emergency response	AHCBER301 Work effectively in an emergency disease or plant pest response	Unit code changed Title changed to reflect broader usage of unit Changes made to Application Elements edited and consolidated Performance Criteria changed and reordered Performance Evidence, Knowledge Evidence and Assessment Conditions updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER302 Work effectively in a biosecurity emergency response

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has participated in at least two emergency response activities, where one must be for a plant scenario and one must be for an animal or insect scenario.

There must also be evidence that the individual has:

- accessed and applied information for emergency response work and resources
- performed work activities to conform with biosecurity response procedures and legislative and regulatory requirements
- conducted a workplace health and safety assessment and implemented controls
- interpreted and applied work instructions
- recognised and responded to stress
- promoted a positive and cooperative work team
- complied with biosecurity requirements for personal protective equipment and fomites,
- reported breaches in biosecurity according to workplace procedures
- reviewed team work practices during emergency response and identified changes for approval and implementation
- completed biosecurity records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- standards and legislative requirements for biosecurity emergency response, including:
 - state and territory and Commonwealth policies, legislation and regulations
 - emergency response plans relevant to industry sector
 - nationally agreed standard operating procedures

- a basic understanding of emergency response needs relating to biosecurity emergencies
- workplace procedures for communication in an emergency response
- resources required for emergency response, including:
 - human
 - materials
 - equipment
- common workplace health and safety, and biosecurity hazards in an emergency response, including:
 - assessing risk and common controls used to mitigate risk
 - personal protective equipment, and fomites relevant to emergency response
 - signs of personal stress and potential impact on work team and stakeholders
- coordinating a small team during an emergency response, including:
 - planning and implementing work activities
 - time management
 - assessing work team performance
 - implementing changes to work practices
- communication principles for working effectively in teams, and reporting information
- records required during an emergency response.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an emergency response situation or an environment that represents an emergency response condition
- resources, equipment and materials:
 - tools, equipment and materials used to respond to a specific emergency response
 - personal protective equipment
- specifications:
 - specific workplace policies, procedures and processes for biosecurity and emergency response
 - workplace instructions for emergency response activity
 - specific legislation, codes of practice and information regarding the specific biosecurity emergency
- relationships
 - stakeholders
 - work team, supervisor
- timeframes:
 - emergency response completed according to time specified in response plan.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER303 Carry out emergency disease or plant pest control procedures at infected premises

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out emergency disease or plant pest control activities at a site affected by an emergency disease outbreak or plant pest incursion.

The unit applies to personnel who undertake a role within an emergency disease or plant pest incursion response.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They provide and communicate solutions to a range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare for emergency disease or plant pest control activities	1.1 Clarify work instructions received from infected premises (IP) site supervisor in preparation for carrying out control procedures 1.2 Select and prepare appropriate equipment and materials to undertake control activities in line with IP site supervisor's work instructions and associated safety requirements 1.3 Select and prepare personal protective equipment (PPE) 1.4 Identify animal welfare considerations if dealing with an emergency disease
2. Carry out emergency disease or plant pest control activities	2.1 Implement control activities in line with work instructions, work health and safety requirements and standards and protocols 2.2 Maintain a log of activities carried out on the IP in accordance with instructions from IP site supervisor 2.3 Use PPE as instructed by IP site supervisor 2.4 Give and receive work instructions within own area of responsibility
3. Check and adjust emergency disease or plant pest control activities	3.1 Check control activities within own area of responsibility regularly to ensure compliance with work instructions, work health and safety requirements and standards and protocols 3.2 Provide reports to IP site supervisor as required 3.3 Report any variations from work instructions and standards and protocols, or failure to achieve objectives to IP site supervisor and undertake remedial action within own scope of authority 3.4 Communicate any recommendations for adjusting work instructions to IP site supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHC BIO303A Carry out emergency disease or plant pest control procedures at infected premises.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER303 Carry out emergency disease or plant pest control procedures at infected premises

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare for control activities
- follow infected premises (IP) site supervisor instructions
- identify animal welfare concerns
- select, prepare and use personal protective equipment (PPE)
- apply biosecurity principles and work health and safety practices in implementing, monitoring and reporting on variations to control activities
- implement control activities
- monitor, review and report on control activities within area of own responsibility, for compliance and effectiveness
- undertake remedial action within own scope of authority
- provide reports to IP site supervisor on variations to activities, failure to meet objectives and recommendations for adjustments to work instructions
- communicate effectively with IP site supervisor and when giving and receiving work instructions to others
- maintain log of activities as required.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- common control activities associated with emergency disease and plant pest control procedures at infected premises (IP)
- objectives and work instructions commonly associated with IP control responses
- own work role and responsibilities within an IP control response

- animal welfare guidelines relevant to the species, disease and IP environment if animals are under control procedures
- PPE gear commonly used in IP control response
- biosecurity principles commonly associated with an IP control response
- safe work practices applicable to work role and responsibilities in an IP environment
- reporting templates and requirements for logging control activities
- communication principles used in giving, receiving and clarifying instructions, and reporting on control activities.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER304 Carry out movement and security procedures

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement appropriate procedures to restrict the movement of vehicles, personnel, products, livestock and plant material in relation to managing an emergency disease or plant pest incursion.

The unit applies to personnel who have been appointed or engaged to undertake a role within an emergency disease or plant pest incursion response.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They provide and communicate solutions to a range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to carry out	1.1 Identify specific movement and security procedures to be carried

Element	Performance criteria
movement and security procedures	<p>out, including times and locations of operations from work instructions</p> <p>1.2 Obtain personal protective equipment required for particular procedures to be carried out and check for serviceability and use</p> <p>1.3 Obtain documentation required to carry out specific procedures</p> <p>1.4 Obtain resources required to carry out specific procedures and check for serviceability and use</p>
2. Carry out movement and security procedures	<p>2.1 Establish a traffic check point according to work instructions</p> <p>2.2 Monitor movement of vehicles, personnel, products, livestock or plant material through declared areas in line with requirements</p> <p>2.3 Issue and check permits according to standards and protocols</p> <p>2.4 Take action in accordance with standards and protocols where vehicles are determined to be carrying personnel, products, livestock or plant material without a valid permit</p> <p>2.5 Maintain close liaison with external security providers as required</p> <p>2.6 Use personal protective equipment where required</p> <p>2.7 Decontaminate resources appropriately where required</p>
3. Check and adjust movement and security procedures	<p>3.1 Check application of movement and security procedures regularly within own area of responsibility to ensure consistency, currency and ongoing effectiveness</p> <p>3.2 Report any variations in consistency, currency and ongoing effectiveness or failure to achieve objectives to appropriate authorities and undertake remedial action within own scope of authority</p> <p>3.3 Communicate any recommendations for adjusting movement and security procedures to supervisor and appropriate authorities</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHC BIO304A Carry out movement and security procedures.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER304 Carry out movement and security procedures

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must undertake movement and security procedures including establishing a traffic check point and monitoring the movement of vehicles and issuing permits.

The candidate must demonstrate that they can:

- determine logistics and required documentation applicable to specific movement and security operations
- obtain and check any resources and personal protective equipment (PPE)
- establish and operate traffic checkpoint
- issue and check permits
- respond to vehicles without valid permit for load being transported as appropriate to standards and protocols
- liaise with external security providers
- use PPE and decontaminate resources as required
- monitor, review and report on application of movement and security procedures within area of own responsibility
- undertake remedial action within own scope of authority
- provide reports on variations to appropriate authorities in consistency, currency and ongoing effectiveness or failure to achieve objectives
- communicate recommendations on adjusting movement and security procedures to supervisor and appropriate authorities.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- movement and security procedures commonly associated with movement and security controls during a disease or plant pest incursion
- AUSVETPLAN or PLANTPLAN, and other relevant standards and protocols to determine:

- permits and documentation associated with implementing movement and security procedures
- action required for any vehicle without a valid permit
- biosecurity principles associated with movement and security procedures, use of PPE gear, and need for decontamination
- safe work practices
- objectives and work instructions associated with movement and security procedures
- own work role, responsibilities and scope of authority in implementing movement and security procedures
- decontamination procedures for PPE and resources
- reporting templates
- communication principles used in operating a traffic control point, issuing permits and documentation, and reporting to supervisor and appropriate authorities.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER305 Carry out emergency disease or pest control procedures on infected premises

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to carry out emergency disease or plant pest control activities at a site affected by an emergency disease outbreak or plant pest incursion.

The unit applies to individuals who undertake a role within an emergency incursion response. They work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for emergency disease or pest control activities	1.1 Interpret work instructions from infected premises (IP) site supervisor 1.2 Select and prepare appropriate equipment and materials to undertake control activities according to work instructions and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace safety procedures 1.3 Select, check and use personal protective equipment (PPE) 1.4 Identify and report potential ethical and animal welfare concerns to site supervisor
2. Carry out emergency disease or pest control activities	2.1 Implement control activities according to standard operating procedures, workplace health and safety requirements and biosecurity standards and protocols 2.2 Maintain a log of activities carried out for IP according to work instructions 2.3 Brief work team on required activity
3. Check emergency disease or pest control activities	3.1 Check control activities comply with standard operating procedures and workplace health and safety and biosecurity standards and protocols 3.2 Provide progress briefings to IP site supervisor according to work instructions 3.3 Communicate recommendations for adjusting work instructions to IP site supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational documentation for logging work activities using clear language, and industry specific terminology
Oral Communication	<ul style="list-style-type: none"> Communicate clearly and effectively with supervisors and work team

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBER305 Carry out emergency disease or pest control procedures on infected premises	AHCBER303 Carry out emergency disease or plant pest control procedures at infected premises	Minor change to title Minor changes to Application Minor changes and reordering of Performance Criteria Performance Evidence, Knowledge Evidence and Assessment Conditions updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER305 Carry out emergency disease or pest control procedures on infected premises

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least two occasions, carried out procedures for disease or pest control at an infected premises (IP) and has:

- prepared for control activities
- followed IP site supervisor instructions
- identified animal welfare concerns
- selected, prepared and used personal protective equipment (PPE)
- applied biosecurity principles and workplace health and safety practices when implementing, monitoring and reporting on control activities
- implemented control activities
- monitored, reviewed and reported on control activities for compliance and effectiveness
- undertaken remedial action according to authority
- reported variations to activities, failure to meet objectives and recommended adjustments to work instructions to IP site supervisor
- maintained log of emergency response activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- control activities and procedures for emergency disease and pest control at IP
- objectives and work instructions commonly associated with IP operations
- responsibilities of roles within an IP control response
- ethical standards and animal welfare guidelines relevant to control procedures
- PPE and its requirement when working in IP operations
- principles of maintaining biosecurity at a workplace
- safe work practices applicable to work role

- reporting templates and requirements for logging control activities
- communication principles used in giving, receiving and clarifying instructions, and reporting on control activities.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on an IP site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - specific tools and equipment for specific pest or disease control on IP
 - PPE
- specifications:
 - workplace policies, procedures and processes for pest or disease control
 - workplace instructions for emergency response on IP
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER306 Carry out movement and security procedures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement procedures to restrict the movement of vehicles, personnel, resources, animals and plant material when engaged in a response to a biosecurity incursion.

The unit applies to individuals who have been appointed or engaged to undertake a role within an emergency disease or pest incursion response. They work under broad direction and take responsibility for their own work, including limited responsibility for the work of others. They provide and communicate solutions to a range of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to carry out movement and security	1.1 Identify traffic, personnel, products and resources movement and security process from work instructions

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
procedures	<p>1.2 Obtain documentation required to implement movement and security procedures</p> <p>1.3 Obtain resources required to implement movement controls and security requirements</p> <p>1.4 Identify hazards, assess risks and implement controls according to workplace health and safety procedures</p> <p>1.5 Select, prepare and use personal protective equipment required for planned work</p>
2. Commence movement and security procedures	<p>2.1 Establish a movement control checkpoint according to work instructions</p> <p>2.2 Monitor vehicles, personnel, products and resources movement through declared checkpoints</p> <p>2.3 Issue and check permits according to workplace procedures, standards and protocols</p> <p>2.4 Respond to breaches in movement and security procedures</p> <p>2.5 Liaise with contracted security providers according to workplace procedures</p> <p>2.6 Decontaminate resources according to workplace decontamination procedures</p>
3. Check movement and security procedures	<p>3.1 Check movement control and security activities comply with workplace health and safety and operating procedures</p> <p>3.2 Provide progress reports to infected premises supervisor according to work instructions</p> <p>3.3 Communicate recommendations for adjusting procedures to supervisor for approval</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Oral Communication	<ul style="list-style-type: none"> Communicate clearly and effectively with supervisors and work team

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBER306 Carry out movement and security procedures	AHCBER304 Carry out movement and security procedures	Changed unit code Changed title Minor changes to Application Changes to Element 3, and Performance Criteria for clarity Changes to Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER306 Carry out movement and security procedures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has participated in at least two emergency response activities; one must be for a plant scenario and one must be for an animal or insect scenario.

There must also be evidence that the individual has:

- determined logistics and documentation required to carry out movement and security operations
- selected, checked and used personal protective equipment (PPE) according to workplace procedures
- established and operated a traffic checkpoint and issued permits
- responded to breaches of movement security according to standards and protocols
- liaised with contracted security providers
- monitored, reviewed and reported on movement and security procedures
- communicated recommendations on adjusting movement and security procedures to supervisor.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- procedures commonly associated with movement and security controls during a biosecurity incursion, including:
 - key objectives
 - importance of work instructions
- standards and legislative requirements for movement and security on an emergency response site, including:
 - emergency response plans relevant to the industry

- nationally agreed standard operating procedures
- permits and documentation associated with implementing movement and security procedures
- action required for any vehicle without a valid permit
- biosecurity principles associated with movement and security procedures, including:
 - required PPE and its purpose and use
 - decontamination procedures
- safe work practices on work sites
- roles, responsibilities and scope of authority in implementing movement and security procedures
- reporting templates and reporting procedures to supervisor and authorities
- communication principles used in operating a traffic control point.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a biosecurity site with traffic control point or in an environment that represents workplace conditions
- resources, equipment and materials:
 - barriers and traffic control equipment
 - decontamination equipment
- specifications:
 - specific workplace policies, procedures and processes for traffic control point
 - traffic movement permits
 - workplace instructions
- relationships:
 - work team
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER403 Plan and supervise control activities on infected premises

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to supervise others in a range of activities required on infected premises (IP).

The unit applies to individuals who have been appointed or engaged to undertake a role within an emergency disease or pest incursion response. They work autonomously, instruct, and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan emergency disease or pest control	1.1 Plan emergency disease or pest control activities under direction of operations manager

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
activities on an IP	1.2 Identify hazards, assess risks and specify controls according to workplace health and safety procedures 1.3 Consider environmental values that need to be protected in consultation with stakeholder 1.4 Develop a schedule for implementation of emergency disease or pest control activities, and request resources for planned activities 1.5 Establish reporting processes with operations manager 1.6 Confirm procedures with operations manager and communicate to stakeholders 1.7 Establish staffing requirements according to budget
2. Supervise emergency disease or pest control activities	2.1 Assign job roles and instruct work team on activity for IP operations 2.2 Maintain communication with IP operations manager and impacted stakeholders throughout operations according to direction 2.3 Allocate and monitor resources according to planned budget 2.4 Minimise damage or loss of property, stock and produce 2.5 Monitor supplies of materials and resources required for control activities 2.6 Monitor and respond to health and safety concerns of work team exposed to emergency response 2.7 Maintain a log of all activities undertaken, including contractors' hours and performance
3. Check effectiveness of emergency disease or pest control activities	3.1 Assess effectiveness and progress of control activities against planned objectives and contracted arrangements 3.2 Inspect work team activity in a timely manner and ensure work performance meets expected standards and protocols 3.3 Provide progress reports to IP operations manager according to agreed reporting processes and workplace policies and procedures 3.4 Maintain records according to standards and protocols
4. Revise site-specific emergency disease or plant pest control activities	4.1 Review and revise control activities according to workplace procedures 4.2 Communicate revisions to activities to local control centre (LCC) according to IP operations procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Communicate clearly and effectively with supervisors and work team
Numeracy	<ul style="list-style-type: none"> Extract and evaluate costs of IP operations using mathematical information embedded in a range of work tasks Select and apply a range of mathematical formulae to compute costs and compare with planned budgetary outcomes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBER403 Plan and supervise control activities on infected premises	AHCBER401 Plan and supervise control activities on infected premises	Coded unit change Updated Application Changes made to Performance Criteria, including rationalising repetition for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER403 Plan and supervise control activities on infected premises

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has engaged with the Operations Manager and planned and supervised control activities for at least two premises, and has:

- planned control activities for emergency disease or pest control response, including:
 - scheduled implementation of control activities
 - conducted a workplace health and safety risk assessment
 - identified infected premises (IP) procedures required, and confirmed with IP manager
 - requested resources required for planned activities
 - established reporting processes
 - established staff rosters
- communicated IP procedures to stakeholders
- supervised and monitored control activities, including:
 - checked standard of work and compliance with protocols required
 - monitored resources for control activities
 - monitored IP service provision for compliance with standards, protocols and contractual arrangements
 - maintained a log and records of control activities and performance
- monitored control activity costs, impact on property and effectiveness against planned objectives, which must include:
 - product, materials and resources requiring destruction
 - cost of plant, equipment and resources
- monitored and responded to health and safety of work team, including their mental health
- reported control activity outcomes to IP operations manager
- revised control activities following a review of performance
- communicated revisions to control activities to local control centre (LCC) according to IP operations procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- standards and legislative requirements that guide development and implementation of IP control plan, contractual arrangements and control procedures, including:
 - emergency response plans relevant to the industry
 - nationally agreed standard operating procedures
- organising and the planning process, including:
 - operational work requirements
 - scheduling and planning work teams
 - basics of contracting and contractor management
 - identifying and acquiring resources
- impact of control activities on the environment and restoration
- resources required for control activities, including:
 - equipment
 - chemicals and materials required for control
 - vehicle movement, entry/exit points and security controls
 - containment and exclusion boundaries and fences
 - personal health and safety equipment
 - adequate budget and approvals processes
 - work teams
 - communications equipment and processes
- communication techniques when dealing with those involved in emergency response, including:
 - principles used for consulting and providing information
 - reporting procedures
 - interacting with and supervising work teams
 - techniques for motivating work team
- recognising and interacting with various stakeholders involved in an emergency response, including general public, farmers, growers and producers, and conservation land and water managers
- workplace health and safety when working in emergencies, including:
 - conducting risk assessments
 - working with staff and stakeholders under stressful emergency situations
- supervisory skills and monitoring practices, including:
 - measuring and reviewing work performance against standards
 - responding to work team performance issues
- statutory and workplace reporting requirements and purpose.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on an IP or in an environment that represents workplace conditions
- resources, equipment and materials:
 - tools and equipment as designated by the IP operation plan
 - personal protective equipment
 - treatments and chemicals required for controlling disease or pest incursion
- specifications:
 - specific workplace documents, policies, procedures and processes for control activities on an IP
 - specific safety data sheets for treatments and chemicals
 - workplace instructions for IP control activities
 - specific legislation and codes of practice for biosecurity
- relationships:
 - stakeholders
 - work team
 - IP operations manager.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER404 Conduct field surveillance for a biosecurity emergency response

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to conduct field surveillance for identifying potential biosecurity threats, to gather evidence to confirm a diagnosis and to implement a response to contain the emergency.

The unit applies to individuals who have been appointed or engaged in a supervisory role in a surveillance response team. Field surveillance teams work under instructions from the local control centre Operations Manager. The individuals take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for surveillance activities	1.1 Receive and confirm information on incursion with Operations Manager

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Confirm proposed surveillance activities 1.3 Clarify legal implications and powers of authority with Operations Manager 1.4 Identify, select and prepare resources required to undertake surveillance 1.5 Notify stakeholders of site visit and legal obligations 1.6 Decontaminate equipment and resources according to site biosecurity procedures 1.7 Identify hazards, assess risks and select and implement controls according to workplace health and safety procedures
2. Conduct and finalise surveillance activities	2.1 Identify signs of emergency disease or pest at sites according to surveillance plan 2.2 Collect samples for a diagnosis according to biosecurity standards and protocols 2.3 Handle, package and dispatch diagnostic samples according to biosecurity standards and protocols 2.4 Contain emergency disease or pest in a timely manner according to authorised information from control centre and biosecurity procedures 2.5 Collect information for managing emergency disease or pest outbreak and report results to operations manager 2.6 Provide directions for stakeholders to follow according to control centre instructions 2.7 Decontaminate personnel, equipment and vehicles according to biosecurity standards

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and analyse biosecurity and emergency response policies, procedures, standards and instructions, and apply to surveillance

Skill	Description
	activities
Oral Communication	<ul style="list-style-type: none"> Communicate effectively with a range of stakeholders

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBER404 Conduct field surveillance for a biosecurity emergency response	AHCBER402 Carry out field surveillance for a specific emergency disease or plant pest	<p>Changed unit code</p> <p>Change to unit title and Application</p> <p>Changes to Elements and Performance Criteria to clarify the work outcomes</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER404 Conduct field surveillance for a biosecurity emergency response

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least two occasions, conducted field surveillance for a biosecurity emergency response and has:

- confirmed and coordinated surveillance activities
- conducted site visits, collected, prepared and dispatched suspect emergency disease or pest samples
- followed biosecurity standards and protocols throughout surveillance operations
- sought expert advice to assist in identification and diagnosis of emergency disease or pest
- alerted surveillance authority and contained emergency disease or pest in a timely manner as directed by Operations Manager and biosecurity standards and protocols
- collected information for management of outbreak and reported to Operations Manager
- directed and communicated with stakeholders of suspected emergency disease or pest
- ensured decontamination of personnel, equipment and vehicles according to biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- standards, guidelines and protocols for the emergency disease or pest
- signs and symptoms of diseases or pests subject to surveillance for different environments
- emergency disease or pest surveillance procedures, including:
 - collecting and handling samples and supporting evidence of diagnosis
 - reporting findings and information that may help in control response
 - containment of outbreak
 - personal and general decontamination
- communication principles for providing direction and warnings to stakeholders, including:

- property owners
- property or land managers
- transient operators such as bee keeping
- recognising and interacting with various stakeholders involved in a biosecurity emergency response, including, general public, farmers, growers and producers and conservation land and water managers
- roles, responsibilities and reporting procedures of stakeholders in an emergency response event
- sources of information for identifying and managing emergency diseases and pests, including:
 - seeking and accessing expertise for disease and pest identification
 - emergency response plans relevant to the industry
 - nationally agreed standard operating procedures
 - codes of practice relevant to different industry sectors
- decontamination procedures for the following:
 - personnel
 - tools and equipment
 - vehicles
- timeliness in an emergency response.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that represents a property or location with a biosecurity emergency
- resources, equipment and materials:
 - references and resources for identification of possible diseases or pests
 - tools and equipment required to contain the emergency disease or pest
 - personal protective equipment and decontamination facilities
- specifications:
 - surveillance authority documents and instructions
 - biosecurity legislation and codes of practice
- relationships:
 - stakeholders
 - surveillance authority and control centre
- timeframes:
 - according to time specified for emergency containment response.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER501 Manage active operational emergency disease or plant pest sites

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage active operational emergency disease or plant pest sites.

The unit applies to personnel who have been appointed or engaged to undertake a role within an emergency disease or plant pest incursion response.

This unit applies to individuals who take personal responsibility for their own work and exercise autonomy in undertaking complex work. They analyse information and demonstrate deep knowledge in a specific technical area. They analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Plan control procedures across the declared area	1.1 Conduct planning and consultation with stakeholders and field personnel 1.2 Conduct planning in line with relevant standards, protocols and guidelines, and according to instructions from operations director 1.3 Identify, obtain, schedule, prioritise and deploy required resources 1.4 Identify work health and safety requirements and hazards associated with implementing control procedures and ensure appropriate action is taken to minimise risks to self and others 1.5 Identify criteria for implementing control procedures which satisfy relevant standards and protocols with minimal livestock or crop destruction and property damage 1.6 Prepare contingency plans for effective control of emergency disease or plant pest
2. Manage the implementation of control procedures	2.1 Coordinate control procedures to achieve effective emergency disease or plant pest control outcomes 2.2 Maintain ongoing consultation and communication links with all stakeholders, field staff, property owners or managers and others in control centre 2.3 Implement control procedures and services supplied under contract 2.4 Prepare and submit written and verbal reports as required
3. Monitor and review the effectiveness of control procedures	3.1 Monitor personnel to ensure that they are achieving specified objectives 3.2 Monitor supply of resources for appropriateness and availability 3.3 Monitor implementation of control procedures to ensure cost-effective compliance with relevant standards and protocols 3.4 Review priorities for emergency disease or plant pest control operations, and confirm or revise as appropriate
4. Implement review findings	4.1 Revise control activities as required 4.2 Advise relevant stakeholders and personnel of revisions to control activities promptly for implementation

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHC BIO501A Manage active operational emergency disease or plant pest sites.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER501 Manage active operational emergency disease or plant pest sites

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply standards, guidelines, protocols and legislation in:
 - planning control procedures
 - resourcing the control plan
 - addressing work health and safety requirements
 - determining criteria for implementing control procedures
 - contracting services
 - monitoring implementation of control procedures for cost effectiveness
 - monitoring, reviewing control operations and revising priorities as part of managing active emergency disease or plant pest sites
- plan and resource control procedures, and contingency plans
- engage with stakeholders and field personnel in planning process
- engage with stakeholders, field staff, property owners/managers and others in control centre throughout the control period
- manage and monitor implementation of control procedures
- monitor personnel against specified objectives
- monitor supply of resources
- review priorities and revise as appropriate after consultation
- review control activities as required and communicate to stakeholders and personnel.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- AUSVETPLAN or PLANTPLAN, and relevant standards, guidelines and protocols, and Nationally Agreed Standard Operating Procedures (NASOP)
- incident control management procedures
- the requirements of relevant commonwealth, state and territory legislation
- relevant public sector policies, practices and constraints in relation to emergency disease or plant pest management
- techniques for monitoring and reviewing control procedures, and resource expenditure
- advanced communication principles to consult and communicate with a range of stakeholders and the control centre
- project management principles.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER503 Manage active operational emergency disease or pest sites

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to manage sites that have an active operational emergency for diseases or pests.

The unit applies to individuals who have been appointed or engaged to undertake a management role within an emergency disease or pest incursion response and who analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge in biosecurity. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan control procedures across the declared area	1.1 Conduct planning and consultation with stakeholders and field personnel, according to biosecurity procedures, standards and protocols 1.2 Identify, obtain, schedule, prioritise and secure resources including

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>PPE</p> <p>1.3 Identify workplace health and safety hazards, assess risks and implement controls</p> <p>1.4 Identify planning criteria to minimise impact on plants, animals and property according to emergency control procedures, standards and protocols</p>
2. Manage the implementation of control procedures	<p>2.1 Coordinate control procedures according to emergency disease or pest control outcomes</p> <p>2.2 Implement control procedures and services supplied under contract</p> <p>2.3 Maintain ongoing consultation and communication with stakeholders, and control centre</p> <p>2.4 Prepare and submit reports according to workplace procedures</p> <p>2.5 Adhere to time frame as outlined in incident control response</p>
3. Monitor and review the effectiveness of control procedures	<p>3.1 Monitor work performance outcomes according to specified objectives</p> <p>3.2 Monitor resources for availability and suitability for purpose</p> <p>3.3 Monitor compliance with financial constraints for implementing control procedures</p> <p>3.4 Review priorities for emergency disease or pest control operations, and amend plan with potential changes</p>
4. Implement review findings	<p>4.1 Revise control activities according to procedures</p> <p>4.2 Advise stakeholders of revisions to control activities in a timely manner for implementation</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and critique information from a biosecurity standards and procedures to prepare plans for managing a disease

Skill	Description
	or pest emergency response
Oral Communication	<ul style="list-style-type: none"> Communicate effectively with a range of different stakeholders
Numeracy	<ul style="list-style-type: none"> Extract and interpret costs from reports, contracts and financial statements for managing emergency response plan and reconcile against available funds and budgets

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBER503 Manage active operational emergency disease or pest sites	AHCBER501 Manage active operational emergency disease or plant pest sites	<p>Changed unit code</p> <p>Minor change to title</p> <p>Changes to Application and minor changes to Performance Criteria for clarity</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER503 Manage active operational emergency disease or pest sites

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned and managed site specific operational emergencies for a disease or pests on at least two different sites.

There must also be evidence that the individual has:

- applied standards, guidelines, protocols and legislation in:
 - planning control procedures
 - resourcing the control plan
 - addressing workplace health and safety requirements
 - determining criteria for implementing control procedures
 - contracting services
 - monitoring implementation of control procedures for cost effectiveness
 - monitoring, reviewing control operations and revising priorities as part of managing active emergency disease or pest sites
- planned and resourced control procedures
- engaged with stakeholders and field personnel in planning process
- engaged with stakeholders, and control centre throughout the control period
- managed and monitored implementation of control procedures
- monitored work performance against specified objectives
- monitored resources including:
 - suitability
 - availability
 - cost against budget
- reviewed priorities and revised plan
- reviewed control activities and communicated to stakeholders.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- standards and legislative requirements that guide development for planning and implementing emergency response to disease or pests, including:
 - emergency response plans relevant to the industry
 - nationally agreed standard operating procedures
 - biosecurity codes of practice
 - commonwealth, state and territory legislation for biosecurity
- management procedures for incident control
- public sector policies, practices and constraints for emergency disease or pest management
- workplace health and safety policies procedures and processes including:
 - risk assessment
 - type and use of personal protective equipment
 - working with personnel and stakeholders under stressful emergency situations
- techniques for monitoring and reviewing control procedures, and resource expenditure, including:
 - allocating costs against planned operations
 - assessing cost against budget
 - losses in production and
- advanced communication principles to consult and communicate with a range of stakeholders and the control centre
- project management principles.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on an active operational emergency site or an environment that represents workplace conditions
- specifications:
 - policies, procedures and processes for managing a biosecurity operation
 - instructions from incident controller
 - biosecurity legislation, codes of practice
 - emergency response cost sharing deeds
- relationships:
 - stakeholder
 - incident controller
- timeframes:

- operations are conducted according to timelines specified by incident control.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER504 Manage the implementation of a biosecurity emergency control program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to manage and implement a biosecurity emergency control program.

The unit applies to individuals who have been appointed or engaged to undertake an operations management role within a biosecurity emergency incursion response and who take personal responsibility for their own work and the work of others and exercise autonomy in undertaking complex work. They analyse information and demonstrate deep knowledge in a specific technical area. They design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Initiate biosecurity emergency management protocols	1.1 Identify, source or develop control procedures required to manage a biosecurity emergency control program according to legislation, standards, protocols and site conditions

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Implement operational objectives and plans within personal area of responsibility 1.3 Contribute to plans and strategies developed by others 1.4 Source resources for incursion according to resource plan
2. Direct implementation of biosecurity emergency control procedures	2.1 Manage activities, work teams and resources of biosecurity emergency control procedures according to operational plan, specified guidelines and site conditions 2.2 Prepare and disseminate reports on progress of biosecurity emergency control according to standards and protocols 2.3 Implement and verify management system functionality
3. Monitor biosecurity emergency control procedures	3.1 Monitor biosecurity emergency status for site according to operational objectives and control plan 3.2 Monitor and review outcomes of biosecurity emergency control procedures 3.3 Monitor resources, availability and expenditure and assess adequacy for program 3.4 Monitor effectiveness and completeness of records of biosecurity emergency control information management system
4. Review biosecurity emergency control program	4.1 Review and revise biosecurity emergency control plans and procedures 4.2 Review, reallocate or acquire resource requirements according to program outcomes

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and critique information from biosecurity standards and procedures for managing an implementation program for biosecurity emergency response

Skill	Description
Numeracy	<ul style="list-style-type: none"> Extract and interpret costs from reports, contracts and financial statements when monitoring expenditure for emergency response

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBER504 Manage the implementation of a biosecurity emergency control program	AHCBER502 Manage the implementation of an emergency disease or plant pest control program	Changed unit code and title Changes to Application Minor changes to Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER504 Manage the implementation of a biosecurity emergency control program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed a biosecurity emergency control program on at least two occasions and has:

- identified, sources or developed control procedures and monitored their implementation according to standards, guidelines and protocols
- develop operational plan and contributed to the development other plans and strategies within personal area of responsibility
- sourced resources for control program
- directed implementation of the control plan and procedures
- reported progress according to information management system
- monitored and reviewed control procedures against guidelines, and operational control plan
- monitored effectiveness of information management system and revised procedures to ensure completeness of records
- monitored resource expenditure and availability against requirements of the or control plan and reviewed allocation of resources.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- standards and legislative requirements that guide the management of an emergency response to biosecurity, including:
 - emergency response plans relevant to the industry
 - nationally agreed standard operating procedures
 - industry biosecurity codes of practice

- commonwealth, state and territory legislation for regulations and practices for biosecurity
- management procedures for biosecurity incident control
- relevant policies, practices and constraints for biosecurity emergency management
- reporting procedures including, information management and record keeping systems and situation reports
- techniques for monitoring and reviewing operational or control plans, and resource expenditure and allocation
- communication principles and strategies to liaise with other agencies, and direct implementation of the operation or control plan
- project management tools and skills required for implementing biosecurity control programs.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a site where a biosecurity emergency control program is to be implemented or an environment that represents workplace conditions
- resources, equipment and materials:
 - information management and record keeping systems
- specifications:
 - policies, procedures and processes for managing a biosecurity operation for biosecurity emergency control
 - biosecurity legislation, codes of practice and industry deeds.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBER602 Plan and oversee a biosecurity emergency incident

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan and control a biosecurity emergency incident according to the relevant standards and protocols provided in a national response plan.

The unit applies to individuals who have been appointed or engaged to take control of a biosecurity incident and response. They take personal responsibility for their own work and exercise autonomy in undertaking complex work. They analyse, design and communicate solutions to a range of complex problems. They work in contexts that are subject to change, and adapt a range of fundamental principles accordingly.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Emergency Response (BER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan biosecurity emergency incident control	1.1 Identify strategies to support biosecurity emergency incident control 1.2 Confirm biosecurity emergency incident control programs comply with state, territory and commonwealth legislative and regulatory

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	frameworks and nationally approved response plans 1.3 Seek expert advice on biosecurity emergency incident and gauge its likely impact 1.4 Identify declared areas of biosecurity emergency incident according to expert advice and available evidence 1.5 Develop plans to effectively and efficiently control biosecurity emergency incident 1.6 Submit plans to authority for approval 1.7 Identify consequences of biosecurity emergency outbreak relating to stakeholders
2. Oversee biosecurity emergency incident plans	2.1 Implement and monitor emergency biosecurity incident plans 2.2 Monitor recording and dissemination of information to ensure compliance with standards and protocols 2.3 Send, receive and act on reports according to relevant standards and protocols 2.4 Brief stakeholders on outcomes of management of biosecurity emergency incident according to command and control procedures
3. Monitor the biosecurity emergency incident	3.1 Monitor biosecurity emergency incident strategies to ensure they achieve planned outcomes 3.2 Monitor resource requirements to ensure strategies are achieved
4. Review biosecurity emergency incident control programs	4.1 Review biosecurity emergency incident control strategies and plans 4.2 Communicate changes to emergency biosecurity incident control strategies to stakeholders 4.3 Amend biosecurity emergency incident control plans according to review, expert advice, biosecurity standards and protocols

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and critique information from biosecurity standards, procedures and legislative and regulatory frameworks when checking the planning and performance of biosecurity emergency incident response
Writing	<ul style="list-style-type: none"> Demonstrate sophisticated writing skills by selecting appropriate conventions and stylistic devices to express precise meaning in reporting and briefing documents to a diverse audience
Oral Communication	<ul style="list-style-type: none"> Communicate effectively with a range of different stakeholders in different situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBER602 Plan and oversee a biosecurity emergency incident	AHCBER601 Plan and oversee an emergency disease or plant pest control program	<p>Changed code and title</p> <p>Changes to Application and Performance Criteria</p> <p>Update Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBER602 Plan and oversee a biosecurity emergency incident

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on more than one occasion for a specified infected property, taken an oversight role in the planning and implementation of biosecurity emergency incident measures.

There must also be evidence that the individual has:

- applied biosecurity standards, guidelines, protocols and legislation
- recorded and disseminated information on a management system
- identified stakeholder communications required for overseeing a biosecurity emergency incident or control program
- planned and submitted for approval a control program contingent on identified strategies following expert advice
- contributed to the development of at least one of the following:
 - response plan
 - incident action plan
 - resource plan
 - communications plan
- identified declared areas that are within the jurisdiction of the control program
- briefed stakeholders, organisations and agencies on outcomes and management of emergency disease or pest outbreak
- implemented and monitored control plans using information management and reporting systems according to standards and protocols
- reviewed control strategies and plans against the intended outcomes, and amended plans commensurate with review outcomes
- monitored resource requirements to ensure strategies are achieved
- communicated revisions of control strategies and/or plans to appropriate personnel.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- standards and legislative requirements that inform and govern management of an emergency response to biosecurity incidents, including:
 - emergency response plans relevant to the industry
 - nationally agreed standard operating procedures
 - biosecurity codes of practice
 - commonwealth, state and territory legislation for biosecurity
- incident management functions
- phases of an emergency response
- strategies for controlling and managing emergency diseases or pests
- the purpose and development of plans designed to support a control program, including:
 - response plan
 - incident action plan
 - resource plan
 - communications plan, including working with the media
- support agencies and sources of expert advice and direction
- control procedures relevant to the emergency disease or pest
- project management principles for coordinating and managing control programs
- consequences and impacts of an outbreak, and management controls
- information and records management systems
- processes for monitoring and reviewing control plans, and resource expenditure
- human and physical resources required to implement the control plan
- methods and techniques for communicating with stakeholders, including:
 - oral presentation
 - print-based and media
 - reports and reporting styles.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a site where a biosecurity emergency incident control program is to be implemented or in an environment that represents workplace conditions
- resources, equipment and materials:
 - record-keeping and information management systems
- specifications:

- policies, procedures and processes for managing a biosecurity operation for emergency disease or pest control
- biosecurity legislation, codes of practice and industry deeds
- relationships:
 - stakeholders
 - subject matter experts.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BIO201 Inspect and clean machinery for plant, animal and soil material

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to inspect and clean machinery and vehicles of material that may contribute to the spread of weeds, pests or diseases.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Biosecurity (BIO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to inspect and	1.1 Confirm the activity to be undertaken with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
clean machinery	1.2 Identify health and safety hazards and risks and apply controls according to supervisor instructions and workplace procedures 1.3 Identify and select tools and equipment required according to supervisor instructions 1.4 Check serviceability of tools and materials required for the task
2. Inspect machinery and support vehicles	2.1 Ensure machinery is safe before inspection and ensure free moving parts are immobilised according to workplace and operating procedures 2.2 Inspect machinery and equipment for contamination according to workplace biosecurity procedures 2.3 Remove covers and guards safely 2.4 Identify contamination and cleaning requirements according to workplace biosecurity procedures
3. Clean machinery, equipment and support vehicles	3.1 Select correct equipment and location of site for cleaning 3.2 Clean the machinery and support vehicles according workplace biosecurity procedures 3.3 Replace guards and covers safely
4. Complete cleaning work	4.1 Dispose of waste materials according to workplace and environmental procedures 4.2 Record cleaning history on appropriate forms according to workplace procedures
5. Report inspection results	5.1 Document inspection results according to workplace procedures 5.2 Deliver inspection reports according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interprets and consolidates information from workplace procedures for application to the cleaning process

Skill	Description
Writing	<ul style="list-style-type: none"> Prepares records and documentation using clear and accurate terminology
Numeracy	<ul style="list-style-type: none"> Performs basic mathematical calculations to prepare and dilute products used for cleaning
Oral Communication	<ul style="list-style-type: none"> Uses clear language, concepts, tone and pace appropriate when reporting to supervisor
Navigate the world of work	<ul style="list-style-type: none"> Complies with explicit policies and procedures seeking clarification or assistance when required
Get the work done	<ul style="list-style-type: none"> Responds to highly obvious routine problems by using step by step instruction and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC BIO201 Inspect and clean machinery for plant, animal and soil material Release 2	AHC BIO201 Inspect and clean machinery for plant, animal and soil material Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC BIO201 Inspect and clean machinery for plant, animal and soil material

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have inspected and cleaned machinery of contaminations, including:

- confirmed work activity with supervisor and identified hazards and risks and applied controls for work practices
- selected cleaning tools, equipment and materials for the cleaning activity
- identified and checked equipment, materials and suitable location for cleaning activity
- made the machinery safe for inspection and exposed contamination according to workplace procedures
- cleaned machinery of contamination according to workplace biosecurity procedures
- reinstated machinery to operational condition and disposed of waste materials according to workplace and environmental procedures
- maintained and presented records of inspection and cleaning according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- biosecurity protocols for contaminants relevant to industry and location
- types of equipment and contamination that can occur
- contaminants and how they are disseminated by machinery and equipment including, weeds, pests and diseases
- cleaning techniques appropriate to machinery, vehicles and types of contaminant including cleaning agents and safety data sheets
- operating features of machinery and equipment relevant to inspection and cleaning

- safe work practices associated with inspecting and cleaning machinery
- safe and environmental methods of disposing of cleaning waste
- records and reporting procedures for biosecurity.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - horticultural or agricultural machinery and equipment relevant to workplace context
 - cleaning tools and equipment
 - appropriate cleaning agents
- specifications:
 - workplace documents including policies, procedures and processes relevant to cleaning practices
 - manufacturers' operating instructions for equipment and machinery
 - cleaning agents' safety data sheets
 - specific legislation/codes of practice relevant to biosecurity and environmental waste.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BIO202 Follow site quarantine procedures

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to follow the organisation's procedures that reduce the likelihood of pathogenic organisms entering a quarantine site.

It applies to any personnel entering and leaving the quarantine area.

This unit applies to individuals who work under general supervision and exercise limited autonomy. They undertake defined activities and work in a structured context.

Licensing, legislative, regulatory or certification requirements may apply to this unit in some states and territories in relation to use of farm chemicals in quarantine situations, national vendor declarations, and movement of livestock and plant material. Therefore, it will be necessary to check with the relevant state or territory regulators for current licensing, legislative or regulatory requirements before undertaking this unit.

Pre-requisite Unit

Nil.

Unit Sector

Biosecurity (BIO)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to work in quarantine site	1.1 Check with supervisor on quarantine procedures and biosecurity protocols relevant to the site 1.2 Check all vehicles are decontaminated before entering the quarantine site, and if required leaving the site 1.3 Report contact with potential contaminants either within the site, or externally 1.4 Shower and change into work clothes if required 1.5 Select and apply appropriate personal protective equipment including footwear before commencing work 1.6 Store street clothing securely away from livestock, feed or other products 1.7 Wash hands before and after livestock, feed, plant stock or other products are handled 1.8 Check disinfectant levels in footbaths and use rigorously before entering quarantine site and before exiting site 1.9 Follow site exit procedures for decontaminating self, work clothing and personal protective equipment
2. Work in quarantine site	2.1 Handle and store chemicals and medications in accordance with site procedures 2.2 Store different feed mixes, soils, growing media and other products separately and mark appropriately 2.3 Identify cases of disease or pest infestation and report to supervisor 2.4 Identify breaches of quarantine procedures and report to supervisor 2.5 Identify work health and safety hazards and report to supervisor 2.6 Dispose of all waste products appropriately 2.7 Dispose of all deceased livestock, unwanted biological material or damaged or infected plant stock as instructed by supervisor 2.8 Record information relating to work in quarantine site
3. Assist in maintaining site quarantine procedures	3.1 Inform all visitors of the quarantine procedures and provide them with appropriate clothing and footwear if required 3.2 Check that visitors are signed in, have stated their recent activities and exposures and have washed or showered if required 3.3 Check that visitors sign out and follow site exit procedures 3.4 Note and report any observed breaches of quarantine procedures by visitors to supervisor 3.5 Keep gates and doors locked where required 3.6 Maintain security fencing according to supervisor's instructions 3.7 Check deliveries to site to ensure that established procedures for

Element	Performance criteria
	vehicle decontamination, unloading and receipt and holding or storage of stock and supplies are followed
4. Respond to site quarantine breach or problem	4.1 Identify and report a site quarantine breach or problem and report the location to supervisor 4.2 Secure any site quarantine breaches or problems 4.3 Clean and disinfect any quarantine breach sites as required according to the specific nature of the breach 4.4 Isolate livestock, plant stock or other items suspected of being exposed to contaminants and monitor for evidence of contamination 4.5 Treat or dispose of all contaminated stock and materials 4.6 Record information about the breach or problem

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHC BIO202A Follow site quarantine procedures.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC BIO202 Follow site quarantine procedures

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- meet site security and entry/exit requirements for vehicles, apparel and personal hygiene and safety
- follow procedures and biosecurity protocols for handling and storing chemicals, medications, feed mixes, soils, growing media and other products
- report disease/pest infestation, breaches of quarantine procedures and work health and safety hazards to supervisor
- dispose of waste products, deceased livestock, unwanted biological material, damaged or infected plant stock, contaminated stock and contaminated material as instructed
- record information related to work in quarantine area, including any breach or problem
- maintain security of quarantine site, any site identified as a quarantine breach and any site considered a problem area
- direct visitors in their obligations to follow quarantine procedures
- control site deliveries to ensure quarantine procedures are followed
- follow quarantine procedure and biosecurity protocols in responding to a site quarantine breach or problem
- clean and disinfect any quarantine breach sites
- isolate and monitor livestock, plant stock or other items suspected of being exposed to contaminants.

Knowledge Evidence

The participant must demonstrate knowledge of:

- site quarantine procedures and biosecurity protocols for:

- disposal of waste products, diseased livestock, unwanted biological material, damaged or infected plant stock, contaminated stock or contaminated material
- directing visitors at the quarantine site
- reporting diseases and pest infestations problem, work health and safety hazards
- handling and storing chemicals, medications, feed mixes, soil, growing media
- controlling entry of deliveries to a quarantine site
- isolating livestock and monitoring livestock
- cleaning and disinfecting quarantine area
- maintaining security for the quarantine site
- recording information about own work and any quarantine breaches
- personal protective equipment appropriate to site quarantine procedures and biosecurity protocols
- work health and safety hazards
- methods for cleaning and disinfecting quarantine site or area of quarantine breach
- biosecurity protocols and how they apply to the work site, industry and in the context of a work role.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BIO203 Inspect and clean machinery, tools and equipment to preserve biosecurity

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to inspect and clean machinery, tools and other equipment, including vehicles, of material that may contribute to the spread of biosecurity threats.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Biosecurity (BIO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to inspect and clean machinery, tools and equipment	1.1 Confirm the work activity to be undertaken with supervisor 1.2 Identify health and safety hazards and risks and apply controls according to supervisor instructions and workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify and select tools and equipment required according to supervisor instructions</p> <p>1.4 Select, check and use personal protective equipment and infection controls</p>
2. Inspect machinery, tools, support vehicles and equipment	<p>2.1 Ensure machinery is safe before inspection and ensure free moving parts are immobilised according to workplace and operating procedures</p> <p>2.2 Check serviceability of tools and materials required for task</p> <p>2.3 Inspect machinery and equipment for contamination according to workplace biosecurity procedures</p> <p>2.4 Remove covers and guards safely</p> <p>2.5 Identify contamination and cleaning requirements according to workplace biosecurity procedures</p> <p>2.6 Report observed equipment faults to supervisor according to workplace procedures</p>
3. Clean machinery, tools, equipment and support vehicles	<p>3.1 Select correct equipment and location of site for cleaning</p> <p>3.2 Clean the machinery, support vehicles, tools and equipment according to workplace biosecurity procedures</p> <p>3.3 Replace guards and covers safely</p>
4. Complete cleaning work	<p>4.1 Dispose of waste materials according to workplace and environmental procedures</p> <p>4.2 Record cleaning history on appropriate forms according to workplace procedures</p>
5. Report inspection results	<p>5.1 Document inspection results according to workplace procedures</p> <p>5.2 Deliver inspection reports according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and consolidate information from workplace procedures for application to the cleaning process
Writing	<ul style="list-style-type: none"> Prepare records and documentation using clear and accurate terminology
Oral Communication	<ul style="list-style-type: none"> Use clear language, concepts, tone and pace appropriate when reporting to supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBIO203 Inspect and clean machinery, tools and equipment to preserve biosecurity	AHCBIO201 Inspect and clean machinery for plant, animal and soil material	<p>Changed unit code</p> <p>Change to title to remove specificity for broader application</p> <p>Removed mapping to Core Skills for Work from Foundation Skills</p> <p>Minor edit to Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC BIO203 Inspect and clean machinery, tools and equipment to preserve biosecurity

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that on at least one occasion the individual has demonstrated that they have inspected and cleaned machinery, tools and equipment of contaminations, including:

- confirmed work activity with supervisor and identified hazards and risks and applied controls for work practices
- selected cleaning tools, equipment and materials for the cleaning activity
- identified and checked equipment, materials and suitable location for cleaning activity
- made the machinery, tools and equipment safe for inspection and exposed contamination according to workplace procedures
- cleaned machinery, tools and equipment of contamination according to workplace biosecurity procedures
- reinstated machinery, tools and equipment to operational condition and disposed of waste materials according to workplace and environmental procedures
- maintained and presented records of inspection and cleaning according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- biosecurity protocols for contaminants relevant to industry and location
- types of machinery, hand tools and equipment and the biosecurity risks that can occur
- contaminants and how they are disseminated by machinery, tools and equipment including, weeds, pests and diseases
- cleaning techniques appropriate to machinery, tools and equipment including vehicles
- cleaning agents for types of contaminant, including safety data sheets
- personal decontamination and procedures
- operating features of machinery, tools and equipment relevant to inspection and cleaning

- safe work practices associated with inspecting and cleaning machinery including personal protective equipment (PPE)
- safe and environmental methods of disposing of cleaning waste
- records and reporting procedures for biosecurity.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - horticultural or agricultural machinery, tools and equipment relevant to workplace context
 - cleaning tools and equipment
 - cleaning agents
 - PPE
- specifications:
 - workplace documents including policies, procedures and processes relevant to cleaning practices
 - manufacturers' operating instructions for equipment and machinery
 - cleaning agents' safety data sheets.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BIO204 Follow site biosecurity procedures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to follow the workplace biosecurity procedures for accessing and leaving a quarantine site to reduce and contain the transfer of diseases or pests.

The unit applies to individuals who work under general supervision and exercise limited autonomy. They undertake defined activities and work in a structured context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Biosecurity (BIO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to enter biosecurity site	1.1 Confirm biosecurity procedures and protocols with supervisor 1.2 Ensure all vehicles are decontaminated before entering and leaving the biosecurity area according to biosecurity procedures 1.3 Identify and report contact with potential biosecurity risk 1.4 Perform personal decontamination before entering biosecurity area according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Store and isolate personal fomites from biosecurity area according to workplace and biosecurity procedures
2. Prepare to work in biosecurity site	2.1 Identify workplace health and safety hazards and report to supervisor 2.2 Select, check and apply personal protective equipment 2.3 Apply personal hygiene procedures while working in biosecurity or quarantine area environments according to workplace procedures 2.4 Check disinfectant levels and report irregularities to supervisor
3. Work in biosecurity site	3.1 Handle and store chemicals and medications according to workplace procedures 3.2 Store and label production materials and products to minimise risk according to biosecurity procedures 3.3 Identify and report abnormal conditions of produce/stock to supervisor 3.4 Identify and report breaches of biosecurity procedures to supervisor 3.5 Dispose of all waste according to workplace biosecurity procedures 3.6 Dispose of all contaminated produce according to supervisor instructions 3.7 Maintain records for quarantine activities according to workplace procedures 3.8 Perform personal decontamination before exiting biosecurity or quarantine area according to workplace procedures
4. Assist in maintaining site biosecurity procedures	4.1 Follow visitor quarantine procedures 4.2 Check visitor sign in, sign out and hygiene procedures are observed according to workplace procedures 4.3 Ensure quarantine facilities are secured according to workplace security procedures 4.4 Maintain security of boundaries and fencing according to supervisor's instructions 4.5 Check deliveries to site comply with delivery procedures and biosecurity protocols

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Respond to infringements of site biosecurity procedures	5.1 Report issues and infringements of site quarantine procedures to supervisor 5.2 Secure site where quarantine infringement occurs according to supervisor instructions 5.3 Apply sanitation procedures to affected areas according to workplace procedures and supervisor instructions 5.4 Isolate potentially contaminated produce, stock or materials and monitor for evidence of contamination 5.5 Treat or dispose of all contaminated produce, stock and materials according to workplace quarantine procedures 5.6 Maintain records of quarantine infringements according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Update records using familiar text types and simple vocabulary, grammatical structures and conventions
Oral Communication	<ul style="list-style-type: none"> Communicate with visitors using everyday language to provide biosecurity information and directions in familiar spoken contexts

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC BIO204 Follow site biosecurity procedures	AHC BIO202 Follow site quarantine procedures	Changed unit code and title Changes to Application, Elements and Performance Criteria for clarity	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC BIO204 Follow site biosecurity procedures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has followed biosecurity procedures for at least one biosecure site and has:

- met site security entry and exit requirements for vehicles, personal fomites and personal hygiene
- handled and stored production materials and products according to procedures and biosecurity protocols
- identified and reported abnormal conditions and infringements of biosecurity procedures and workplace health and safety hazards to supervisor
- disposed of waste and contaminated produce and products according to biosecurity and quarantine procedures
- maintained records for quarantine activities and infringements
- maintained security of biosecurity or quarantine site and reported infringements
- checked visitors for compliance with workplace biosecurity procedures
- controlled site deliveries according to biosecurity procedures
- applied sanitation procedures on contaminated quarantine sites
- isolated and monitored produce, stock or materials suspected of being contaminated according to supervisor instructions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- site quarantine procedures and biosecurity protocols for:
 - disposal of waste products, diseased livestock, unwanted biological material, damaged or infected plant stock, contaminated stock or contaminated material
 - directing visitors at the quarantine site

- reporting diseases and pest infestations, workplace health and safety hazards
- handling and storing production materials and products, including chemicals, medications, feed mixes, soil, growing media
- controlling entry of deliveries to a quarantine site
- isolating livestock and monitoring livestock
- cleaning and disinfecting quarantine area
- maintaining security for the quarantine site
- recording information about own work and any quarantine breaches
- personal infection control and decontamination procedures while working in a biosecure site, including:
 - shower in and shower out environments
 - removal of street clothing and replacement with decontaminated work clothing
 - decontaminating hands and exposed skin during work
 - purpose and use of hair nets, coveralls, booties, gloves
 - footbaths and disinfectant levels
- fomites - inanimate objects that can cause infections:
 - clothing, boots and hats
 - cars and trucks
 - utensils and hand tools
 - furniture
 - work machinery
- security procedures for biosecurity:
 - fences and boundaries
 - entrance access locks
 - site visitors checking and communicating their responsibilities
- external deliveries and protocols, including:
 - vehicle decontamination
 - unloading of produce and stock
 - receipt and holding or storage of stock and supplies are followed
- personal protective equipment appropriate to site quarantine procedures and biosecurity protocols
- workplace health and safety hazards and controls
- methods for cleaning and disinfecting quarantine areas
- control area and restricted area
- biosecurity protocols and how they apply to the work site, industry and in the context of a work role.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a site subject to quarantine and biosecurity conditions or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - products, stock and materials relevant to the industry sector
 - tools and equipment required to secure biosecurity site
 - personal protective safety equipment
 - sanitation materials and equipment specific to site
- specifications:
 - specific workplace procedures and processes for maintaining a biosecure environment
 - access to safety data sheets for treatments, chemicals and medications
 - workplace instructions
- relationships:
 - visitors
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BIO301 Identify and report signs of unusual disease or pest

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify and report signs of diseases and pests that are not commonly found during day-to-day work. The unit is typically performed by those who have daily contact with plants or animals and is carried out in conjunction with routine animal or plant husbandry tasks.

The unit applies to individuals who work in a range of production environments under broad direction and take responsibility for their own work including limited responsibility for the work of others. They provide and communicate solutions to a range of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Biosecurity (BIO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify signs of unusual disease or pest	1.1 Identify signs of disease or pest on target species 1.2 Compare signs with those common to the target species 1.3 Seek advice from supervisor or other professional when signs indicate an unusual disease or pest

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Report signs of unusual disease or a plant pest	2.1 Report signs of unusual disease or pest to supervisor in a timely manner 2.2 Implement biosecurity measures according to enterprise biosecurity plans and instructions from appropriate authority

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Use clear communication when describing the symptoms of unusual pest or disease for identification to supervisor or professional

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC BIO301 Identify and report signs of unusual disease or pest	AHC BIO302 Identify and report unusual disease or plant pest signs	Changed unit code Minor title change Changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC BIO301 Identify and report signs of unusual disease or pest

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that on two occasions the individual has:

- identified signs of unusual disease or pest
- sought advice from supervisors or professionals
- notified supervisor
- implemented biosecurity measures according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- signs of common endemic diseases or pests for the target species
- key exotic pests and disease threats for the target species
- abnormal signs indicating unusual disease or pest
- methods for assessing severity and extent of problem
- biosecurity measures associated with enterprise biosecurity plans, including local government, State and Federal biosecurity policies and legislation
- the process of reporting any unusual findings to appropriate authorities.

Assessment Conditions

Assessment of skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:

- plants or animals showing signs of disease or pest infestation
- specifications:
 - workplace procedures for managing a biosecurity threat
 - reference materials for comparing observations
- relationships:
 - supervisor and/or professional.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BIO302 Identify and report unusual disease or plant pest signs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to recognise unusual disease or plant pest signs during day-to-day work and take appropriate reporting action.

The unit is typically performed by those who have daily contact with plants, birds, animals or fish. It would usually be carried out in conjunction with routine animal or plant husbandry tasks.

This unit applied to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They provide and communicate solutions to a range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Biosecurity (BIO)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Identify signs of unusual disease or a plant pest	1.1 Identify signs of disease or a plant pest 1.2 Compare signs of disease or a plant pest with own experience of common endemic disease or a plant pest in the species 1.3 Assess severity and extent of the problem in the species where signs indicate an unusual disease or a plant pest 1.4 Seek immediate advice from supervisors, professionals or appropriate authorities when signs indicate an unusual disease or a plant pest
2. Report signs of unusual disease or a plant pest	2.1 Report signs of unusual disease or a plant pest to appropriate authorities immediately 2.2 Implement biosecurity measures according to enterprise biosecurity plans and instructions from appropriate authority

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHC BIO302A Identify and report unusual disease or plant pest signs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC BIO302 Identify and report unusual disease or plant pest signs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify unusual disease or pest signs
- assess the severity and extent of problem in the disease or pest species
- seek advice from supervisors or professionals
- notify appropriate authorities
- implement appropriate biosecurity measures.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- signs of common endemic diseases or plant pests in the species
- signs indicating unusual disease or plant pests
- methods for assessing severity and extent of problem
- biosecurity measures associated with enterprise biosecurity plans
- the process of reporting any unusual findings to appropriate authorities.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BIO303 Apply biosecurity measures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to interpret and apply control measures in a biosecurity plan to protect a site from the entry and spread of biosecurity threats.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Biosecurity (BIO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify biosecurity threats and determine control measures for site	1.1 Access and interpret site biosecurity plan and information 1.2 Identify biosecurity hazards and threats for the site 1.3 Identify control measures to minimise the risk of identified biosecurity threats 1.4 Determine responsibilities for applying control measures in regular

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	work routines and confirm with supervisor
2. Apply biosecurity control measures to site activities	2.1 Apply control measures identified in site biosecurity plan for all activities according to workplace procedures 2.2 Incorporate the site control measures into work routines seeking clarification from supervisor according to workplace procedures
3. Monitor biosecurity procedures	3.1 Monitor effectiveness of control measures 3.2 Monitor work duties of site personnel to ensure biosecurity control measures are applied appropriately 3.3 Report issues and concerns for biosecurity according to workplace procedures 3.4 Maintain currency in biosecurity measures applicable to workplace 3.5 Record inputs and outputs for traceability of activity according to workplace procedures and legislative requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Apply a range of learning strategies in structured and familiar contexts to maintain currency in biosecurity
Reading	<ul style="list-style-type: none"> Analyse and consolidate information and data from a range of sources which apply to biosecurity measures
Writing	<ul style="list-style-type: none"> Accurately complete workplace and regulatory biosecurity records using clear and industry relevant terminology
Oral Communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges including active listening and questioning and reading of verbal and non-verbal signals to convey and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC BIO303 Apply biosecurity measures	AHC BIO305 Apply biosecurity measures	<p>Changed unit code</p> <p>Minor changes to Performance Criteria to be inclusive of non-farm environments</p> <p>Updated Performance Evidence and Knowledge Evidence</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC BIO303 Apply biosecurity measures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has applied biosecurity measures, including:

- located and interpreted site biosecurity plans and information to inform control measures
- identified biosecurity hazards and threats for the site and determined control measures
- determined responsibilities for applying control measures
- incorporated and applied biosecurity control measures into work routines according to the biosecurity plan
- maintained records for traceability of input and output data
- monitored control measures for effectiveness
- monitored workplace personnel for compliance with biosecurity control measures
- reported biosecurity issues and concerns according to procedures
- maintained currency in biosecurity.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of biosecurity on different sites, including:
 - production agriculture
 - amenity and production horticulture
 - conservations and land management including the natural landscape
- sources of biosecurity information, including:
 - government and industry websites
 - technical and research papers
 - journals
 - training
 - on farm resources, standard operating procedures, mandatory documentation

- biosecurity plans and their function
- biosecurity threats, including:
 - vertebrate pests
 - plants
 - diseases
 - invertebrate pests
- risk assessment principles, standards and regulations for biosecurity
- control measures to minimise the threats entering or spreading into, or from, the site, including:
 - inputs
 - outputs
 - movement of people
 - movement of animals
 - vehicles and equipment
 - production practices
 - feral and wild animals, pests and weeds
- record keeping for traceability, both trace back and trace forward, of inputs and outputs
- processes for monitoring effectiveness of control measures
- process for reporting biosecurity concerns and issues.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a site that has exposure to potential biosecurity threats or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology and websites to access current biosecurity information
 - tools and equipment required to implement control measures
 - recording system relevant to biosecurity
- specifications:
 - workplace biosecurity plans, procedures, records,
 - workplace instructions, job specifications or work routines
 - regulations, legislation, codes of practice relevant to biosecurity
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BIO305 Apply biosecurity measures

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to interpret and apply control measures in a biosecurity plan to protect a property from the entry and spread of biosecurity threats.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Biosecurity (BIO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify biosecurity threats and determine control measures for a	1.1 Access and interpret enterprise biosecurity plan and biosecurity information 1.2 Identify biosecurity threats to the enterprise

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
farm	1.3 Identify control measures to minimise the risk of identified biosecurity threats for the property 1.4 Determine responsibilities for applying control measures in regular work routines and confirm with supervisor
2. Apply biosecurity control measures to all farm activities	2.1 Apply control measures identified in the property biosecurity plan for all farm activities according to workplace procedures 2.2 Incorporate the property control measures into work routines seeking clarification from supervisor according to workplace procedures
3. Maintain records related to biosecurity activity	3.1 Keep records for sales and purchases for traceability of farm inputs and outputs 3.2 Request and retain vendor biosecurity documentation according to state and territory regulations 3.3 Retain monitoring and surveillance data according to workplace procedures
4. Monitor biosecurity procedures	4.1 Monitor effectiveness of control measures 4.2 Monitor work duties of farm personnel to ensure biosecurity control measures are applied appropriately 4.3 Report issues and concerns with biosecurity according to workplace procedures 4.4 Maintain currency in biosecurity measures applicable to workplace

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Analyse and consolidates information and data from a range of sources and applies to biosecurity measures
Writing	<ul style="list-style-type: none"> Accurately completes workplace and regulatory biosecurity records using clear and industry relevant terminology

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Effectively participates in verbal exchanges including active listening and questioning and reading of verbal and non-verbal signals to convey and clarify information
Learning	<ul style="list-style-type: none"> Applies a range of learning strategies in structured and familiar contexts to maintain currency in biosecurity
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for following policies, procedures and legislative requirements
Interact with others	<ul style="list-style-type: none"> Cooperates and contributes to work practices of others where biosecurity control measures are expected
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising biosecurity measures in work routine

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC BIO305 Apply biosecurity measures Release 2	AHC BIO305 Apply biosecurity measures Release 1	Changes to Elements and Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC BIO305 Apply biosecurity measures

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has applied biosecurity measures, including:

- located and interpreted farm biosecurity plans and biosecurity information to inform control measures
- identified biosecurity threats for the property and determined control measures
- determined responsibilities for applying control measures
- incorporated and applied biosecurity control measures into work routines according to the biosecurity plan
- maintained records for traceability of farm inputs and farm outputs, and monitoring and surveillance data
- monitored control measures for effectiveness
- monitored workplace personnel for compliance with biosecurity control measures
- reported biosecurity issues and concerns according to procedures
- maintained currency in biosecurity.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of biosecurity on farms
- sources of farm biosecurity information, including:
 - government and industry websites
 - technical and research papers
 - journals
 - training

- farm/enterprise biosecurity plans and their function
- farm biosecurity threats, including:
 - pests animals vertebrate
 - plants
 - diseases
 - invertebrate pests
- control measures to minimise the threats entering or spreading into, or from, the farm production and resources, including:
 - farm inputs
 - farm outputs
 - movement of people
 - movement of animals
 - vehicles and equipment
 - production practices
 - feral and wild animals, pests and weeds
- record keeping for traceability (both trace back and trace forward) of farm inputs and outputs
- record keeping for retention of monitoring and surveillance data
- processes for monitoring effectiveness of control measures
- process for reporting biosecurity concerns and issues.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a farm or rural property or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computers and websites to access current biosecurity information
 - tools and equipment required to implement control measures
 - recording system relevant to biosecurity
- specifications:
 - workplace documents including farm biosecurity plans, procedures, records,
 - workplace instructions, job specifications or work routines
 - regulations, legislation, codes of practice relevant to biosecurity
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BIO401 Plan and implement a biosecurity program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify potential biosecurity threats, conduct a risk assessment and develop, implement and review a biosecurity program.

The unit applies to individuals who apply specialist skills to provide solutions to technical and unpredictable problems. They work autonomously, instruct and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Biosecurity (BIO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Scope threats and hazards for a biosecurity program	1.1 Collate and interpret biosecurity advice, standards and protocols according to the biosecurity plan 1.2 Confirm known biosecurity threats to workplace operations 1.3 Identify current potential incursion points for property and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace operations 1.4 Incorporate the objectives of biosecurity plan for workplace operations
2. Conduct a biosecurity risk assessment	2.1 Investigate workplace activity and practices for potential biosecurity hazards and assess the risks 2.2 Identify and assess control measures to mitigate risk for resources entering and leaving the workplace 2.3 Identify and assess procedures to manage human activity and movement 2.4 Identify and assess control measures for vehicles and equipment to reduce biosecurity threats
3. Document biosecurity program	3.1 Collate controls for identified biosecurity hazards and risks 3.2 Identify resources for implementing identified controls 3.3 Prioritise biosecurity activity within financial limits of management 3.4 Combine control measures into a biosecurity program according to workplace operations
4. Prepare for training and keeping records	4.1 Develop a communication program for informing work team and visitors of biosecurity procedures 4.2 Identify and document training requirements for work team and visitors for biosecurity controls 4.3 Develop record keeping procedures for monitoring program according to biosecurity plan
5. Implement and monitor biosecurity program	5.1 Induct and train work team and visitors according to biosecurity plan 5.2 Monitor work team and visitor adherence to biosecurity procedures 5.3 Monitor effectiveness of biosecurity program against the planned goals
6. Review biosecurity program	6.1 Review outcomes of biosecurity program implementation against planned goals 6.2 Identify and record inconsistencies between implementation and goals

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	6.3 Compile recommendations to rectify inconsistencies for future programs 6.4 Record and report recommendations for biosecurity programs according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Plan to review biosecurity resources produced by industry to update personal skills and knowledge for revising and redesigning biosecurity plan and program
Reading	<ul style="list-style-type: none"> Interpret and critically analyse biosecurity advice, standards, and protocols for including content in plans and programs
Writing	<ul style="list-style-type: none"> Communicate complex relationships between biosecurity principles into plans and programs using a style of writing applicable to work team and visitors
Oral Communication	<ul style="list-style-type: none"> Communicate clearly and effectively with work team and visitors

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHC BIO401 Plan and implement a biosecurity program	AHC BIO403 Plan and implement a farm or enterprise biosecurity plan	Changed unit code Changes to title and Application Consolidated Performance Criteria and Elements by removing duplication for clarity and brevity	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC BIO401 Plan and implement a biosecurity program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned and implemented at least one biosecurity program and has:

- scoped biosecurity threats and possible incursion points and established goals for property
- used current biosecurity advice, standards and protocols
- identified biosecurity hazards, assessed the risks and identified controls for the specific work site, including:
 - inputs to the workplace
 - output from the workplace
 - movement of personnel and visitors
 - movement and hygiene of machinery and equipment
 - worksite practices
 - pest and disease control
- prepared a communications program to train work team and visitors
- identified and assessed documentation required for managing biosecurity
- developed a program for implementing biosecurity
- monitored work team and visitor compliance
- reviewed biosecurity program
- reviewed and updated training and induction records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- national industry standards and guidelines relevant to managing biosecurity
- principles of risk management for biosecurity, including:

- relevant standards and procedures
- identification
- assessment of risk and the significance and severity
- evaluation of risk
- establishing control options
- documentation and traceability procedures, including:
 - quality and disease free assurance status
 - compliance with national, state and territory standards and regulations
 - industry health assurance programs
 - movement of product and materials on and from properties
 - chemical use and storage in accordance with industry best practice
 - pest, disease and weed status of organic materials and compliance with Industry Purchasing Code of Practice or equivalent quality controls
- biosecurity threats to production and land management environments
- workplace inputs, including:
 - new plants or animals
 - quality of water resource
 - production material
 - use of organic and inorganic materials
- movement of workers and visitors, including:
 - training and communication
 - signage
 - visitor access, sign in and out
 - controlled access points and production areas
 - general hygiene
 - biosecurity entry and exist procedures such as shower in and shower out
- vehicles and equipment, including:
 - dedicated equipment use, harvest and storage
 - vehicle entry points, roads and tracks
 - vehicle movement and parking
 - vehicle and equipment hygiene and run off from wash areas
- worksite and production practices, including:
 - plant or animal by-products and waste
 - product and feed storage
 - water quality and access
 - animal or plant disease control and resistance to treatments
 - monitoring production, biosecurity surveillance and frequency
 - fencing and boundary security
- control of pests, including:
 - vertebrate pests

- pest and volunteer plants
- treatments and control measures
- influence of biosecurity on property and enterprise performance and values
- possible environmental incursion points to sites, including, wind, denudation and soil movement
- planning processes for costing, allocating resources and establishing timelines
- importance of records and record keeping for biosecurity procedures and processes.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a work environment specified in the performance evidence or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - specific tools and equipment for training work team and inducting visitors
- specifications:
 - workplace policies, procedures and process information for the specific workplace environment
 - legislation, codes of practice for biosecurity
- relationships:
 - visitors
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC BIO403 Plan and implement a farm or enterprise biosecurity plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan and implement a farm or enterprise biosecurity plan which includes a set of measures designed to protect a property from the entry and spread of pests and diseases.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

Licensing, legislative, regulatory or certification requirements may apply to this unit in some states and territories in relation to use of farm chemicals in quarantine situations, national vendor declarations, and movement of livestock and plant material. Therefore, it will be necessary to check with the relevant state or territory regulators for current licensing, legislative or regulatory requirements before undertaking this unit.

Pre-requisite Unit

Nil.

Unit Sector

Biosecurity (BIO)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Identify relevant information for developing a biosecurity plan	1.1 Interpret biosecurity guidance in industry standards and protocols relevant to enterprise 1.2 Identify known disease, pest and weed seed threats relevant to enterprise 1.3 Identify current access points on the property through which staff, visitors, machinery, equipment, vehicles, farm inputs and farm outputs pass
2. Develop control measures and procedures for controlling farm inputs	2.1 Research farm inputs relevant to the enterprise and identify practices to minimise risk of introducing and spreading disease, pests and weeds 2.2 Establish control measures and procedures as required for controlling farm inputs 2.3 Seek vendor declarations or animal health statements
3. Develop control measures to support biosecurity for farm outputs	3.1 Research farm outputs relevant to the enterprise and identify practices to minimise risk of spreading disease, pests and weeds 3.2 Establish control measures as required to support biosecurity for farm outputs 3.3 Provide and retain supporting documentation
4. Develop control measures for movement of people	4.1 Research the movement of people relevant to the enterprise and identify practices to minimise risk of spreading disease, pests and weeds 4.2 Establish control measures as required for movement of people 4.3 Arrange appropriate signage to support established control measures
5. Develop control measures for vehicles and equipment	5.1 Research the role of vehicles and equipment relevant to the enterprise and identify practices to minimise risk of spreading disease, pests and weeds 5.2 Establish control measures as required for vehicles and equipment as required
6. Develop control measures for production practices	6.1 Research production practices relevant to the enterprise and identify practices to minimise risk of spreading disease, pests and weeds 6.2 Establish control measures as required for production practices
7. Develop control measures for control of feral animals, plant pests and weeds	7.1 Identify feral animals, plant pests and weeds relevant to the enterprise and determine options for their control 7.2 Establish and document control measures as required for control of feral animals, plant pests and weeds
8. Develop control measures for training staff and keeping	8.1 Identify and document staff training required to implement control measures 8.2 Establish recording requirements in accordance with industry best

Element	Performance criteria
records	practice
9. Implement, monitor and review biosecurity plan	9.1 Conduct a property risk assessment and identify risk factors for pest and disease spread 9.2 Identify appropriate control measures 9.3 Document control measures in the form of a property biosecurity plan 9.4 Develop a biosecurity plan that is achievable and cost effective with short and long term goals 9.5 Induct and train staff in control measures relevant to their role and responsibility 9.6 Monitor staff performance in adhering to control measures 9.7 Monitor effectiveness of control measures and progress against the program timelines, and identify improvements that can be made 9.8 Monitor industry standards and protocols relevant to biosecurity and incorporate into the on farm biosecurity plan 9.9 Revise and amend risk assessment and control measures 9.10 Review staff training and induction records to ensure staff are able to implement biosecurity control measures appropriate to their position

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHC BIO403A Plan and implement a biosecurity program.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC BIO403 Plan and implement a farm or enterprise biosecurity plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine biosecurity threats to farm or enterprise and control measures using standards and protocols
- identify sources of current biosecurity best practice
- identify current access points to property
- establish control measures and procedures for:
 - controlling farm inputs including:
 - new plants or animals
 - the quality of water sources
 - bee hives coming onto the property
 - bedding material
 - records of source, and use of organic and inorganic fertiliser
 - measures to support biosecurity for farm outputs including:
 - harvest bins
 - packaging operations
 - transport and movement of plants, produce, livestock and livestock products, and plant waste
 - intensive rearing of young animals
 - animal breeding facilities
 - animal milking facilities
 - maintaining records
 - movement of people including:
 - controlled access points and production areas

- visitors, their vehicles, and risk profile
- general hygiene
- vehicles and equipment including:
 - equipment hygiene
 - dedicated equipment use
 - storage areas
 - vehicle entry points
 - vehicle movement and parking
 - vehicle hygiene and washes
 - run off from wash areas
 - roads and tracks
- production practices including:
 - water management
 - plant byproducts and waste
 - animal manure and waste effluent
 - feed storage, feed spills and disposal of unwanted feed
 - feed and water troughs
 - product storage
 - resistance to chemicals
 - animal disease control
 - monitoring and surveillance
 - monitoring frequency
 - fencing
- control of feral animals, plant pests and weeds including:
 - wild and feral animals
 - boundary fences
 - property cleanliness
 - weeds
 - volunteer plants
 - straying animals
 - agisted or other visiting animals
 - property and land destruction
- training staff and keeping records including:
 - staff training
 - traceability (both trace back and trace forward)
 - animal health assurance
 - vendor declarations and animal health and product statements
 - monitoring and surveillance data
- seek vendor declarations or animal health statements for:

- quality and disease free assurance status of animals, animal feed and compliance with national, state and territory standards and regulations and industry health assurance programs
- disease and weed free status of organic fertilisers and compliance with Industry Purchasing Code of Practice or equivalent quality controls
- purchased animal bedding material being fit for purpose
- provide and retain supporting documentation for:
 - moving plants, or animals on and off the property
 - appropriate chemical usage and storage in accordance with industry best practice
- develop, document, and induct and train staff in control measures for:
 - controlling farm inputs
 - biosecurity for farm outputs
 - movement of people
 - vehicles and equipment
 - production practices
 - control of feral animals, plant pests and weeds
 - training staff
 - keeping records
- develop a plan for implementing biosecurity
- monitor staff performance
- monitor effectiveness of control measures, and identify improvements
- revise and amend control measures as needed
- review staff training and induction records.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- national industry standards and guidelines relevant to farm or enterprise biosecurity
- Nationally Agreed Standard Operating Procedures (NASOP) relevant to farm or enterprise biosecurity plan
- diseases, pests and weeds that pose a threat and potential causes of spread
- principles of risk management applied to biosecurity
- biosecurity practices for:
 - farm inputs
 - farm outputs
 - people, vehicles and equipment
 - production
 - feral animals, pests and weeds
 - training staff, biosecurity planning, and maintaining records
- planning processes for costing, allocating resources and establishing timelines
- processes for improving staff performance.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS406 Administer finance, insurance and legal requirements

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to administer finance, insurance and legal requirements of a business.

This unit applies to individuals who work as part of a business management team, who provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes, sustainability practices and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Administer the legal requirements of the	1.1 Identify, implement and monitor legislative requirements to ensure business processes comply

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
business	1.2 Identify, maintain and store legal documents 1.3 Review legislative requirements regularly
2. Process and maintain the insurance requirements for the business	2.1 Identify and assess insurance requirements 2.2 Identify suitable insurers or brokers and obtain quotations 2.3 Acquire adequate insurance policies and cover 2.4 Review legislative requirements and insurance cover 2.5 File documents to ensure security and accessibility
3. Identify sources, types and cost of finance	3.1 Conduct research on the types of finance available to businesses 3.2 Determine costs associated with different forms of finance 3.3 Assess repayment structures for finance options in consultation with management team
4. Develop an application for finance or investment	4.1 Prepare an application for finance or investment, based on business and financial data 4.2 Refer the finance application to management team for checking prior to submitting to the relevant body 4.3 Maintain and store documentation

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access and interpret legislative requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS406 Administer finance, insurance and legal requirements	AHCBUS401 Administer finance, insurance and legal requirements	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS406 Administer finance, insurance and legal requirements

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has administered the finance, insurance and legal requirements of a business covering a period of at least six months, including:

- interpreted financial reports and business data
- maintained accounts
- administered the legal requirements of the business
- processed and maintained the insurance requirements for the business
- identified sources, types and cost of finance
- prepared and processed the application for finance or investment.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- obligations imposed by the choice of the business structure
- award and enterprise agreements
- insurance requirements, including:
 - workers' compensation
 - public liability
 - superannuation
 - life
 - personal accident and sickness
 - buildings
 - plant
- sources of finance, including:
 - banks
 - merchant banks

- building societies
- credit unions
- co-operatives
- finance companies
- solicitors
- accountants
- private treaty
- business and financial data, including:
 - balance sheets
 - profit and loss statements
 - production yields
 - sales
 - income
 - security
 - assets and liabilities
 - cash flow performance
- taxation and account keeping requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - financial, insurance and legal business records covering a period of at least six months
 - access to legislation and information relevant to insurance and finance
 - office equipment and resources.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS407 Cost a project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to cost a project, including establishing and documenting costs for materials, resources, services, consultants and contractors.

This unit applies to supervisors and managers who establish and oversee projects to the best financial advantage of the enterprise. In this role, individuals take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes, sustainability practices and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine resources required for the project	1.1 Identify and interpret project objectives, required work activities and available finance in line with enterprise guidelines and legislative

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.2 Identify resources required for project works 1.3 Identify factors affecting resource costs using available information 1.4 Select and use appropriate tools, equipment and technology for the calculation and documentation of project costs
2. Calculate individual itemised costs of the project	2.1 Calculate unit and total cost for each resource item 2.2 Evaluate total itemised resource costs against the financial schedule for the project and assess value for money 2.3 Make adjustments where required to reconcile resource costs with project schedules 2.4 Identify and determine costs for peripheral works arising from the project
3. Prepare a summary of the cost of the project	3.1 Collate and schedule resource costs 3.2 Calculate and record total project costs 3.3 Document summary of costs and submit financial summary for approval

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Get the work done	<ul style="list-style-type: none"> Plan and organise quotes from various sources

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS407 Cost a project	AHCBUS402 Cost a project	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS407 Cost a project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has costed at least one project for a business, including:

- identified resources for a project
- investigated options for material supplies, services, contractors and consultants
- researched prices for resources
- calculated costs for the project
- documented a summary of project costs.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- state/territory and commonwealth legislation and management policies relating to the project
- project costing technology and software
- current pricing structures and options for material supplies, services, contractors and consultants relevant to work role.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer based technology to research goods and services
 - communications technology to request quotes for services.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS408 Operate within a budget framework

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to operate within a budget framework of a business.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems in relation to their roles working within a budget framework..

All work must be carried out to comply with organisational requirements, legislation and codes and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Participate in formulation of a budget	1.1 Gather budget planning information from relevant sources 1.2 Identify priorities in relation to the organisation's vision and plans 1.3 Identify known sources of income as well as new sources of income

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Review expenditure for existing operations 1.5 Review overhead expenditure 1.6 Estimate expenditure for new initiatives and expansion 1.7 Request budget variations to suit organisational needs
2. Supervise financial transaction	2.1 Arrange expenditure within budget delegations 2.2 Record transactions to meet taxation and accounting requirements 2.3 Compare actual sales and expenditure to the enterprise budget 2.4 Check financial reports to ensure operations are within forecast limits 2.5 Adjust expenditure to meet financial targets as required 2.6 Report actual and potential variations in budgeted income 2.7 Develop recommendations to address budget variations

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Estimate and calculate expenditure and recognise trends
Get the work done	<ul style="list-style-type: none"> Use software applications, including spreadsheets, to compile data and produce reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS408 Operate within a budget	AHCBUS404 Operate within a budget framework	Foundation skills added Assessment requirements	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
framework		updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS408 Operate within a budget framework

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has operated effectively within a budget framework for a period of at least three months (a financial quarter), using a software application or spreadsheet, including:

- identified information to be included in a budget
- reviewed budgeted income and expenditure and compared to actuals
- recorded transactions and allocated them to cost and income categories
- identified and reported budget variations
- reviewed production and expenditure plans to meet financial targets.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- income and expenditure categories
- budgeting procedures and templates
- taxation and accounting requirements for business
- costing and forecasting mechanisms
- cash flow analyses and records
- financial recording and reporting systems
- records of receipts and expenditure
- factors that impact upon the timing of sales and purchases, including taxation, goods and services tax (GST), and market conditions.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to business financial records that cover a period of at least three months.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS409 Participate in an e-business supply chain

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to participate in and develop e-business as part of value adding to a rural enterprise, accommodating a niche market or changed market access to a product.

This unit applies to business managers or supervisors, who use an e-business supply chain and who are required to adjust production to meet the requirements of that supply chain. Those who work in this role take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes, sustainability practices, and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare e-business systems and procedures	1.1 Identify and validate supply chain requirements 1.2 Identify required technology hardware and software, and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>determine if purchases are required</p> <p>1.3 Develop policies and procedures to guide business relations and operations to support supply chain requirements</p> <p>1.4 Develop or redevelop supporting business processes and outputs to support requirements of the e-business supply chain</p> <p>1.5 Provide information and development support to staff, customers and suppliers</p>
2. Implement e-business systems and procedures	<p>2.1 Implement production processes required by e-business supply chain</p> <p>2.2 Conduct online purchasing, selling and payments as required by the e-business supply chain, with reference to associated risk management strategies and relevant legal and ethical requirements</p> <p>2.3 Identify and adjust business processes and data flows required by the e-business supply chain</p> <p>2.4 Implement actions to build trust and foster a supply chain culture</p>
3. Monitor and review e-business systems and procedures	<p>3.1 Integrate and monitor e-business innovations into the business to gauge their usefulness and maximise implementation</p> <p>3.2 Review e-business innovation in consultation with users, and document and evaluate recommendations for improvement or further innovation</p> <p>3.3 Analyse business data and reports to compare outcomes, budgets, timelines and forecasts to actual performance</p> <p>3.4 Review technology performance and make recommendations for improvements to hardware and software and their use, in accordance with e-business strategy and budget</p> <p>3.5 Use feedback and evaluation results to plan and improve future supply chain management strategies</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Get the work done	<ul style="list-style-type: none"> • Problem-solves issues as they arise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS409 Participate in an e-business supply chain	AHCBUS405 Participate in an e-business supply chain	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS409 Participate in an e-business supply chain

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has actively participated in an e-business supply chain for one business, including:

- effectively used e-business technology
- developed procedures and systems for an e-business process
- implemented an e-business process
- met timelines required by the e-business supply chain
- monitored and reviewed e-business systems.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- entire supply chain for a business, including from raw materials to producers, component suppliers, manufacturers, wholesalers, third-party service providers, retailers, customers and recyclers, plus freight, distribution and cash flow
- technology hardware and software requirements of the e-business supply chain
- protocols for electronic data access and interchange
- protocols for electronic funds transfer
- protocols for e-business legal and security issues.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- e-business technology suitable to business.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS511 Manage enterprise staff requirements

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to manage staff who work in both operational and strategic roles.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities when managing all staffing requirements.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine employment requirements	1.1 Identify tasks and conditions under which work performance occurs 1.2 Identify industrial relations requirements to ensure adherence to relevant award conditions

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Determine most appropriate employment arrangements based on employer and employee needs, responsibilities and rights</p> <p>1.4 Negotiate enterprise agreements and contracts of employment</p>
2. Manage workforce performance	<p>2.1 Develop induction programs for each employee consistent with legislative requirements</p> <p>2.2 Clarify and establish terms of engagement for consultants and contractors</p> <p>2.3 Conduct induction programs for new internal and external appointees and establish appropriate records</p> <p>2.4 Develop and implement strategies for communicating with workers</p> <p>2.5 Develop and implement performance management strategies</p> <p>2.6 Develop and implement strategies to resolve disputes and conflicts</p> <p>2.7 Identify and follow processes for the termination of non-performing staff</p>
3. Implement work health and safety priorities and procedures	<p>3.1 Communicate and enforce safe work practices</p> <p>3.2 Involve all members of staff in hazard identification and risk assessment</p> <p>3.3 Induct new staff into the work health and safety system</p>
4. Support workforce training programs	<p>4.1 Develop strategies to identify and address skill and knowledge gaps</p> <p>4.2 Provide on-job training to optimise worker performance and ensure safety and fairness in the workplace</p> <p>4.3 Identify off-job training requirements and source and support training</p>
5. Manage administrative support	<p>5.1 Implement procedures for the administration of staff records</p> <p>5.2 Implement administrative procedures to meet legislated requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Effectively interact with employees and contractors across a range of situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS511 Manage enterprise staff requirements	AHCBUS501 Manage staff	Title updated Two performance criteria removed due to overlap with WHS units Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS511 Manage enterprise staff requirements

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed enterprise staff requirements over a production cycle of at least six months, including:

- prepared job/task descriptions
- arranged employment of workforce members
- developed and implemented strategies to manage workforce performance
- implemented work health and safety policies, procedures and priorities
- reviewed labour productivity
- managed the performance of staff
- implemented procedures for the administration of staff records
- managed industrial relations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and principles of job/task descriptions
- equal opportunity and equal employment opportunity legislation
- work health and safety legislation
- industrial awards relevant to enterprise activity
- performance management approaches
- personnel management strategies
- employee induction programs
- requirements for developing contracts of employment
- unfair dismissal legislation
- interviewing procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - access to legislation, regulations and guidelines for employment
- relationships:
 - access to employees and/or contractors.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS512 Develop and implement family business structures and relationships

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop and implement business structures and relationships for a family based primary production business.

This unit applies to individuals who participate in the establishment of a family based primary production business and communicate the roles and responsibilities of family members within that business. They take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes, sustainability practices and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
<p>1. Identify and establish an appropriate rural family business structure</p>	<p>1.1 Establish the goals for the business and the goals of the individual family stakeholders</p> <p>1.2 Identify options for the business structure which best fit the business and family stakeholder goals</p> <p>1.3 Assess legal and taxation implications of each option</p> <p>1.4 Assess the advantages and disadvantages of each option for this business</p> <p>1.5 Establish an appropriate business organisational structure in consultation with members of the business unit</p> <p>1.6 Establish administrative procedures to ensure full compliance within the chosen structure.</p> <p>1.7 Prepare a succession plan for the business</p>
<p>2. Identify and establish the roles and responsibilities within the business unit</p>	<p>2.1 Identify and discuss roles and responsibilities family stakeholders within the business</p> <p>2.2 Allocate individual roles and responsibilities to members of the business unit</p> <p>2.3 Assess roles and responsibilities of family members in accordance with succession and estate planning requirements</p> <p>2.4 Prepare, update and store wills</p>
<p>3. Develop and implement conflict and stress management strategies</p>	<p>3.1 Identify potential causes of conflict and stress within a rural family business environment.</p> <p>3.2 Develop appropriate interpersonal skills to facilitate and promote positive relations within the business</p> <p>3.3 Identify and access relevant rural support networks and organisations</p> <p>3.4 Develop conflict and stress management strategies in consultation with family and other employees</p> <p>3.5 Implement strategies to minimise conflict and stress within the family and the workplace</p> <p>3.6 Review conflict and stress management strategies regularly</p>
<p>4. Implement business structure and review performance</p>	<p>4.1 Review goals for the business and the goals of the individual family stakeholders.</p> <p>4.2 Review succession plan</p> <p>4.3 Adjust business structures and relationships on the basis of the reviews</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Interact effectively and negotiate with family members and stakeholders, including in times of conflict

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS512 Develop and implement family business structures and relationships Release 2	AHCBUS512 Develop and implement family business structures and relationships Release 1	Minor update Duplicated performance criteria removed at PC4.2	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS512 Develop and implement family business structures and relationships

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed and implemented family business structures and relationships for at least one rural, family business including:

- establishing goals for business structure and relationship
- assessing options to establish the business structure
- preparing a succession plan
- establishing roles and responsibilities
- preparing or updating wills
- developing conflict and stress management strategies
- reviewing performance about business goals and relationships.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislation and regulations relevant to family business
- family business planning
- succession planning
- organisational policies, plans and procedures
- principles of effective communication, negotiation and conflict resolution
- principles and techniques that utilise feedback to achieve positive outcomes
- rural networks and support groups
- stressors in a rural, family business environment
- stress management strategies.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to a rural, family business.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS513 Market products and services

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to market products and services, including analysing data, investigating alternative marketing strategies for a product or service, developing marketing plans and implementing a marketing strategy for an organisation.

This unit applies to those who market products and services, and who take personal responsibility and exercise autonomy in undertaking complex work. They analyse information and exercise judgement to complete a range of advanced skilled activities.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes, sustainability practices and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Analyse market information	1.1 Identify, research and analyse existing or new markets for existing or new products or services, using techniques to ensure reliable data

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Analyse past trends and developments to determine market variability and associated risks</p> <p>1.3 Identify and evaluate competing products and determine strengths and weaknesses of own products</p> <p>1.4 Monitor market environment to ensure information is current and reliable</p> <p>1.5 Identify the legal, ethical and environmental constraints of the markets and their effect on the enterprise</p> <p>1.6 Identify product specifications that suit market requirements and price advantage at the time</p> <p>1.7 Present clear and concise information to the enterprise management team</p>
2. Identify and evaluate factors to include in a marketing plan	<p>2.1 Identify and evaluate production processes to ensure required product specifications are met</p> <p>2.2 Identify and assess alternative selling strategies and techniques to identify marketing targets and methods</p> <p>2.3 Identify and assess distribution channels and their role in marketing strategies</p> <p>2.4 Incorporate suitable advice of marketing professionals in marketing plan</p>
3. Develop a marketing plan for products and services	<p>3.1 Establish marketing objectives based on current and potential product specifications</p> <p>3.2 Establish appropriate production processes to ensure product specifications are met</p> <p>3.3 Select selling strategies to ensure required prices are achieved</p> <p>3.4 Determine appropriate distribution channel options to ensure access to target markets is achieved efficiently and appropriately</p> <p>3.5 Establish time-frames for production, distribution and selling activities</p> <p>3.6 Develop a gross margin budget to demonstrate the cost effectiveness of the marketing plan</p> <p>3.7 Develop partial gross margin budgets to accommodate market variability</p> <p>3.8 Compile and document the marketing plan</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Determine promotional strategies	<p>4.1 Prepare and record detailed plans for promotional activities</p> <p>4.2 Outline objectives, level of exposure and available markets</p> <p>4.3 Ensure strategies take account of time management and scheduling issues, and resource constraints</p> <p>4.4 Create promotional materials that enhance the product and commercial presentation</p> <p>4.5 Record and communicate priorities, responsibilities, timelines and budgets for promotional activities</p>
5. Implement marketing activities	<p>5.1 Schedule planned marketing activities within appropriate timeframes</p> <p>5.2 Develop measurable performance targets that meet business plan objectives</p> <p>5.3 Organise distribution channels and ensure product and service information is accurate and readily available to clients</p> <p>5.4 Implement marketing activities within budgetary constraints to meet legal, ethical and enterprise requirements</p>
6. Evaluate marketing performance	<p>6.1 Review the established marketing objectives to ensure they remain viable</p> <p>6.2 Make an objective assessment of the marketing plan and its implementation by comparing current activity against the established objectives</p> <p>6.3 Assess product, pricing and distribution policies in relation to market changes, marketing objectives and enterprise requirements</p> <p>6.4 Identify areas of positive marketing performance and take corrective action to remedy poor marketing performance</p> <p>6.5 Document and distribute information for continual analysis and effective planning management</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Analyse past financial trends and forecast future trends
Get the work done	<ul style="list-style-type: none"> Problem solve issues as they arise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS513 Market products and services	AHCBUS502 Market products and services	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS513 Market products and services

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has marketed at least one product or service, including:

- collected, analysed and presented data about the product or service, in the internal and external business environment
- identified the marketable features of the product or service and potential markets
- assessed alternative marketing strategies and techniques to meet business plan objectives
- evaluated performance targets and recommend modifications or improvements
- implemented and evaluated the marketing strategy
- planned promotional activities
- monitored pricing and distribution policies to improve market performance.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- markets specific to the product or service, such as wholesalers; retailers; exporters; local, national and/or international customers
- sales networks and distribution systems, customer trends and preferences, relevant to product or service
- financial management and budgeting practices
- price risk management
- performance evaluation measures for relevant product or service
- competitors' strengths and weaknesses
- customer relations policies
- enterprise goals, objectives and directions
- sales and marketing principles and practices
- principles of trend analysis

- legal issues that affect marketing activities (trade practices, Fair Trading Acts, Sales of Goods Acts)
- demographic studies and their application in the development of a marketing plan.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - products or services to be marketed
 - access to relevant market information
- specifications:
 - legislation, regulations and guidelines for marketing and selling products and/or services.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS514 Negotiate and monitor contracts

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to negotiate and monitor contracts with sources external to the enterprise.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. At this level, workers analyse information and exercise judgement to complete a range of advanced skilled activities especially in relation to the negotiation and monitoring of contracts.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Define agreements with external parties to the business for service provision	1.1 Identify and define the enterprise requirements of a business relationship with external sources 1.2 Establish the ranges of acceptable outcomes from a negotiation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Make contact with individuals, bodies or corporations and discuss requirements of an agreement 1.4 Clarify communication channels between all parties 1.5 Check references where applicable 1.6 Implement good practice procedures for business meetings and document discussions and agreements
2. Complete the formal agreement	2.1 Check and confirm negotiations conform to established enterprise requirements and relevant legislation 2.2 Document requirements of the contract 2.3 Clarify and resolve areas of ambiguity or concern 2.4 Gain consensus between parties in relation to conditions for service or supply including the key performance indicators 2.5 Undertake alternative processes where agreement is unable to be reached 2.6 Confirm the agreement based on mutually acceptable terms 2.7 Incorporate penalties or redress for non-performance 2.8 Sign and exchange contract documentation between the relevant parties
3. Monitor the performance of contracts	3.1 Identify the rights and obligations of parties to a contract and implement appropriate methods of addressing non-performance 3.2 Identify and consult professional and regulatory bodies available to support commercial grievance processes 3.3 Monitor completion of contract against key performance indicators 3.4 Advise parties of any non-compliance in writing

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Writing	<ul style="list-style-type: none"> Prepare legal contracts that clearly express expectations, payments, timelines and penalties for non-conformance

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS514 Negotiate and monitor contracts	AHCBUS503 Negotiate and monitor contracts	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS514 Negotiate and monitor contracts

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has negotiated and monitored at least one contract with a person or entity external to the enterprise, including:

- established agreed terms and conditions with the person or entity
- negotiated to obtain fair outcomes
- documented the contract
- monitored the performance of the contract.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- contract and commercial law applicable to the type of agreement
- types of contracts used within the enterprise, including employment contracts and services contracts
- typical considerations taken into account when developing a contract, including:
 - current state/territory and Commonwealth legislation for employment and taxation
 - work health and safety in terms of duties of employers, employees, suppliers and contractors
 - hazardous substances and dangerous goods
 - environment protection
 - equal opportunity
 - equal employment opportunity
 - affirmative action standards
 - certification requirements
 - license, patent or copyright arrangements
 - quality assurance procedures
 - emergency procedures

- processes of formulation and negotiation of contracts
- enterprise business policies and procedures for maintenance of confidentiality.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to information about contracts and relevant contract/employment legislation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS515 Prepare estimates, quotes and tenders

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare estimates, quotes and tenders for project-based work.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. At this level, workers analyse information and exercise judgement to complete a range of advanced skilled activities when preparing estimates, quotes and tenders.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out preliminary planning activities for estimating, quoting and tendering	1.1 Identify nature and scope of the project in consultation with the client 1.2 Confirm format, specifications and deadline for submission with

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>the client</p> <p>1.3 Interpret available relevant documentation</p> <p>1.4 Inspect project site and reconcile with scaled drawings, project and other site plans</p>
2. Determine resource requirements	<p>2.1 Interpret and record detailed project information and financial requirements from client specifications</p> <p>2.2 Identify and estimate size, type and quantity of required project resources</p> <p>2.3 Identify and evaluate sources for the procurement of suitable project resources</p> <p>2.4 Calculate the size, type and quantity of resource items</p> <p>2.5 Calculate and document unit and total cost for resource items</p> <p>2.6 Determine risks and document contingencies</p> <p>2.7 Record calculations on a price summary sheet</p>
3. Prepare schedules for the estimate, quote or tender	<p>3.1 Document works schedule according to client specifications</p> <p>3.2 Document scheduling of resources consistent with the requirements of the works schedule</p> <p>3.3 Document scheduling of financial requirements</p>
4. Prepare and document the estimate, quote or tender for submission to the client	<p>4.1 Calculate and check estimate, quote or tender price</p> <p>4.2 Compile costed summaries and works, resource and financial schedules</p> <p>4.3 Adhere to quality assurance requirements, enterprise customer service procedures, conventional formatting and industry standards in the development of documentation</p> <p>4.4 Complete and submit total estimate, quotation or tender by the specified date</p> <p>4.5 Provide further information and make adjustments according to client requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Clarify client requirements for project and negotiate value for money quotes from suppliers

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS515 Prepare estimates, quotes and tenders	AHCBUS504 Prepare estimates, quotes and tenders	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS515 Prepare estimates, quotes and tenders

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared an estimate, quote or tender for at least one project, including:

- clarified details of requirement with client
- investigated options for supplies, services, contractors and consultants with current pricing structures and availability
- developed a work schedule with timelines and expenditure
- developed detailed costing sheets with the final quoted cost, including an estimated margin for risk
- submitted the completed document to the client with supporting information including details of organisation's previous work and client feedback
- sought feedback from the client to ensure information supplied is sufficient.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- state/territory and Commonwealth legislation, awards, enterprise agreements relevant to project
- enterprise policies relating to labour hire and employment terms
- current pricing structures and options for supplies, services, contractors and consultants
- enterprise and industry standards and practices for formatting, organising and presenting financial and quantitative information
- ethical considerations in relation to confidentiality and the tendering process.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to information about, and costs of, supplies and services, relevant to project.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS516 Develop and review a business plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop and review a business plan.

This unit applies to individuals whose role is to set the short, medium or long term goals and targets for the business plan. Roles may relate to marketing and production targets, resource and asset development and management, supply chain management, acquisitions, capital, property improvements, and operational systems.

At this level, workers take personal responsibility and exercise autonomy in undertaking complex work. They analyse information and exercise judgement to complete a range of advanced skilled activities.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes, sustainability practices and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine scope of business plan	1.1 Determine scope of the business plan and associated systems in consultation with key and specialist personnel 1.2 Access information to inform business plan development including potential business opportunities 1.3 Account for and incorporate trends and seasonal variations 1.4 Account for strategic goals, targets and directions of the enterprise 1.5 Identify legal obligations and compliance requirements
2. Prepare business plan	2.1 Develop operational goals and targets that enhance opportunities to meet the enterprise strategic plan 2.2 Check indicators of operational performance are clear and measurable and allow for realistic analysis of performance 2.3 Identify and include resource requirements and input supply chain options 2.4 Identify and incorporate human resource strategies 2.5 Identify and incorporate marketing strategies 2.6 Identify risks for the business and develop minimisation strategies 2.7 Trial systems to test budgetary impact and operational potential before implementation
3. Document and review business plan	3.1 Develop the business plan 3.2 Incorporate financial and operational systems that enhance performance management and suit enterprise requirements 3.3 Communicate business plan to relevant parties 3.4 Monitor performance against the business plan to identify strengths, weaknesses and areas for improvement 3.5 Make recommendations to improve the business plan and associated systems

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access and interpret complex information including legislation and business documentation relevant to enterprise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS516 Develop and review a business plan	AHCBUS506 Develop and review a business plan	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS516 Develop and review a business plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed and reviewed a business plan for at least one enterprise, including:

- set strategic goals, targets and directions for the enterprise
- determined clear and measurable indicators of operational performance
- identified and designed risk management strategies
- developed appropriate operational plans
- documented the business plan
- monitored the business plan to identify strengths, weaknesses and areas for improvement.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- profit and loss and cash flow systems
- forecasting trends in expenditure and production for an enterprise
- communication techniques typically used to negotiate business strategies and directions
- risk management strategies relevant to the enterprise
- marketing strategies relevant to the enterprise
- measures of operational performance
- financial and operational systems and resource considerations relevant to business planning
- logical and analytical methods to interpret and analyse financial reports
- industrial relations, taxation, corporate and industry legislation, environmental and work health and safety legislation as they relate to the enterprise
- capital investment analysis.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to business records for an enterprise.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS517 Monitor and review business performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to monitor and review business performance.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities in relation to monitoring and reviewing the performance of a business.

All work must be carried out to comply with organisational requirements, work health and safety legislation, sustainability practices and codes and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify performance requirements	1.1 Develop realistic performance indicators within available timeframes and resources 1.2 Identify and minimise factors inhibiting performance against

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	objectives 1.3 Identify and assess market conditions based on relevant data and transferable and justifiable assumptions 1.4 Identify capacity to promote the sustainability of operations and incorporate into enterprise procedures
2. Evaluate enterprise performance	2.1 Gather and analyse data relating to enterprise production and financial performance to identify historical and current performance 2.2 Review and analyse operational structures to determine the suitability of organisational processes to enterprise objectives 2.3 Evaluate enterprise strengths and weaknesses against market conditions to determine current and future capacities 2.4 Monitor impact of natural conditions on enterprise performance 2.5 Assess sustainability of resource use 2.6 Monitored performance against enterprise objectives to identify variations and scope for future development
3. Review business performance	3.1 Review business operations to identify opportunities for improvements in performance 3.2 Review business financial performance to identify opportunities for improvement 3.3 Review business marketing performance to identify opportunities for improvement 3.4 Review business risk management performance to identify opportunities for improvement 3.5 Document opportunities for improvement

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Recognise trends in financial activity of business

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS517 Monitor and review business performance	AHCBUS507 Monitor and review business performance	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS517 Monitor and review business performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has monitored and reviewed the performance of at least one business, or part of, including:

- identified, gathered and analysed data relating to enterprise performance
- developed realistic performance indicators
- reviewed operations against performance indicators
- monitored resources
- assessed sustainability of resource use
- planned to improve business performance by addressing results of review.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- markets, relevant to enterprise
- financial analysis techniques, including:
 - benchmarking
 - cost benefit analysis
 - 'what if?' analyses
 - time series and trend
 - expenditure and revenue ratios
 - break-even analysis
 - accounting standards
 - cash flow schedules
- types of data analysed to indicate business performance, including:
 - financial indicators
 - non-financial indicators

- organisational structures, including:
 - management processes
 - reporting arrangements
 - decision-making authorities
 - financial accounting procedures
- legislative requirements relevant to the operations of the enterprise
- environmental conditions, positive environmental practices and negative impact minimisation measures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to business records for an enterprise.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS518 Prepare and monitor budgets and financial reports

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare and monitor budgets and produce financial reports.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities when preparing and monitoring budgets and financial reports.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare a budget	1.1 Obtain information on past receipts and payments and compare to current prices and cost trends 1.2 Prepare gross margin projections for each production enterprise of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>the business</p> <p>1.3 Identify projected non-enterprise income and overhead costs for the business</p> <p>1.4 Identify projected capital-based income and costs for the business</p> <p>1.5 Prepare a plan for a period which allows for expected income and expenditure, using the 'most likely' prices and costs</p> <p>1.6 Ensure the plan allows the business to meet financial reporting requirements</p>
2. Implement and monitor a budget	<p>2.1 Monitor receipts and payments and reconcile against the original budget</p> <p>2.2 Allocate funds in accordance with budget objectives and parameters</p> <p>2.3 Identify variances against the original plan and calculate the impact on overall profit and loss and cash flow</p> <p>2.4 Make adjustments to the original plan for the remainder of the budget period where necessary to respond to unacceptable variations</p> <p>2.5 Renegotiate and restructure budgets and plans to optimise enterprise performance</p>
3. Prepare financial report	<p>3.1 Maintain records of financial performance</p> <p>3.2 Assemble information with source documents according to the requirements of the report recipient</p> <p>3.3 Prepare financial reports to meet both management and legislative requirements</p> <p>3.4 Forward documentation to management in a timely and efficient manner</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Numeracy	<ul style="list-style-type: none"> Determine trends in financial activity and forecast future expenditure

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS518 Prepare and monitor budgets and financial reports	AHCBUS508 Prepare and monitor budgets and financial reports	Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS518 Prepare and monitor budgets and financial reports

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared and monitored the budget of at least one business activity and prepared a financial report that covers at least six months of business activity.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- how budgets and financial reports are formulated and presented
- audience for financial reports, including:
 - taxation office
 - financing agencies
 - boards of management
 - committees
 - councils
 - executive management
- financial management systems used within the business
- budget analysis and reporting processes
- standards for organisational recordkeeping and audit requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- access to financial records for a business.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS609 Develop and review an enterprise strategic plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop and review a strategic enterprise plan for a small, medium or large business.

This unit applies to individuals who work strategically, who analyse information and exercise judgement to complete a range of advanced skilled activities especially in relation to strategic planning. At this level, workers analyse, design and communicate solutions to a range of complex problems.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes, sustainability practices, and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Clarify business goals and direction for enterprise plan	1.1 Evaluate the focus, direction and structure of the enterprise in the development and review of the enterprise plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Assess and identify need for development and change 1.3 Identify competitive and collaborative factors 1.4 Identify and consider legal obligations and estate considerations 1.5 Develop goals and targets consistent with the enterprise 1.6 Document outcomes of the analysis work and draft the new enterprise plan
2. Undertake strategic analysis	2.1 Access data for use in review and development 2.2 Assess opportunities to value-add in the distribution chain of commodities and identify competitive implications 2.3 Analyse and assess competitive and collaborative opportunities 2.4 Assess expansion opportunities for viability and feasibility 2.5 Undertake comprehensive analysis of data and information to formulate a viable and realistic enterprise plan
3. Develop and document enterprise plan	3.1 Ensure performance measures are clear and address all key aspects of enterprise performance 3.2 Identify, document and incorporate the implications of the enterprise plan for the business 3.3 Introduce value-adding activities and opportunities 3.4 Finalise enterprise plan 3.5 Communicate enterprise plan initiatives and desired outcomes
4. Review operations against the enterprise plan	4.1 Evaluate operations and performance against the enterprise plan, identifying gaps and strengths 4.2 Modify processes to ensure strategic outcomes are achieved

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Oral communication	<ul style="list-style-type: none"> Communicates effectively with stakeholders to formulate agreed strategic directions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS609 Develop and review an enterprise strategic plan	AHCBUS603 Develop and review a strategic plan	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS609 Develop and review an enterprise strategic plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed and reviewed an enterprise strategic plan for at least one business, including:

- determined the scope and desired business outcomes of the plan
- analysed the competitive environment
- documented performance measures to address all key aspects of enterprise performance
- evaluated opportunities and the viability and feasibility of the production, business and marketing plans
- documented the plan
- communicated the strategic direction to employees
- reviewed business activity and made adjustments to meet requirements of the plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the market in which the enterprise operates:
 - market forces
 - resource availability and accessibility
 - competitors
- business structures for similar enterprises
- business analysis and forecasting
- value-adding concepts, relevant to the enterprise
- enterprise planning methodologies
- data collection and analysis methods
- risk management techniques
- legislation and by-laws relevant to the organisation's operation and potential expansion
- organisational design and change processes.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to an enterprise, including business records, to conduct enterprise planning activity.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS610 Manage agribusiness risk

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to manage risks in a range of contexts.

It applies to individuals who work in positions of authority and are approved to implement change across the organisation, business unit, program or project area. In these roles, workers analyse information and exercise judgement to complete a range of advanced skilled activities. They analyse, design and communicate solutions to a range of complex problems.

All work must be carried out to comply with organisational requirements, workplace health and safety legislation and codes, sustainability practices and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish risk context	1.1 Review organisational processes, procedures and requirements for undertaking risk management

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Determine scope for risk management process 1.3 Identify internal and external stakeholders and their issues 1.4 Review potential risks associated with climate; natural, human and financial resources; production systems and equipment; marketing; political and social factors 1.5 Review strengths and weaknesses of existing arrangements 1.6 Document critical success factors, goals or objectives for area included in scope 1.7 Obtain support for risk management activities 1.8 Communicate with relevant parties about the risk management process and invite participation
2. Identify risks	2.1 Invite relevant parties to assist in the identification of risks 2.2 Research risks that may apply to scope 2.3 Use tools and techniques to generate a list of risks that apply to the scope, in consultation with relevant parties
3. Analyse risks	3.1 Assess likelihood of risks occurring 3.2 Assess impact or consequence if risks occur 3.3 Evaluate and prioritise risks for treatment
4. Select and implement treatments	4.1 Determine and select most appropriate options for treating risks 4.2 Develop an action plan for implementing risk treatment 4.3 Communicate risk management processes to relevant parties 4.4 Ensure all documentation is in order and appropriately stored 4.5 Implement and monitor action plan 4.6 Evaluate risk management process

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Engage effectively with stakeholders to elicit opinions and determine strategies to address risk
Numeracy	<ul style="list-style-type: none"> Use numerical data to determine risk

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS610 Manage agribusiness risk	AHCBUS608 Manage risk	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS610 Manage agribusiness risk

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed significant risks for a land-based enterprise, including:

- determined the scope for risk management
- identified six potential risks, including:
 - three associated with financial, production and system, and
 - three associated with the environmental, political, social context
- planned and implemented strategies to minimise the impact of the six identified risks.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the wide range of risks faced by a land-based production business
- threats presented by climate change
- legislation, codes of practice and national standards, including:
 - duty of care
 - operation as a business entity
 - environmental protection
 - freedom of information
 - industrial relations
 - privacy and confidentiality
 - equal employment opportunity
- organisational policies and procedures, including:
 - risk management strategy
 - policies and procedures for risk management
- overall operations of land-based business

- risk insurance and insurance providers.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to a land-based production business.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS611 Manage capital works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to manage the planning and construction of capital works projects.

This unit applies to individuals who manage capital works projects. They take personal responsibility for their own work and exercise autonomy in undertaking complex work. They analyse, design and communicate solutions to a range of complex problems.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes, sustainability practices and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify scope of capital works	1.1 Determine the scope of the proposed capital works 1.2 Develop a strategy to achieve objectives, outcomes and client

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements for the capital works 1.3 Develop an effective risk management system to ensure objectives can be met within the enterprises allocated budget
2. Acquire resources	2.1 Identify, acquire and allocate resources, equipment and infrastructure for construction 2.2 Analyse scope and objectives of works to determine the tasks to achieve agreed outcomes on time and within budget 2.3 Develop and apply processes for monitoring, evaluating and reporting performance against objectives 2.4 Identify and agree roles and responsibilities of team members and stakeholders
3. Manage construction activities	3.1 Implement tasks in accordance with plans and specifications 3.2 Establish and utilised communication process including responsibilities for conflict resolution 3.3 Monitor progress to ensure time, performance, cost and quality of works is achieved 3.4 Investigate and negotiate proposed variations in consultation with stakeholders
4. Complete capital works and evaluate and report on activities	4.1 Undertake site inspections to ensure all outcomes are met 4.2 Undertake evaluation of completed project against agreed objectives and report to stakeholders

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Monitor and manage project expenditure and timelines

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS611 Manage capital works	AHCBUS601 Manage capital works	Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS611 Manage capital works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed at least one capital works project, including:

- negotiated with contractors and suppliers, and internal and external clients
- developed a strategy to achieve project outcomes and client requirements
- monitored, evaluated and reported on progress of works
- resolved disagreements and disputes satisfactorily
- evaluated and reported on project achievements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- human resource management and policies for the enterprise
- project management systems
- project management tools and techniques
- cost schedule control systems
- enterprise procurement guidelines
- enterprise project management policies
- risk management techniques
- business and commercial issues relevant to business/project
- basics of contract law
- physical resource management.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a workplace setting or an environment that accurately represents a capital works site
- resources, equipment and materials relevant to capital works project
- specifications:
 - capital works specifications and objectives
- relationships:
 - construction team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS612 Review land management plans and strategies

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to review and assess effectiveness of land use, land management plans and strategies.

This unit applies to individuals who work at a strategic level, with capacity to devolve responsibilities to others. In this role, workers analyse, design and communicate solutions to a range of complex problems.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes, sustainability practices and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine mechanisms and criteria for reviewing land use, land management plans	1.1 Establish clear reasons for reviewing land use, land management plans and strategies 1.2 Analyse data to determine internal policy and procedures that

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
and strategies	impact on land use, land management plans and strategies 1.3 Interpret trends to identify changes occurring in land use, land management plans and strategies, beyond normal variations 1.4 Regularly review industry information to establish the need for reviewing land use, land management plans, and strategies within the organisation 1.5 Determine realistic timeframes for review process
2. Analyse existing land use, land management plans and strategies	2.1 Assess trends and threats against the objectives of the land use land management plans and strategies 2.2 Identify and assess existing management plans and strategies relevant to the issue under consideration, for effectiveness, relevance, and impact on resource management 2.3 Analyse land use, land management plans and strategies, taking account of the relevant historical, social, cultural, political, ecological, biodiversity and economic contexts in which they apply 2.4 Identify and prioritise gaps in management plans and strategies 2.5 Consult with stakeholders to ensure support for potential changes in land management plans 2.6 Identify and resolve problems taking into consideration the views of stakeholders
3. Modify land use and management plans and strategies	3.1 Evaluate feedback from stakeholders on existing land use, land management plans and strategies 3.2 Prepare modified land management plans and strategies covering revised outcomes, in a standardised format 3.3 Ensure modified land use and management plans and strategies comply with relevant legislation 3.4 Incorporate outcomes of the consultative process in amended land use and management plans and strategies, and seek agreement from stakeholders where appropriate 3.5 Ensure revised land management plans are consistent with the overall business plan and adjust as required
4. Implement modified land use and management plans and strategies	4.1 Modify operational processes to obtain additional key data and monitor changes to conservation strategies and plans 4.2 Provide education and training to employees to ensure effective

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	implementation 4.3 Provide education and training to stakeholders to promote implementation 4.4 Implement modifications in a timely manner to reflect the need for changes confirmed through the review process

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Develop management plans using clear and concise language
Oral communication	<ul style="list-style-type: none"> Interact effectively with stakeholders when views differ

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS612 Review land management plans and strategies	AHCBUS602 Review land management plans and strategies	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS612 Review land management plans and strategies

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has reviewed land management plans and strategies of at least one designated plot of land, including:

- established clear criteria for reviewing land usage, land management plans and strategies
- analysed existing land usage, land management plans and strategies
- modified land management plans and strategies to match required outcomes
- implemented modified land management plans and strategies
- monitored land management plans to ensure required outcomes are achieved.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- ecosystems including the interrelationship of geophysical, hydrological, biological and meteorological factors
- effects of climate change on the environment and on soil
- advantages of improved biodiversity above and below ground
- common land management practices that reduce greenhouse gas emissions, including:
 - crop stubble retention
 - no till cropping
 - mulching
 - improved water management
 - use of organic fertilisers
 - composting
 - protecting vegetation from stock grazing
 - reducing emissions from cattle and dairy cows through controlled grazing
- monitoring parameters and techniques utilised in biological monitoring
- threats, both natural and from human activity, to places of natural significance

- international, national and local standards and codes of practice for land management
- land management assessment and monitoring processes
- scientific processes for evaluating land management
- general understanding of a range of cultural issues.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to a plot of land.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS613 Manage human resources

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to manage human resources in an agricultural, horticultural or land management enterprise.

This unit applies to individuals who take personal responsibility for their own work and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities in relation to managing human resources. They analyse, design and communicate solutions to a range of complex problems.

All work must be carried out to comply with organisational requirements, workplace health and safety legislation and codes, sustainability practices and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Implement strategies for personal development and appropriate	1.1 Audit own management strengths and weaknesses and address through training and professional support 1.2 Determine priorities in management and operations and allocate

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
self-management	time to achieve effective outcomes 1.3 Implement strategies for managing conflicting demands and pressure
2. Identify skill requirements and prepare task descriptions	2.1 Identify and describe tasks along with the range of conditions under which performance may need to occur 2.2 Determine most appropriate employment arrangements based on employer and employee needs, responsibilities and rights 2.3 Prepare task descriptions with due regard to equal opportunity employment legislation, workplace health and safety and work-based harassment regulations 2.4 Explore and use opportunities to use government-supported employment and training programs
3. Arrange employment of workforce members	3.1 Assess options for filling job vacancies 3.2 Prepare resources and materials for recruitment and place with media and employment agencies 3.3 Determine criteria for assessing job applicants and prepare applicant evaluation processes and procedures 3.4 Assess applicants against the criteria and finalise selection decision 3.5 Advise all applicants of outcome 3.6 Negotiate terms of employment and ensure adherence to relevant award conditions
4. Manage workforce performance	4.1 Design induction programs for each employee consistent with legislative requirements and effective management 4.2 Establish terms of engagement for consultants and contractors 4.3 Conduct induction programs for new internal and external appointees and establish appropriate records 4.4 Develop work plans for all members of the workforce 4.5 Design and implement strategies for communicating with workers 4.6 Design and implement performance management strategies 4.7 Follow processes for terminating non-performing staff
5. Support personal development, training	5.1 Design and implement strategies to identify skill and knowledge gaps with workers

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
and career development of workers	<p>5.2 Provide on-job training to optimise worker performance and to ensure safety and fairness in the workplace</p> <p>5.3 Identify off-job training requirements and source and support training</p> <p>5.4 Identify and provide opportunities for career development and design and implement strategies for succession</p> <p>5.5 Recognise and reward prior learning, experience and training</p>
6. Manage administrative support	<p>6.1 Design and implement processes and procedures for the administration of staff records</p> <p>6.2 Design and implement administrative procedures and processes to meet legislated requirements</p> <p>6.3 Monitor adherence to awards, enterprise agreements and contracts of employment, and resolve disputes and conflicts</p>
7. Implement work health and safety priorities and procedures	<p>7.1 Communicate and enforce safe work practices among all members of the workforce</p> <p>7.2 Involve all members of staff in hazard identification and risk assessment</p> <p>7.3 Induct new staff into the workplace health and safety system</p>
8. Review labour productivity	<p>8.1 Establish strategies for monitoring labour costs</p> <p>8.2 Review the performance of the enterprise using labour productivity benchmarks</p> <p>8.3 Establish opportunities to develop more efficient work practices by consulting peers, staff and consultants</p> <p>8.4 Implement strategies for improving labour productivity</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Oral communication	<ul style="list-style-type: none"> Effectively engage with employees at interview, to monitor work and to encourage quality performance

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS613 Manage human resources	AHCBUS605 Manage human resources	Element 7 updated to remove overlap with WHS units Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS613 Manage human resources

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed human resources for at least one staff member in one enterprise, including:

- identified skill requirements and prepared at least one task description
- arranged employment of at least one permanent workforce member
- supported career and professional development of at least one workforce member
- implemented workplace health and safety priorities and procedures
- managed administration of staff records
- reviewed labour productivity.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- process to develop job descriptions
- relevant industrial awards
- employee induction programs
- interviewing strategies and protocols
- legislation, regulations and codes of conduct relevant to employers, including:
 - WorkCover insurance
 - superannuation
 - taxation
 - equal employment opportunity
 - anti-discrimination and anti-harassment
 - workplace health and safety
 - privacy
 - unfair dismissal

- contracts of employment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- relationships:
 - access to potential employees and contractors.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS614 Develop a monitoring, evaluation and reporting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop a monitoring, evaluation and reporting program for a project or production process.

This unit applies to individuals who take personal responsibility for their own work and exercise autonomy in undertaking complex work. At this level workers analyse information and exercise judgement to complete a range of advanced skilled activities especially in relation to developing the program. They also analyse, design and communicate solutions to a range of complex problems.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes, sustainability practices and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Define terms of	1.1 Identify and clarify the preferred outcomes of the monitoring,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
reference and evaluation context	evaluation and reporting program, who will use the information and for what purpose 1.2 Identify the key stakeholders who will be consulted 1.3 Select evaluation and monitoring methods that are suitable to the size and significance of the program, and the terms of reference 1.4 Complete a review of existing evidence and literature relevant to the proposed evaluation 1.5 Develop an approach to monitoring and evaluating a project or production that supports broader management targets, Natural Resource Management standards, targets and outputs
2. Identify the key stages and outcomes of the program	2.1 Define key stages, milestones and timeframe 2.2 Communicate the details of the program and delivery timeline for endorsement with clients and stakeholders 2.3 Identify potential risks that may impact on the proposed program 2.4 Refine targets and objectives to minimise risks
3. Define reporting and record keeping requirements for data management	3.1 Identify data collection, management and reporting requirements to meet the objectives of the program 3.2 Identify existing data sets that may be accessed for the program 3.3 Design data collection protocols so relevant standards and required formats are met 3.4 Identify how data will be stored to ensure security and appropriate access, taking required formats into account 3.5 Identify the information products required, taking clients and stakeholders' needs into account, and use in decision making 3.6 Design reports to suit program audience types
4. Identify the resources needed to implement and evaluate the program	4.1 Design an evaluation strategy for the program 4.2 Identify the personnel and skills sets required to implement the evaluation program 4.2 Assess the material resources required to undertake the work 4.3 Determine the cost of the program and develop a budget 4.4 Present an overview of the monitoring, evaluation and reporting program, along with budget for ongoing evaluation, to management

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Interpret and communicate reporting requirements across a range of areas, relevant to product or process
Numeracy	<ul style="list-style-type: none"> Design numerical reports to that clearly express set requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS614 Develop a monitoring, evaluation and reporting program	AHCBUS606 Develop a monitoring, evaluation and reporting program	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS614 Develop a monitoring, evaluation and reporting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed a monitoring, evaluation and reporting program for at least one enterprise, including:

- clarified the context and terms of reference
- identified key stages and outcomes
- assessed and defined data collection requirements
- collected and managed data
- designed and costed an evaluation strategy
- presented strategy, along with costings, to management.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- program design considerations (cost, equality, technically valid, ethics)
- approaches to monitoring and evaluating business processes
- secure data storage
- data analysis processes
- quantitative and qualitative data collection methods for monitoring and evaluation
- data management.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- access to an enterprise conducting activities to be monitored, evaluated and reported.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS615 Implement a monitoring, evaluation and reporting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to implement a monitoring, evaluation and reporting program.

This unit applies to individuals who take personal responsibility for their own work and exercise autonomy in undertaking complex work. They must analyse information and exercise judgement to complete a range of advanced skilled activities in relation to implementing the program. They analyse, design and communicate solutions to a range of complex problems.

All work must be carried out to comply with organisational requirements, workplace health and safety legislation and codes, sustainability practices, and in consultation with the management team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Business (BUS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Implement a monitoring and	1.1 Collect baseline data for program to be monitored and evaluated

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
evaluation strategy	<p>1.2 Consult with stakeholders with an interest in the program to be monitored and evaluated</p> <p>1.3 Brief colleagues, staff and contractors who will be involved in implementing the program on the monitoring and evaluation methods selected and justification</p> <p>1.4 Ensure standard procedures and recording templates are available for use</p> <p>1.5 Ensure program timelines are communicated and monitored</p> <p>1.6 Implement chosen monitoring and evaluation methods in accordance with defined strategy</p> <p>1.7 Monitor program expenditure and compare with budget</p>
2. Collect and analyse data	<p>2.1 Ensure data and information is collected following relevant standards and format</p> <p>2.2 Assess if further data or information is needed to answer key evaluation questions and adjust design as required</p> <p>2.3 Ensure data is appropriately stored and can be accessed as needed</p> <p>2.4 Facilitate access for colleagues and contractors involved in the monitoring and evaluation process</p>
3. Prepare reports and provide information	<p>3.1 Compare outcomes against milestones</p> <p>3.2 Produce reports with information appropriate for stakeholders</p> <p>3.3 Evaluate the effectiveness, efficiency and appropriateness of investment and project priorities as required by the evaluation design</p> <p>3.4 Communicate findings and recommendations to stakeholder groups according to program schedule</p> <p>3.5 Negotiate changes to projects and programs with stakeholders</p> <p>3.6 Implement changes to improve the delivery and alignment of projects with organisational targets</p> <p>3.7 Ensure the style of reporting reflects the needs of the audience and how information is to be used</p>
4. Review the monitoring and evaluation process	<p>4.1 Review and adapt ongoing evaluation strategy and processes, and provide feedback on the implementation and the evaluation design</p> <p>4.2 Foster a culture of self-evaluation and learning through encouraging ongoing participation, consultation and communication with stakeholders</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Produces reports that include data compiled in tables and charts that convey information about the effectiveness and efficiency of the business
Oral communication	<ul style="list-style-type: none"> Effectively engages stakeholders in monitoring, evaluation and reporting program Effectively presents findings of evaluations to stakeholders

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBUS615 Implement a monitoring, evaluation and reporting program	AHCBUS607 Implement a monitoring, evaluation and reporting program	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS615 Implement a monitoring, evaluation and reporting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has implemented a monitoring, evaluation and reporting program for at least one enterprise, or enterprise activity, including:

- collected and managed data
- analysed production or project data
- prepared reports and presented information to stakeholders
- evaluated the effectiveness, efficiency and appropriateness of investment in a project or program
- made recommendations for improvement
- reviewed the evaluation process.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- quantitative and qualitative methods for monitoring and evaluation
- communication and consultation skills to present findings and recommendations
- data management processes and systems
- policy and program management processes
- adaptive management and review cycles.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- enterprise process or project to be monitored and evaluated.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCFP301 Identify the effects of climate change as a factor in land management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to identify climate change as a factor in land management. It incorporates knowledge of climate, climate change and the impacts of a range of land management practices on the production of greenhouse gases.

The unit applies to individuals who participate in land management activities, who require knowledge and skills to make decisions around activities that reduce greenhouse gas emissions.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Carbon Farming (CFP)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify the climate system and climate change as they relate to land management	1.1 Identify the components of the climate system 1.2 Identify the role of the main greenhouse gases in the climate system

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify and describe the natural factors that contribute to climate change</p> <p>1.4 Identify and describe the factors that contribute to human-induced climate change</p> <p>1.5 Identify the potential impacts of climate change on local natural and agricultural environments</p>
2. Identify the roles of vegetation, animals and carbon in greenhouse gas production	<p>2.1 Research the role of land, vegetation and animal management in greenhouse gas production</p> <p>2.2 Identify carbon cycle processes in relation to own work role</p> <p>2.3 Identify the forms of carbon in the carbon cycle and where they are stored</p> <p>2.4 Research the role of vegetation and soil carbon in the mitigation of carbon dioxide levels in the atmosphere</p>
3. Identify and contribute to land management practices that reduce greenhouse gas emissions	<p>3.1 Identify and contribute to land management practices to reduce methane production</p> <p>3.2 Identify and contribute to land management practices to reduce nitrous oxide production</p> <p>3.3 Identify and contribute to land management practices to reduce carbon dioxide production</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Engages with material focused on climate, climate change, greenhouse gas mitigation and land management techniques

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMCFP301 Identify the effects of climate change as a factor in land management	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCFP301 Identify the effects of climate change as a factor in land management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has identified the impacts of climate change on land management and land management techniques that reduce greenhouse gas emissions, including:

- identified at least three effects that climate change has had on a designated site
- identified three land management practices that would reduce greenhouse gas emissions, for a designated site
- identified at least one environmental, one social and one economic benefit that implementing new land management practices could have on a designated site.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the climate system
- the main greenhouse gases and their role in the climate system
- climate change both natural and human-induced
- factors that contribute to human-induced climate change
- common land and agricultural management practices that reduce greenhouse gas emissions, including:
 - vegetation methods: including regenerating native forests, protecting native forests by reducing land clearing, and planting trees to grow carbon stocks
 - savanna burning: including managing bushfires in Australia's savannas to avoid harmful, high-temperature fires
 - agricultural practices: including building soil carbon through changed farming practices such as crop stubble retention, no till cropping, mulching, improved water management, use of organic fertilisers, composting and use of soil conditioners including biochar

- other agricultural practices: including protecting vegetation from stock grazing, reducing emissions from cattle, controlled grazing practices, or other industry-specific practices
- Australia's commitment to global emissions reduction targets
- environmental benefits of changed land management practices, including improved biodiversity above and below ground, improved air, water and soil quality, reduced greenhouse gas emissions, improved movement of water across landscape, increased resilience to drought, and increased land versatility
- social benefits of changed land management practices, including potential for increased social capital, Indigenous community empowerment, and increased resilience to drought
- economic benefits of changed land management practices, including potential for diversified income streams and potential increased farm productivity.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - access to information about climate, climate change and carbon farming practices
 - access to details and history of a designated site.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCFP401 Increase soil organic carbon using land management practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to identify the benefits of increasing soil organic carbon for soil condition or soil health, and to implement a project to increase soil carbon.

The unit applies to individuals who participate in farming and/or land management activities. It may lead to participation in an approved carbon farming project to generate carbon credits.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Carbon Farming (CFP)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify benefits of increasing soil organic carbon	1.1 Identify the role, and forms, of soil organic carbon in soil 1.2 Identify carbon as a component of soil organic matter 1.3 Analyse the benefits of increasing soil organic carbon in soil 1.4 Identify the role of photosynthesis in increasing soil organic

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	carbon 1.5 Determine land management practices that store or sequester carbon 1.6 Identify other interactions of ecosystem processes in increasing soil organic carbon
2. Identify co-benefits of increasing soil organic carbon	2.1 Identify land management practices to increase soil organic carbon 2.2 Consider the social and cultural, environmental and economic benefits of increasing soil organic carbon
3. Plan project to increase soil organic carbon	3.1 Identify site for soil carbon project 3.2 Identify and select a strategy or method to increase soil organic carbon 3.3 Identify equipment and resources required 3.4 Carry out cost-benefit analysis of implementing the project 3.5 Plan strategy to measure soil organic matter in soil, and record results
4. Implement project	4.1 Measure and record soil carbon as baseline for project 4.2 Implement project in line with selected method and document results 4.3 Monitor and maintain soil to preserve soil health through changing conditions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret written material focused on increasing carbon in soil
Numeracy	<ul style="list-style-type: none"> Uses formulae to calculate soil organic matter (SOM)

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCFP401 Increase soil organic carbon using land management practices	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCFP401 Increase soil organic carbon using land management practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has increased carbon in soil for a designated plot of land, including:

- identified the benefits and co-benefits of increasing carbon in soil
- planned and implemented a project to increase soil organic matter in soil.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- how land use and management practices impact on soil health
- physical, chemical and biological properties of healthy soil
- opportunities presented by degraded soil (or soil that has less soil carbon than normally expected under standard, normal or common land management practices for the local area)
- land management practices that have the potential to increase soil health and agricultural productivity, dependent on local climate and soil type, including:
 - no till or conservation tillage and controlled traffic
 - cover crops
 - pasture cropping
 - crop rotation (depending on rotation and crop)
 - perennial-based systems
 - integrated pest management and weed management
 - managed movement of water
- co-benefits of increased carbon in soil, including:

- environmental benefits: improved biodiversity above and below ground, improved air, water and soil quality, reduced greenhouse gas emissions, improved movement of water across landscape, reduced salinity/erosion/acidification/compaction, increased resilience to drought, and increased land versatility
- social benefits: including increased resilience to drought, more stable and diverse income, healthier people and communities, and improved succession planning
- economic benefits: including potential for diversified income streams, increased farm productivity, access to finance, increased land versatility, new skills and career development, and less income spent on supplements and fertilisers.
- reasons for measuring soil organic carbon, including as a measure of soil health and as an estimate of stocks of soil organic carbon for carbon trading
- informal methods for measuring soil carbon, including percentage tests across a paddock
- using baseline measurements to estimate potential additional soil carbon
- approved methods for soil-based carbon farming projects
- soil quality calculators at soilquality.org.au.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - designated plot of land that has potential for increasing soil organic carbon
 - equipment and resources relevant to method
 - access to information about soil land management methods and practices.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCFP402 Prepare to comply with measuring and modelling requirements of carbon farming methods

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to comply with the reporting guidelines for measuring and modelling methods of land-based carbon farming projects. It covers the requirement to collect project data and information requirements.

The unit applies to farmers and land managers who intend to earn carbon credits by storing carbon or reducing greenhouse gas emissions. To be eligible, projects must comply with a project methodology (or method) approved for use under the carbon program or fund.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Carbon Farming (CFP)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine compliance obligations of carbon farming method	1.1 Identify carbon farming method 1.2 Access compliance requirements of method 1.3 Interpret requirements of method and prepare to meet requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Establish project area	2.1 Determine requirement for collection and reporting of geographic information, specific to method and guidelines 2.2 Use geospatial data to define project area 2.3 Define activity areas including exclusions areas, as required by the method
3. Collect and input data	3.1 Identify data collection procedure associated with method 3.2 Collect data according to project methodology 3.3 Input and save data as specified by method or technical guidance documentation
4. Analyse data for submission to carbon market regulator	4.1 Calculate carbon abatement or storage for reporting period 4.2 Generate report on carbon abatement or storage using approved tool or procedure 4.3 Submit report to the carbon market regulator 4.4 Follow regulator procedures to receive carbon credits
5. Comply with audit requirements	5.1 Ensure records are secure and backed-up 5.2 Ascertain audit requirements of method 5.3 Choose an auditor approved by carbon market regulator 5.4 Participate in audit process in line with auditor's directions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Get the job done	<ul style="list-style-type: none"> Research and manage complex information
Reading	<ul style="list-style-type: none"> Interpret documentation from a variety of sources
Numeracy	<ul style="list-style-type: none"> Interpret data in maps, tables, charts and/or graphs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCFP402 Prepare to comply with measuring and modelling requirements of carbon farming method	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet at: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCFP402 Prepare to comply with measuring and modelling requirements of carbon farming methods

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared to comply with the measuring and modelling requirements of one approved, carbon farming method, including:

- established the project area utilising geospatial data
- collected, inputted and analysed carbon data
- followed approved carbon farming method procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- relevant carbon farming legislation, rules, method, technical guidance documentation and related procedures
- contemporary sources of geospatial data:
 - Global Positioning Systems (GPS) and Global Navigation Satellite System (GNSS)
 - field surveys and sampling
 - orthorectified aerial photographs
 - orthorectified satellite imagery
 - cadastral database
 - publicly available datasets
- criteria used to assess fitness for purpose of datasets
- approved methods to reduce emissions or increase carbon storage
- formats used to report to the regulator.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources:
 - GPS tools, approved modelling tools and calculators
- specifications:
 - access to legislation, regulations and information about carbon farming methods and markets.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet at: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCFP403 Identify opportunities and risks in carbon farming projects

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to identify the opportunities and risks involved in undertaking a carbon farming project for a given site/s.

The unit applies to individual land owners, land managers or members of a community, or other entity, who assess the opportunities and feasibility of starting up, or taking part in, a land-based carbon farming project.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Carbon Farming (CFP)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify carbon farming opportunities	1.1 Identify potential site/s for carbon farming project 1.2 Consider land type, land use, local climate and investment 1.3 Consider carbon farming methods that may apply to selected site/s and associated social, cultural and economic benefits 1.4 Determine rights to lands, eligible interest holder groups and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	project boundaries 1.5 Investigate markets that offer carbon credits for approved carbon farming projects
2. Consider feasibility of the carbon farming project	2.1 Estimate total costs of project 2.2 Consider technological systems required to monitor project and collect, collate and record relevant data 2.3 Identify the management, governance and technical skills required to implement a carbon farming project 2.4 Assess requirement to contract suitably qualified or experienced personnel 2.5 Consider services that may be offered by carbon project developers, agents, aggregators and advisors
3. Consider financial aspects of the carbon farming project	3.1 Identify stakeholders and consultation processes 3.2 Estimate ongoing project costs 3.3 Roughly estimate anticipated carbon abatement 3.4 Investigate benefits of working with an agent or advisor who holds an Australian Financial Services Licence (AFSL) to identify financial risks 3.5 Assess risks of working with an agent or advisor who does not hold an AFSL
4. Analyse overall benefits and risks associated with carbon farming project	4.1 Analyse direct benefits and ancillary benefits of potential carbon farming project 4.2 Analyse risks associated with the implementation of the carbon farming project 4.3 Present a summary risk analysis document to stakeholders and make recommendations that provide options for carbon farming

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none">Interpret material focussed on carbon farming funds and methods

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCFP403 Identify opportunities and risks in carbon farming projects	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet at: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCFP403 Identify opportunities and risks in carbon farming projects

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has identified the benefits and risks associated with a carbon farming project for a designated site, utilising at least one land-based method. This includes:

- identifying appropriate method for land type
- conducting a feasibility assessment
- assessing financial viability
- documenting and developing a summary analysis

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- carbon farming project methods to store carbon or avoid emissions from agricultural or land management activities
- implementation costs of a land-based carbon farming project method, including equipment, technology, preparation of land, service providers such as soil testing services, legal advice, engineering services, carbon advisor or agent
- ownership/leasing arrangements for site (that may need to be in place for up to 25 years)
- key questions to ask a carbon farming advisor or agent
- markets for carbon credits, including the Emissions Reduction Fund (ERF).

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources:

- designated site
- specifications:
 - access to information about carbon farming methods and markets.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet at: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCFP404 Plan a land-based carbon farming project

Modification History

Release	Comments
Release 1	This version released with Agriculture Horticulture and Conservation and Land Management Training Package 4.0.

Application

This unit of competency describes the skills and knowledge required to plan a carbon farming project based on a land-based project method, to earn carbon credits through any carbon market.

The unit applies to individuals who may own or manage land and who wish to participate in an emissions reduction or carbon farming project. The unit may also apply to carbon project advisers.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Carbon Farming (CFP)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out preliminary planning activities	1.1 Establish eligibility to participate in the target carbon market method 1.2 Identify the project site/s including elements and features that will influence the project 1.3 Ascertain determined rights to land and project boundaries

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify the approved carbon farming method</p> <p>1.5 Identify how reductions in emissions and/or carbon storage will be measured for the method</p> <p>1.6 Determine the regulatory requirements of the method</p> <p>1.7 Seek free, prior and informed consent of people or organisations who hold an eligible interest in site/s</p> <p>1.8 Undertake preliminary cost-benefit analysis</p>
2. Prepare and develop the plan	<p>2.1 Identify responsibilities of owning and managing a carbon farming project</p> <p>2.2 Identify advisory services, management, governance and technical services required to implement project</p> <p>2.3 Identify equipment, tools and labour required to implement project</p> <p>2.4 Identify project risks and establish controls</p> <p>2.5 Prepare project timelines and key work tasks, taking seasonal factors and interdependencies into account</p> <p>2.6 Plan reporting and auditing schedules to comply with requirements of method</p> <p>2.7 Identify circumstances under which the market regulator will issue carbon credits or offsets</p>
3. Cost implementation of project	<p>3.1 Obtain current prices for equipment, technology, labour and advisory services to implement method</p> <p>3.2 Calculate overall costs to implement project</p> <p>3.3 Prepare an abatement estimate utilising method calculation, approved tool or expert advice</p> <p>3.4 Prepare return on investment analysis</p>
4. Present project plan	<p>4.1 Finalise project plan according to audit requirements of method</p> <p>4.2 Present plan to stakeholder for approval to participate in the targeted carbon market</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret carbon market planning and implementation guidelines
Numeracy	<ul style="list-style-type: none"> Estimate return on investment
Writing	<ul style="list-style-type: none"> Develop and document project plan

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCFP404 Plan a land-based carbon farming project	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCFP404 Plan a land-based carbon farming project

Modification History

Release	Comments
Release 1	This version released with Agriculture Horticulture and Conservation and Land Management Training Package 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned a carbon farming project for one site, utilising one land-based method approved by the target market, including preparing a project plan that specifies:

- implementation costs
- anticipated return on investment
- project risks and risk management controls
- regulatory requirements of the fund in which to sell carbon credits.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislation and regulations that guide the carbon fund
- latest version of the *Native Title Act 1993*
- dealing with multiple land interest holders (e.g. Indigenous groups, pastoralists and the Crown)
- carbon rights protocols for exclusive and non-exclusive native title holders
- consent rights for native title, Crown land and mining leases
- details of relevant approved carbon farming method including eligibility requirements, project area requirements, net abatement calculation requirements, monitoring, reporting and auditing requirements and further information sources
- how to plan and implement large scale projects relevant to method
- requirements for measuring emissions from land-based sources relevant to the method
- formats for organising and presenting financial, qualitative and quantitative information
- personal and professional liability
- duty of care

- managing environmental risk
- tools to estimate carbon abatement
- certification requirements of auditors and technical advisors, as specified by method
- benefits of working with an agent or advisor who holds an Australian Financial Services Licence (AFSL).

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources:
 - approved modelling tools and calculators
- specifications:
 - access to legislation, regulations and information about carbon farming methods and markets.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCFP405 Increase carbon using vegetation and/or agricultural methods

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to identify the benefits of increasing carbon in the biosphere, using vegetation and agricultural methods, and to implement a project to reduce emissions or store carbon.

This unit does not cover increasing carbon in soil (refer to AHCCFP401 Increase soil organic carbon using land management practices).

The unit applies to individuals who participate in farming and/or land management activities. It may lead to participation in an approved carbon farming project to generate carbon credits.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Carbon Farming (CFP)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify benefits of increasing carbon	1.1 Identify the role, and forms, of carbon in the environment 1.2 Analyse the benefits of increasing carbon

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Analyse the benefits of reducing greenhouse emissions 1.4 Determine vegetation and/or agricultural practices that increase carbon or reduce greenhouse emissions 1.5 Consider the associated social and cultural, environmental and economic benefits of increasing carbon
2. Identify co-benefits of increasing carbon in the biosphere	2.1 Identify land management practices to increase carbon using vegetation and agricultural methods 2.2 Consider the social and cultural, environmental and economic benefits of increasing carbon in the biosphere
3. Plan project to increase carbon	3.1 Identify appropriate site/s for project methodology 3.2 Choose strategy or method to increase carbon or reduce emissions 3.3 Identify equipment and resources required 3.4 Identify risks associated with undertaking the project 3.5 Carry out cost-benefit analysis of implementing the project 3.6 Plan strategy to measure or model carbon and record results
4. Implement and monitor project	4.1 Measure carbon as baseline for project and document 4.2 Implement project in line with selected method 4.3 Monitor project to maintain carbon storage or reduced emissions through changing conditions and document

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret written material focused on vegetation and/or agricultural carbon farming methods
Numeracy	<ul style="list-style-type: none"> Measure or model carbon specific to chosen method

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCFP405 Increase carbon using vegetation and/or agricultural methods	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCFP405 Increase carbon using vegetation and/or agricultural methods

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has increased carbon using vegetation and/or agricultural methods for a designated plot of land, including:

- identified the direct and associated benefits of increasing carbon
- identified method appropriate to plot of land
- assessed risks associated with project methodology
- calculated costs of carbon project
- planned and implemented a project to increase carbon or reduce greenhouse emissions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- how land use and management practices impact on carbon
- land management vegetation practices that can increase carbon, such as avoiding clearing of native growth, farm forestry, plantations, controlled burning of savanna, and human-induced regeneration of native forest
- agricultural practices that can increase carbon and/or reduce emissions, such as changes to beef cattle herd management, destruction of methane, feeding dietary additives to cows, changed grazing regimes, and improved herd management
- co-benefits of increased carbon, including:
 - environmental benefits: improved biodiversity above and below ground, improved air, water and soil quality, reduced greenhouse gas emissions, improved movement of water across landscape, reduced salinity/erosion/acidification/compaction, increased resilience to drought, and increased land versatility
 - social benefits: including increased resilience to drought, more stable and diverse income, healthier people and communities, and improved succession planning

- economic benefits: including diversified income streams, increased farm productivity, access to finance, increased land versatility, new skills and career development, and less income spent on supplements and fertilisers
- informal methods for measuring carbon, including use of plots, and vegetation datasets
- industry-specific carbon calculators
- baseline measurements that allow scope for improvement
- approved methods for vegetation and agriculture-based carbon farming projects
- payments available for increasing carbon levels.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - designated plot of land or animal group
 - equipment and resources relevant to method
 - access to information about vegetation or agricultural carbon farming methods and practices.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCFP501 Advise on carbon farming project planning and implementation

Modification History

Release	Comments
Release 1	This version released with Agriculture Horticulture and Conservation and Land Management Training Package 4.0.

Application

This unit of competency describes the skills and knowledge required to provide advice on the processes involved in planning, implementing and monitoring carbon farming projects that utilise approved methods.

The unit applies to individuals who provide advice to land owners, eligible interest holder groups and land managers about implementing projects to earn carbon credits. This unit applies in the context of at least one approved carbon farming method to increase carbon storage or reduce emissions.

Note the term 'advice' referred to in this unit does not relate to financial advice which requires an Australian Financial Services License (AFSL). This unit does not address the skills or the generic knowledge requirements in 'ASIC Regulatory Guide 146 Licensing: Training of financial product advisors'.

Refer to FMSFMK512 Apply knowledge of emissions markets for skills and knowledge to engage with carbon funds.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Carbon Farming (CFP)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Define requisites for planning a carbon farming project	<p>1.1 Explain to client advice provided does not cover financial advice that requires an ASFL</p> <p>1.2 Describe phases for planning an approved carbon farming project</p> <p>1.3 Define equipment, specialist services and service providers required to plan and implement a project</p> <p>1.4 Specify the means of determining the project area for carbon storage and emissions avoidance methods</p> <p>1.5 Determine the need for and use of relevant measuring and modelling tools</p> <p>1.6 Assess the impact of differing crediting and reporting periods on project planning and implementation</p> <p>1.7 Determine the steps required to calculate the baseline and project emissions</p> <p>1.8 Outline the responsibilities of owning and managing an approved project</p>
2. Determine requisites for implementing a project	<p>2.1 Detail the requirements and process for owning or managing a carbon project</p> <p>2.2 Define the requirements and process for applying for registration</p> <p>2.3 Outline methods of data collection for emissions avoidance and carbon storage projects</p> <p>2.4 Determine systems and procedures for accurately measuring and recording project emissions</p> <p>2.5 Specify procedures for maintaining records of procedures undertaken, and mitigation achieved</p> <p>2.6 Establish equipment maintenance and calibration requirements</p> <p>2.7 Detail project audit requirements and the providers of audit services</p>
3. Provide information on applying for carbon credits	<p>3.1 Outline requirements for completing a carbon mitigation or offsets report</p> <p>3.2 Define steps involved in commissioning an audit report</p> <p>3.3 Specify the process for applying for carbon credits</p> <p>3.4 Provide information on the circumstances under which the fund regulator will issue carbon credits and their maintenance on the register</p>
4. Provide information	4.1 Explain project processes and administrative and compliance

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
on project administration and implementation	requirements 4.2 Ensure responses to stakeholder enquiries are comprehensive, clear and delivered in the most appropriate form and within the agreed timeframe 4.3 Ensure enquiries outside area of responsibility and knowledge are identified and assistance is sought, or the enquiry is referred onto a relevant expert 4.4 Facilitate sourcing of AFSL approved advice

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Research and manage complex information
Reading	<ul style="list-style-type: none"> Interpret documentation from a variety of sources Analyse information to ensure currency, accuracy and appropriateness to client needs
Oral communication	<ul style="list-style-type: none"> Establish rapport and interact respectfully with client Determine and confirm client requirements Negotiate financial transactions with clients
Get the work done	<ul style="list-style-type: none"> Apply ethical principles when providing advice for decision making

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMCFP501 Advise on carbon farming project planning and	Not applicable	New unit	No equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
implementation			

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCFP501 Advise on carbon farming project planning and implementation

Modification History

Release	Comments
Release 1	This version released with Agriculture Horticulture and Conservation and Land Management Training Package 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has advised at least one potential client on carbon farming project planning and implementation, following the requirements of at least one approved carbon farming method. This includes:

- compliance requirements
- phases of project
- data collection requirements
- administrative requirements

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- requirements of approved methods, including:
 - project eligibility and scope
 - identifying the baseline scenario
 - project area
 - estimating abatement and/or carbon storage
 - data collection methods relevant to emissions avoidance and carbon storage
 - monitoring, record keeping and reporting
 - audit requirements
 - providers of audit services
 - commissioning audits
- legal requirements, regulations relating to project proponent requirements and project requirements, including:
 - creating and using a carbon credit account
 - applying for project registration

- implementing the project in accordance with the approved method
- writing and submitting reports and arranging audit reports
- applying for, and receiving, carbon credits
- closing and/or withdrawing from a project
- varying a project
- relinquishing carbon credits if required
- scheme oversight, institutions and governance
- equipment, specialist services and service providers required to plan and implement the project
- impact of differing crediting and reporting periods on project planning and implementation
- stakeholder responsibilities of owning and managing a project
- procedures for maintaining records
- project audit requirements and the providers of audit services
- role of carbon industry associations, carbon farming support networks and related codes of practice.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources:
 - access to carbon fund website and approved modelling tools and calculators
- specifications:
 - access to legislation, regulations and information about carbon farming methods and markets
- relationships:
 - access to clients.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM303 Prepare and apply chemicals

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare and apply chemicals for the control of pests across a range of industry sectors.

This unit covers the use of general application equipment used across a variety of industries including; boom sprays, orchard air-blast sprayers, handheld spray equipment, wipers, dry chemical applicators, dips, pour-on, spot-on, vaccination and drenching equipment.

All work must be carried out to comply with workplace procedures, work hand safety and pesticide legislation and codes.

All work must be carried out to comply with chemical label instructions, Safety Data Sheets (SDS's), the organisation's application plan and relevant legislation.

This unit applies to individuals who work under broad direction and take responsibility for their own work and use discretion and judgement in the selection and use of available resources.

Licensing, legislative, regulatory or certification requirements may apply to this unit. Candidates should confirm the regulatory requirements that apply in their relevant State or Territory before undertaking this unit.

This unit may be deemed to have a time limit when used as part of an accreditation or licence process.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine the need for chemical use and prepare an application plan	1.1 Identify the nature and level of the pest, weed infestation or disease, assess the need for control 1.2 Assess the requirement for chemical use as an option within an integrated pest management strategy 1.3 Undertake a hazard and risk analysis of different chemical options 1.4 Confirm requirement for chemical application 1.5 Assess the spray drift risk of various application options 1.6 Assess the risk to sensitive areas and environmentally sensitive organisms 1.7 Prepare application/spray plan where required
2. Prepare chemical mixes	2.1 Access the workplace application or spray plan to determine chemical and target, application rate or dose, type of application equipment, set-up requirements and amount to be applied as per the label instructions 2.2 Identify potential hazards, assess risks and implement control measures 2.3 Interpret and apply requirements from chemical labels 2.4 Select appropriate personal protective equipment (PPE) for each stage of work and ensure correct fit 2.5 Select appropriate mixing equipment and a suitable location for mixing and loading 2.6 Mix chemicals in accordance with registered use and clean

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	equipment when finished task 2.7 Follow label instructions in the event of a spill 2.8 Confirm that neighbours have been notified of chemical application as appropriate
3. Calibrate application equipment	3.1 Select application equipment to be used to minimise spray drift risk and maximise efficacy 3.2 Carry out pre-operational checks of application equipment 3.3 Calibrate equipment in accordance with manufacturers' specifications and application/spray plan. 3.4 Safely load chemical mix wearing appropriate Personal Protective Equipment (PPE) and controlling risks to human health and the environment
4. Apply chemicals	4.1 Monitor meteorological conditions and forecasts prior to and during application to minimise spray drift and other off target movement of chemicals 4.2 Select and use appropriate PPE in accordance with chemical label and SDS's 4.3 Apply chemical in accordance with the label and application/spray plan 4.4 Assess and minimise risks to others, product integrity and the environment 4.5 Follow chemical spill or accident procedures in the event of a spill
5. Clean up equipment and complete records	5.1 Dispose of excess chemicals and containers as per label and SDS instructions 5.2 Clean and decontaminate application equipment in appropriate location 5.3 Clean and store personal protective equipment in appropriate location 5.4 Report incidents 5.5 Complete all records

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM303 Prepare and apply chemicals Release 3	AHCCHM303 Prepare and apply chemicals Release 2	Minor typographical errors corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM303 Prepare and apply chemicals

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine the need for chemical application
- develop an application/spray plan
- identify hazards and implement risk control procedures to ensure a safe workplace
- interpret and apply chemical label requirements included in the application or spray plan
- identify weather conditions that impact on spray drift risk and implement control measures
- conduct pre-operational checks of application equipment
- calibrate handheld and/or powered application equipment relevant to the industry sector
- mix and load chemicals in accordance with label requirements
- measure and record weather conditions before and during and after application
- apply chemicals safely in compliance with labels, legislation and codes of practice
- dispose of surplus chemicals and empty containers
- record relevant information including amount of chemical applied
- use appropriate personal protective equipment
- follow emergency procedures during an accident or spillage.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- options for pest control based on the Integrated Pest and Resistance Management Plan
- pest and/or disease resistance management
- various chemical labels and SDS formats
- impact of meteorological factors on the safe and effective application of chemicals
- factors that determine spray drift risk including droplet size, wind speed, temperature and temperature inversions and approaches to controlling spray drift risk
- risk factors including human and animal health, weather prior to, during and after application, spillage, residues in plants and animals consumed as food and environmental
- how to mix chemicals including mixing order, adjuvants and water quality
- requirements for disposal of excess chemicals, clearing spillages and equipment clean up
- how to select, operate and use a variety of application equipment including boom sprays
- features, functions and calibration techniques for a range of powered and hand held application equipment relevant to the industry sector
- spray nozzle identification, selection, operation and use
- pests, weeds and/or diseases relevant to the industry sector
- legislation, regulations and licensing requirements in relation to chemical use
- APVMA policy on spray drift management.

Assessment Conditions

Competency is to be assessed in the workplace OR simulated environment that accurately reflects performance in a real workplace setting.

The candidate must be assessed at least once calibrating application equipment.

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM306 Prepare and apply chemicals for hand held application equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare a basic application plan, prepare chemicals and equipment and apply chemicals for the control of identified pests, weeds or diseases using hand held application equipment.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine the need for chemical use and	1.1 Identify the characteristics of the pest, weed or disease and assess the control requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
prepare basic application plan	<p>1.2 Assess and select a chemical control option according to workplace procedures</p> <p>1.3 Identify health and safety in the workplace hazards, risks and controls for selected chemical</p> <p>1.4 Determine the requirement for chemical usage according to chemical label instructions</p> <p>1.5 Prepare a basic application plan according to workplace procedures</p> <p>1.6 Notify stakeholders of intended chemical application according to workplace procedures and legislative and regulatory requirements</p>
2. Prepare chemical mixes	<p>2.1 Access the application plan and determine chemical application parameters according to chemical label instructions</p> <p>2.2 Identify hazards, assess risks and implement control measures for application method according to chemical label and health and safety in the workplace procedures</p> <p>2.3 Interpret and apply requirements from chemical labels and safety data sheets (SDS)</p> <p>2.4 Identify, select, fit and use personal protective equipment (PPE) according to chemical label and workplace safety procedures</p> <p>2.5 Select appropriate mixing equipment and a suitable location for mixing and loading according to workplace procedures</p> <p>2.6 Prepare chemicals according to chemical label instructions</p> <p>2.7 Clean preparation equipment and work site of residues and spillage according to chemical label instructions and workplace procedures</p>
3. Calibrate application equipment	<p>3.1 Select application equipment to be used to minimise off target risk and maximise efficacy</p> <p>3.2 Carry out pre-operational checks of application equipment</p> <p>3.3 Calibrate equipment in accordance with manufacturers' specifications and application plan</p> <p>3.4 Load the equipment with chemical according to operating instructions and workplace safety procedures</p>
4. Apply chemicals	<p>4.1 Monitor and assess weather conditions and forecasts to ensure effective chemical application according to application plan</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.2 Identify, select, fit and use PPE according to chemical label instructions</p> <p>4.3 Apply chemical while minimising off target damage according to label directions, SDS and application plan</p> <p>4.4 Assess health and safety hazards and risks and implement controls according to workplace procedures</p> <p>4.5 Clean up chemical spills according to workplace and manufacturer procedures</p>
5. Clean up equipment and complete records	<p>5.1 Clean and decontaminate application equipment according to operator instructions, SDS and legislative and regulatory requirements</p> <p>5.2 Dispose of chemicals and used containers according to manufacturer instructions and legislative and regulatory requirements</p> <p>5.3 Clean and store PPE according to workplace procedures</p> <p>5.4 Complete chemical treatment records and report incidents according to workplace procedures and legislative and regulatory requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret SDS, signs and symbols, chemical labels, equipment operating instruction and other documentation and consolidates information to determine chemical application actions and activity
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational records using clear language and correct spelling, grammar and terminology
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to determine rates of application chemical mixtures
Oral Communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges using active listening and to convey and clarify chemical applications notifications
Navigate the world of	<ul style="list-style-type: none"> Take responsibility for following policies, procedures and

Skill	Description
work	regulations <ul style="list-style-type: none"> Identify and implement manufacturer requirements for chemical use
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks required for chemical application activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM306 Prepare and apply chemicals for hand held application equipment Release 2	AHCCHM306 Prepare and apply chemicals for hand held application equipment Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM306 Prepare and apply chemicals for hand held application equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have prepared and applied chemicals using hand held application equipment, including:

- determined the need for chemical application by assessing the specific infestation
- developed an application plan according to workplace procedures
- identified health and safety hazards, risk and implemented control procedures and used personal protective equipment (PPE) according to workplace procedures
- notified stakeholders of planned chemical application
- interpreted chemical labels and applied chemical according to manufacturer requirements, safety data sheets (SDS) and application plan
- determined the chemical application parameters according to workplace and
- complied with manufacturer requirements, regulations and environmental factors
- monitored and assessed weather conditions for application
- selected and conducted pre-operational checks of equipment according to operator instructions
- completed at least one calibration activity for hand held application equipment
- mixed and loaded chemicals in accordance with label and application plan
- cleaned equipment, spills and disposed of waste according to procedures
- maintained records and reported incidents according to workplace procedures and regulations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- control options when selecting chemicals for pest, disease and weed control, including:
 - chemical
 - cultural
 - biological
 - Integrated Pest Management
- parameters affecting the selection of chemical and equipment for application, including:
 - common pests, weeds and diseases
 - rate of application
 - type of application equipment
 - set-up requirements
 - pest and disease resistance
- chemical labels, SDS reading and interpretation
- impact of weather factors on the safe and effective application of chemicals
- factors that determine off target contamination, including:
 - physical movement of chemicals (e.g. animals moving baits or soil movement)
 - chemical formulation
 - droplet size
 - wind speed
 - temperature
 - temperature inversions
 - controlling spray drift and air concentrations
- risk factors of chemical application, including:
 - human and animal health
 - spillage
 - residues in environment, plants and animals
 - withholding periods
- preparing chemicals including mixing order, compatibility, adjuvants and water quality
- requirements for disposal of excess chemicals, clearing spillages and equipment clean up
- selecting and operating suitable hand held application equipment, including:
 - operation and use
 - features, functions
 - calibration techniques
 - nozzle identification and selection
- legislation, regulations and licensing requirements in relation to chemical use
- stakeholders and required notifications including, neighbours, staff and statutory notifications
- health and safety in the workplace hazards, risks and controls including PPE
- regulatory and industry policies on off target management.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - chemicals
 - PPE
 - application equipment
 - chemical measuring and mixing equipment
- specifications:
 - specific workplace documents, including work instructions and procedures for chemical application
 - chemical labels and SDS
 - legislation and regulations about use of chemicals
 - manufacturers' operation and maintenance instructions for equipment
 - access to weather reports.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM406 Provide advice and sell farm chemicals

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify customer needs, provide advice, sell, handle and maintain farm chemicals.

The unit applies to individuals who apply specialist skills and knowledge to providing advice and selling farm chemicals. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish customer needs	1.1 Use interpersonal skills to engage customer and identify needs 1.2 Handle customer enquiries courteously and promptly according to workplace procedures and legislative requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Match available products to customer needs and environmental considerations
2. Research and provide product advice	<p>2.1 Research and update knowledge and understanding of farm chemicals and related products from authoritative sources</p> <p>2.2 Research local workplace and district requirements for farm chemical products</p> <p>2.3 Provide advice to customer in a timely and professional manner according to workplace procedures and legislative requirements</p> <p>2.4 Consider and discuss environmental considerations, non-chemical alternatives and additional products</p> <p>2.5 Address customer concerns and questions</p> <p>2.6 Check that information and directions on the product label are understood by the customer</p> <p>2.7 Provide safety information to the customer for recommended products</p> <p>2.8 Prepare and supply quotations according to workplace procedures</p>
3. Sell products	<p>3.1 Check relevant licences or accreditation regarding the sale and handling of farm chemicals are held by salesperson and workplace</p> <p>3.2 Complete sales to maximise potential for customer satisfaction according to workplace procedures and legislative requirements</p> <p>3.3 Supply Safety Data Sheets (SDS) to customers purchasing registered chemicals</p> <p>3.4 Identify and respond to opportunities for add-on and repeat sales</p>
4. Complete sales documentation and maintain products	<p>4.1 Handle and store farm chemical products safely and efficiently according to workplace health and safety and manufacturer requirements, and chemical legislation and regulations</p> <p>4.2 Complete sales documentation according to workplace procedures</p> <p>4.3 Monitor sales results against specified criteria</p> <p>4.4 Review sales techniques to enhance future sales results</p> <p>4.5 Monitor stock levels and follow reordering procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about farm chemicals, non-chemical alternatives and related product range, and legislative requirements Interpret product labels and SDS for farm chemicals
Writing	<ul style="list-style-type: none"> Record product sales and reordering
Oral communication	<ul style="list-style-type: none"> Use clear language with customers to gather information and match products to customer needs, explain products and suggest non-chemical alternatives and additional products and services
Numeracy	<ul style="list-style-type: none"> Calculate farm chemical product formulations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM406 Provide advice and sell farm chemicals	AHCMER403 Provide advice and sell farm chemicals	Unit code and sector changed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM406 Provide advice and sell farm chemicals

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has provided advice and sold farm chemicals on at least three occasions, and has:

- engaged with and advised customer on the range of products available, received information and created additional sales opportunities
- complied with relevant legislative requirements in sales environments, including; fair trading, trade practices and sale of goods legislation and public liability
- represented the workplace in a professional manner when dealing with customers
- researched farm chemical supplier information to retain technical currency in all aspects of farm chemicals relevant to local district requirements
- applied workplace procedures for providing advice on farm chemicals and related products
- discussed benefits of products and non-chemical alternatives
- supplied Safety Data Sheets (SDS) with all registered chemicals
- encouraged add on sales and repeat sales
- applied workplace health and safety procedures for the safe handling of farm chemicals and related products.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles of customer service and sales techniques
- requirements of local or specific customers for farm chemicals
- legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- workplace procedures for providing advice on farm chemicals and related products
- potential environmental impact of chemicals

- chemical formulations, available proprietary products and their applications
- the content and legal status of registered chemical labels
- hazardous chemical (HAZCHEM) code, Australian Dangerous Goods Code, pesticides and environmental legislation, chemical safety legislation and regulations, and workplace health and safety procedures relevant to the safe handling of farm chemicals and related products
- licences or accreditation relevant to the sale and handling of farm chemicals.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - farm chemicals
 - SDS for registered chemicals
- specifications:
 - legislative requirements relevant to sales environments, including fair trading, trade practices and sale of goods legislation and public liability
 - workplace procedures for providing advice on farm chemicals and related products
 - HAZCHEM code, Australian Dangerous Goods Code, pesticides and environmental legislation, chemical safety legislation and regulations, and workplace health and safety procedures relevant to the safe handling of farm chemicals and related products
- relationships:
 - customers.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCMN102 Apply effective work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan and complete tasks effectively within a workplace environment, including working with others, using technologies and solving simple work problems.

This unit is designed for use in a Pathway qualification or skills set. It should not be used in a qualification that has a direct job outcome.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Common (CMN)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan, organise and complete daily work	1.1 Identify and interpret work instructions and priorities in consultation with supervisor 1.2 Determine and map out appropriate work plan or daily routine 1.3 Determine, collect and organise materials, resources and information needed to complete work

Element	Performance criteria
	1.4 Complete work tasks within designated timelines and in line with quality standards and instructions 1.5 Follow work health and safety policies 1.6 Deal with problems that arise in a practical, timely and appropriate manner and seek assistance when required 1.7 Seek feedback on work performance and make improvements as required
2. Communicate effectively	2.1 Identify appropriate lines of communication with supervisors, colleagues and customers 2.2 Use effective communication skills as well as literacy and numeracy skills, to gather and convey information 2.3 Demonstrate appropriate non-verbal behaviour
3. Work with others	3.1 Identify work roles of self and others in the workplace 3.2 Contribute to team outcomes in a manner that fulfils own work responsibilities and promotes cooperation and good relationships 3.3 Interact respectfully with customers and colleagues from diverse backgrounds
4. Use workplace technology	4.1 Select appropriate workplace technology to complete work tasks and use according to workplace and manufacturer guidelines and instructions 4.2 Inspect workplace technology to ensure it is working properly and take precautions to reduce risks to technology and self 4.3 Take appropriate action to address or report problems with workplace technology 4.4 Care for workplace technology according to workplace and manufacturer guidelines and instructions
5. Solve work problems	5.1 Identify problems and determine practical or creative solutions within scope of individual responsibility 5.2 Seek assistance from key personnel when required 5.3 Report workplace problems as required using workplace procedures
6. Adapt to change	6.1 Identify, clarify and accommodate new work requirements or situations 6.2 Identify possible practical or creative options to deal with workplace challenges, and discuss with supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AGFCMN102A Apply effective work practices.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCMN102 Apply effective work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- interpret responsibilities and plan own work activities
- follow work health and safety policies
- apply relevant ethical practices and codes of practice in the course of work activities
- recognise simple numerical information relating to work activity
- communicate effectively in the course of work activities
- complete work activities in collaboration with others according to instructions, procedures and applicable regulations
- identify, report and address problems according to workplace procedures
- complete work activities with required attention to detail and without damage to goods, equipment or personnel
- use a range of workplace technologies
- use industry standard terminology

Knowledge Evidence

The candidate must demonstrate knowledge of:

- procedures for identifying and using relevant workplace technology
- systems and equipment used in the workplace and instructions, processes and precautions for their use
- typical problems in the workplace and appropriate action and solutions
- workplace procedures, policies and instructions
- workplace structures and roles and responsibilities of individuals, and team and group members
- basic principles of teamwork in the workplace

- verbal and non verbal communication techniques appropriate to receive and convey workplace information
- basic concepts of time management to meet daily planning and scheduled timelines
- industry and enterprise work health and safety policies

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCMN201 Contribute to animal care through work activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to identify what 'animal care' means in a workplace and how one's own individual responsibilities contribute to animal care as a whole within a specific workplace or industry.

It may or may not include hands-on animal care but more importantly includes being part of a whole system that supports and contributes to animal care.

The unit also includes contributing to animal care through the use of an appropriate mix of technical skills, handling unexpected contingencies in relation to animal care, and reflecting on animal care procedures in order to make improvements to one's own work. All activities are carried out under supervision.

This unit is designed for use in a Pathway qualification or skills set. It should not be used in a qualification that has a direct job outcome.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Common (CMN)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify and plan appropriate animal care approach	1.1 Identify workplace approach to working with animals, and describe in relation to work activity 1.2 Identify individual responsibilities in contributing to animal care 1.3 Identify workplace products, services, operations and customers 1.4 Identify safe work practices relevant to work activity 1.5 Identify appropriate capture and restraint requirements and equipment, where required 1.6 Map out animal care strategy based on workplace requirements and individual responsibility, and apply to work activity
2. Contribute to animal care using a mix of technical skills	2.1 Organise food preparation equipment according to task needs 2.2 Recognise common animal behaviours for the species and take appropriate action 2.3 Care for animals and feed and water according to animal welfare standards and health and safety procedures and standards 2.4 Identify tools and equipment and use safely and according to enterprise requirements 2.5 Accurately count stock levels as required 2.6 Groom animals according to enterprise and animal welfare policy as required
3. Work with others and handle unexpected contingencies	3.1 Respond to requests that effect work activity and animal care courteously, clearly, professionally and efficiently 3.2 Seek assistance with issues relating to animal care from other staff when required and in a timely manner 3.3 Keep key personnel informed of progress of animal care activity and provide clear explanations regarding issues in regards to animal care 3.4 Identify and report on physical and behavioural hazards
4. Reflect on animal care procedures	4.1 Reflect on personal performance in relation to working with animals and discuss possible improvements with supervisor 4.2 Apply improvements to work practice 4.3 Identify possible improvements to animal care procedures and discuss with key personnel

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AGFCMN201A Contribute to animal care through work activities.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCMN201 Contribute to animal care through work activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply basic principles of animal ethics and welfare
- adapt and modify activities depending on differing workplace contexts and environment
- apply animal-observation skills
- apply relevant industrial or legislative requirements
- identify and use equipment, tools and other technology required to complete workplace tasks
- follow relevant work health and safety and environmental protection procedures and requirements
- identify species using common names
- interpret and follow a designated work plan or set of instructions for a job
- keep required records of workplace activities
- plan a daily routine to complete required workplace tasks
- applying technical skills in animal care including:
 - preparing and providing food and water
 - grooming
 - counting stock
- recognising common animal behaviours and determining required response
- recognise and adapt appropriately to cultural differences in the workplace, including modes of behaviour and interaction with staff and others
- recognise limitations, ask for help and seek clarification or information about work requirements and procedures
- demonstrate appropriate initiative to deal with problems or refer them where appropriate to relevant person, and complete tasks
- apply time-management skills

- use basic interpersonal and communication skills, including listening, questioning and receiving feedback
- use routine capture and restraint procedures
- work cooperatively and collaboratively with others to complete tasks

Knowledge Evidence

The candidate must demonstrate knowledge of:

- basic principles of animal ethics and welfare
- codes of practice relating to work requirements
- diseases and pests, disease prevention and routine health care
- feeding and watering procedures
- hazards in the workplace
- health and safety requirements relating to care of animals
- capture and restraint procedures
- techniques for grooming animals
- common animal behaviours and appropriate responses
- quarantine requirements
- terminology relevant to animal care

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCMN202 Contribute to work activities to produce food

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit covers the skills and knowledge needed to contribute to work activities that help to produce food. Food in this context refers to product from animal, seafood and plant sources. Producing food may involve hands-on activities, such as seeding, weeding, hoeing and feeding stock (fish or animals), as well as post-harvest activities. It includes being part of a whole system that supports and contributes to producing food.

This unit is designed for use in a Pathway qualification or skills set. It should not be used in a qualification that has a direct job outcome.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Common (CMN)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify and plan appropriate activities	1.1 Identify workplace approach to producing food and describe in relation to work activity 1.2 Identify individual responsibilities in contributing to producing

Element	Performance criteria
	food 1.3 Identify workplace products, services, operations and customers 1.4 Identify safe work practices relevant to work activity 1.5 Plan and implement activities to meet workplace requirements
2. Use an appropriate mix of technical skills	2.1 Prepare machinery, equipment and tools required to conduct work, and use safely and in accordance with work procedures 2.2 Apply technical skills to support food production and supply 2.3 Handle produce in a way that minimises damage 2.4 Maintain temperature of produce at appropriate levels 2.5 Clean, maintain and sort machine and equipment according to manufacturer or workplace specifications 2.6 Apply safe work practices to food production activities 2.7 Conduct housekeeping in work area 2.8 Complete workplace documentation
3. Contribute to postharvest treatment of produce where required	3.1 Apply post-harvest treatments where relevant 3.2 Grade and label produce where relevant 3.3 Deal with waste material produced during post-harvest handling process, according to supervisor instructions
4. Handle unexpected contingencies	4.1 Respond to requests that effect work activity courteously, clearly, professionally and efficiently 4.2 Seek assistance with issues relating to work from other staff when required and in a timely manner 4.3 Keep key personnel informed of work progress and provide clear explanations regarding issues 4.4 Identify and report on physical and behavioural hazards
5. Reflect on procedures used to produce food or plants	5.1 Reflect on personal performance and discuss possible improvements with supervisor 5.2 Apply improvements to work practice 5.3 Identify possible improvements to food production procedures and discuss with key personnel

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AGFCMN202A Contribute to work activities to produce food.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCMN202 Contribute to work activities to produce food

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- adapt and modify activities depending on differing workplace contexts and environments
- apply relevant industrial or legislative requirements
- apply technical skills to support food production, including one or more of:
 - seeding
 - weeding
 - hoeing
 - feeding stock (fish or animals)
 - packing produce
- handle produce safely and according to workplace requirements
- follow enterprise requirements for market specification of products
- follow relevant food safety, work health and safety and environmental protection procedures and requirements
- grade, label and treat produce according to enterprise and customer specifications
- identify and use equipment, tools and other technology required to complete workplace tasks
- interpret and follow a designated work plan or set of instructions for a job
- maintain required records of workplace activities
- maintain work area housekeeping standards
- monitor environment of storage facility
- plan a daily routine to complete required workplace tasks
- recognise and adapt appropriately to cultural differences in the workplace, including modes of behaviour and interaction with staff and others

- recognise limitations, ask for help and seek clarification or information about work requirements and procedures
- demonstrate appropriate initiative to deal with problems or refer them where appropriate to relevant person
- use appropriate techniques to solve or report problems identified when completing work tasks
- use basic interpersonal and communication skills, such as listening, questioning and receiving feedback
- use required machinery and equipment appropriately
- work cooperatively and collaboratively with others to complete tasks

Knowledge Evidence

The candidate must demonstrate knowledge of:

- handling requirements for produce
- enterprise storage facilities and their maintenance
- enterprise quality procedures
- food safety regulations
- humidity levels and their effect on quality of produce
- hygiene issues in handling and storing horticultural, agricultural and seafood products intended for human consumption
- industry standards for grading and labelling
- post-harvest treatments for various horticultural, agricultural and seafood products
- temperature settings within storage facilities
- relevant storage methods
- correct storage temperatures for a range of produce
- safe work practices relevant to work activities
- housekeeping standards and practices
- procedures for one or more of:
 - seeding
 - weeding
 - hoeing
 - feeding stock (fish or animals)
 - packing produce
- operating and cleaning procedures for required machinery, equipment and tools

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDES401 Apply construction techniques to landscape design

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to incorporate constructed elements into landscape designs, within site and budgetary requirements, and seek technical and specialist expertise.

The unit applies to individuals who apply specialist skills and knowledge to the application of construction techniques to landscape design. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Incorporate structures and features into a landscape design	1.1 Identify and locate design structures and features to maximise efficient use of the space 1.2 Identify and source any required preliminary specialist expertise 1.3 Select materials that reflect the style and aesthetic of overall design concept

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Assess suitability of constructed elements in relation to physical properties of soils on site</p> <p>1.5 Assess effects of surface and subsurface water and drainage patterns on constructed elements</p> <p>1.6 Assess drainage requirements to ensure integrity of constructed elements in design</p>
2. Determine construction requirements	<p>2.1 Evaluate factors that impact on selection and construction of elements in the design</p> <p>2.2 Select materials according to properties and application within the design</p> <p>2.3 Determine construction techniques that support design, fit timelines and meet budget requirements</p> <p>2.4 Identify surface treatments appropriate for selected materials and design</p>
3. Assess the need for supplementary water in a landscape design	<p>3.1 Identify available water in the landscape</p> <p>3.2 Determine the feasibility of using available water in the landscape</p> <p>3.3 Identify appropriate irrigation methods to support the design</p> <p>3.4 Incorporate irrigation requirements into the design or design documentation</p>
4. Source technical services and expertise	<p>4.1 Determine construction requirements beyond the scope of own expertise</p> <p>4.2 Determine and consult with technical and specialist services beyond own scope of expertise as required</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding design concept requirements

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions, using clear language and standard industry terminology to discuss and determine construction requirements
Numeracy	<ul style="list-style-type: none"> Estimate construction budget and timelines Take and record measurements Calculate quantities and cost of construction materials

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES401 Apply construction techniques to landscape design	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDES401 Apply construction techniques to landscape design

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has applied construction techniques to landscape designs on at least one occasion, and has:

- selected, in consultation with appropriate specialist representatives, appropriate construction methods for structures and features to suit site specific soil properties
- identified and modified natural drainage patterns
- determined appropriate drainage systems for the landscape design
- incorporated into a landscape design constructed elements and drainage that meet the aesthetic and physical requirements of the site
- assessed the need for supplementary water and suitability of available water on site to support landscape design
- identified and specified where required appropriate waterwise irrigation systems
- recognised limits of own expertise and sourced providers of technical services and specialist expertise when required.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- landscape features and elements commonly used in landscape design projects
- specialist and technical services commonly involved in the construction of landscape design projects
- physical soil properties and their impact on constructed features
- natural drainage patterns and modification methods
- movement of water through soil
- purpose and application of drainage systems
- properties of construction materials commonly used in landscape design projects

- construction techniques commonly required for landscape design projects
- purpose and application of hydro zoning
- different methods of irrigation.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - design concepts, construction drawings, site plans and specifications
 - software and hardware to source and document information
- specifications:
 - construction material manufacturer specifications
- relationships:
 - technical and specialist representatives
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDES402 Apply sustainability principles to landscape design

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to analyse landscape designs for the application of sustainability principles and make recommendations for improving sustainability.

The unit applies to individuals who apply specialist skills and knowledge to application of sustainability principles to landscape design. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research the application of sustainability in landscape design	1.1 Research principles of sustainability and their application to landscape design 1.2 Identify legislation, standards, policies and procedures relevant to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	sustainable landscape design 1.3 Identify processes and materials used in landscape design 1.4 Identify and determine sustainable design criteria used to assess the impacts of processes and materials 1.5 Analyse the impact of legislation, standards, policies and procedures on sustainable landscape design 1.6 Identify the ways in which alternative design strategies support the environment
2. Evaluate landscape designs for sustainability	2.1 Apply systems-based thinking to assess the impacts of processes and materials on the landscape design 2.2 Apply sustainable landscape design criteria to assess the impacts of processes and materials 2.3 Identify alternative design strategies to minimise the impacts of processes and materials 2.4 Analyse and evaluate alternative design strategies to determine sustainability outcomes
3. Make recommendations for improvement	3.1 Review the outcomes of the landscape evaluation to determine potential sustainability improvements 3.2 Document and present recommended improvements for feedback from key stakeholders 3.3 Review and respond to key stakeholder feedback 3.4 Incorporate agreed changes into final landscape design

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Identify and interpret information regarding legislation, standards, policies and procedures

Skill	Description
Writing	Record sustainability improvements into landscape design information using correct conventions and terminology
Oral communication	Initiate discussions with key stakeholders, using clear language and standard industry terminology to present findings, respond to feedback and agree on changes to landscape design

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES402 Apply sustainability principles to landscape design	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDES402 Apply sustainability principles to landscape design

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has applied sustainability principles to landscape design on at least one occasion, and has:

- analysed and applied the principles of sustainability in landscape design to evaluate designs and make recommendations on improving sustainability
- applied relevant workplace health and safety and environmental legislation, regulations and workplace procedures
- interpreted specifications and plans
- evaluated landscape designs and made recommendations for improvements
- sought, analysed and applied feedback from key stakeholders on recommendations to improve sustainability.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles of sustainability and their application to landscape design, including:
 - environmental, ecological, economic and social resources relevant to sustainable design
 - sustainable use of resources in the landscape
 - materials commonly used in landscape design
 - systems-based thinking
 - cradle-to-cradle design, including life cycle mapping and assessment
 - alternative design strategies
- workplace health and safety and environmental legislation and regulations and workplace procedures relevant to sustainable landscape design
- sustainable design principles, including ensuring that natural and built landscape:

- preserves, improves and protects existing water catchments
- harvests water if appropriate
- minimises the depletion of materials and resources
- minimises the use of energy
- minimises land degradation
- attaches value to and preserves in-situ soils
- allows for carbon sequestration
- uses plants that contribute to and enhance the future environment
- maintains biodiversity through healthy ecosystems
- designs for habitat
- improves the wellbeing of humankind and all living organisms
- minimises waste.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - landscape designs
 - site information, documentation and data applicable to sustainable landscape design
- specifications:
 - legislation, standards, policies and procedures relevant to sustainable landscape design
 - workplace health and safety and environmental legislation and regulations and workplace procedures applicable to sustainable landscape design
- relationships:
 - key stakeholders
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDES403 Develop landscape designs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to develop landscape designs.

The unit applies to individuals who apply specialist skills and knowledge to develop landscape designs. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements and sustainability practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a design brief	1.1 Consult with client to establish landscape design requirements 1.2 Clarify site constraints 1.3 Determine budget parameters 1.4 Advise client of process to finalise project and anticipated

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	timelines
2. Analyse the site	<p>2.1 Identify potential hazards and risks related to site inspection and implement safe working practices to manage risks according to workplace health and safety procedures</p> <p>2.2 Inspect site to identify and record physical elements and features</p> <p>2.3 Identify and record soil conditions, topography, aspect, existing and local endemic vegetation, neighbouring elements, levels and climatic factors that may impact the design</p> <p>2.4 Identify impact of local council, legislative and regulatory requirements on design</p> <p>2.5 Assess and record additional information that will impact design</p>
3. Develop a design concept	<p>3.1 Source information and ideas that may assist in generating design</p> <p>3.2 Refine design ideas to develop a concept that meets brief</p> <p>3.3 Analyse design concept for its aesthetic integrity and effective use of design principles</p> <p>3.4 Consult with client to agree any required changes or modifications</p> <p>3.5 Confirm design concept with client</p>
4. Incorporate the use of lighting into a design	<p>4.1 Determine need for supplementary lighting in landscape</p> <p>4.2 Identify lighting effects to support design</p> <p>4.3 Review use of lighting to ensure it is consistent with design concept and budget</p>
5. Prepare the final landscape design	<p>5.1 Complete design concept to illustrate final location and layout of landscape elements according to design brief</p> <p>5.2 Prepare planting plan according to landscape design</p> <p>5.3 Incorporate clear and precise notes on design to assist in interpretation</p> <p>5.4 Review final design in consultation with client to ensure all requirements have been addressed</p> <p>5.5 Submit completed landscape design to client within agreed timeframes</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding local council, legislative and regulatory requirements
Writing	<ul style="list-style-type: none"> Record design information using correct conventions and terminology
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client, using clear language and standard industry terminology to determine their requirements, and advise and confirm design concepts Negotiate with client, using clear language and confirm modifications or changes to design concept
Numeracy	<ul style="list-style-type: none"> Estimate budget and timelines for design process Take and record measurements, levels and other numerically expressed information required for landscape design Draw to scale Calculate quantities of plants required for planting plan

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES403 Develop landscape designs	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDES403 Develop landscape designs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed a landscape design on at least one occasion, and has:

- developed a design brief in consultation with client to determine their requirements
- negotiated and established design timelines and budget
- applied relevant workplace health and safety and environmental legislation, regulations and workplace procedures
- assessed landscape sites
- analysed the impact of soils, topography, aspect, existing vegetation, neighbouring elements, levels and climatic factors on individual landscape designs
- researched, interpreted and applied local council, legislative and regulatory requirements relevant to landscape design
- consulted with clients to negotiate and confirm any modifications or changes to design concept
- assessed design against client budget
- selected plants for the landscape design that meet the brief and are appropriate for the site conditions
- developed scaled designs that meet client regulatory and site requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of developing landscape designs, including:
 - landscape design costing and budgeting practices
 - Australian standards relevant to landscape design

- drafting techniques for landscape plans and drawings, including conventional symbols and notations
- site functional analysis techniques relevant to landscape design
- scaled concept drawings and landscape plans
- format and layout of landscape designs
- available materials and their applications and restrictions relevant to landscape design
- plant selection and culture, and planting schedule relevant to landscape design
- design principles relevant to landscape design
- workplace health and safety and environmental legislation, regulations and workplace procedures relevant to landscape design and construction
- local council, legislative and regulatory requirements relevant to landscape design, including:
 - heritage overlays
 - building covenants
 - easements and underground cables
 - landscape and vegetation preservation orders and overlays
 - flood and fire overlays.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - client brief and budget
 - landscape site
 - site information applicable to landscape design
 - computer software and hardware to source and document information
- specifications:
 - Australian standards relevant to landscape design
 - local council, legislative and regulatory requirements applicable to landscape design
 - workplace health and safety and environmental legislation, regulations and workplace procedures applicable to landscape design
- relationships:
 - client
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDES404 Prepare simple landscape drawings

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to produce simple drawings that communicate landscape design ideas, options and concepts to clients.

The unit applies to individuals who apply specialist skills and knowledge to prepare simple landscape drawings. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine simple landscape requirements	1.1 Identify type of drawing required to describe design according to scope and complexity of job being undertaken 1.2 Identify existing key features to be recorded 1.3 Identify and assemble required tools and equipment 1.4 Identify and interpret site surveys, architectural drawings and statutory requirements relevant to site

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Produce simple landscape draft sketches and drawings	2.1 Determine workplace health and safety requirements applicable to worksite 2.2 Inspect worksite as required to take and record measurements 2.3 Select appropriate scale for drawing 2.4 Create simple two and three-dimensional drawings using standard drawing conventions and incorporating relevant codes and standards 2.5 Create drawings of simple elements including plan view and site analysis plans using standard drawing conventions 2.6 Create elevation drawings of simple landscape elements using standard drawing conventions
3. Notate and process drawings	3.1 Record essential information on drawing with symbols and abbreviations according to standard drawing conventions 3.2 Label, date and process drawings according to workplace administration and quality procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and evaluate detailed technical information to prepare simple landscape drawings
Writing	<ul style="list-style-type: none"> Record essential drawing information and notations using correct conventions and terminology
Numeracy	<ul style="list-style-type: none"> Identify and record scales, dimensions, measurements, symbols and other numerically expressed information required for simple landscape drawings

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES404 Prepare simple landscape drawings	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDES404 Prepare simple landscape drawings

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared simple landscape drawings on at least one occasion and has:

- identified and confirmed scope of drafting works
- interpreted site surveys and architectural drawings
- produced two and three-dimensional and sectional drawings appropriate to the job being undertaken
- applied standard landscape drawing conventions to produce clear and accurate drawings, including:
 - annotation styles
 - drawing types
 - key features
 - drawing tools and equipment
- applied numeracy skills to calculate and record scales, dimensions, measurements and symbols
- processed completed drawings according to workplace requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- standard landscape drawing conventions, principles and practices, including:
 - annotation styles
 - types of drawings, including; orthographic drawings, site analysis plans, concept plans, plan view, and elevation drawings
 - key features, including: levels and variations, gates, lighting, power and water supplies, services, walls, existing vegetation, existing structures and footings

- hardware, software, tools and equipment used for preparing simple landscape drawings.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - site surveys, architectural drawings and statutory information applicable to producing simple landscape drawings
 - drawing tools and equipment
- specifications:
 - calculation and drawing requirements applicable to producing simple landscape drawings
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDES405 Produce 2-D landscape drawings using CAD software

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to produce two-dimensional (2-D) drawings for landscape designs using computer-aided design (CAD) software for residential, commercial or public open space projects.

The unit applies to individuals who apply specialist skills and knowledge to produce 2-D landscape drawings using CAD software. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Create a landscape drawing template file	1.1 Set up drawing environment according to design drawing requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Create suitable layering strategy according to design drawing requirements</p> <p>1.3 Create landscape design library according to design drawing requirements</p> <p>1.4 Create text and dimensions styles according to design drawing requirements</p>
2. Produce landscape drawings	<p>2.1 Clarify drawing requirements</p> <p>2.2 Produce drawings using appropriate layers</p> <p>2.3 Add drawing notations according to Australian standards and design drawing requirements</p> <p>2.4 Apply scale and dimensions to drawing according to Australian standards and design drawing requirements</p> <p>2.5 Import symbols to represent landscape features</p> <p>2.6 Setup tool bars and apply essential status toggles appropriate for the CAD software program</p>
3. Edit drawing components	<p>3.1 Remove unnecessary elements and text from existing drawings</p> <p>3.2 Use editing commands to modify drawing elements and existing text</p> <p>3.3 Set up title blocks</p>
4. Plot or print CAD drawings	<p>4.1 Set page layout to suit printing or plotting requirements</p> <p>4.2 Set print parameters for printer or plotter</p> <p>4.3 Select correct print media and print or plot drawings</p> <p>4.4 Apply basic palette editing and tool shortcuts</p>
5. Save and back up files	<p>5.1 Create drawing project file directory</p> <p>5.2 Save and back up drawing files to specified drives or directories</p> <p>5.3 Retrieve, rename and edit saved files as required</p>
6. Import files	<p>6.1 Import text files into CAD drawings from other software</p> <p>6.2 Import blocks or components into files and drawings</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret detailed plans, specifications and design briefs to prepare and produce 2-D landscape CAD drawings
Writing	<ul style="list-style-type: none"> Record key design information and notations using correct conventions and terminology
Oral communication	<ul style="list-style-type: none"> Use questioning and careful listening to clarify drawing requirements from clients or relevant project personnel
Numeracy	<ul style="list-style-type: none"> Identify and record layers, measurements and other numerically expressed information required for landscape drawings Operate numerical functions of CAD equipment to produce accurate scales, dimensions, ratios and measurements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES405 Produce 2-D landscape drawings using CAD software	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDES405 Produce 2-D landscape drawings using CAD software

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has produced two-dimensional (2-D) landscape drawings using computer-aided drawing (CAD) software on at least one occasion and has:

- used features and functions of CAD software to produce 2-D landscape drawings
- applied creative design, drawing and drafting skills, including:
 - characteristics and annotated styles
 - drafting methods
 - drafting technologies
 - drafting equipment
- clarified drawing requirements with client or relevant project personnel
- applied Australian standards and design drawing requirements relevant to producing 2-D landscape drawings
- followed CAD operating instructions and workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of drawing 2-D landscape drawings using CAD software, including:
 - drawing requirements, protocols and features relevant to landscape drawings
 - CAD hardware, software, tools and equipment used for drawing 2-D landscape drawings
 - CAD operating instructions
 - CAD software program features and functions, including; drawing tools, view displays, edit functions, working with layers, plotting, printing and file save functions
 - workplace digital file management procedures

- Australian standards, workplace procedures and design drawing requirements relevant to producing 2-D landscape drawings.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plans specifications and design briefs applicable to producing 2-D landscape drawings using CAD software
 - CAD software, hardware, printers and peripheral equipment
- specifications:
 - CAD operating instructions
 - Australian standards, workplace procedures and design drawing requirements relevant to producing 2-D landscape drawings
- relationships:
 - client or relevant project personnel
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDES505 Prepare a landscape design

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to develop a design brief, assess the site, prepare a concept of design, revise and amend design, and produce final landscape design for a large project on residential, commercial or public open spaces.

The unit applies to individuals who apply specialist skills and knowledge to surveying and establishing site levels, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a design brief	1.1 Consult with client to establish purpose and requirements of design

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Interpret and incorporate architectural designs, styles and details into design brief</p> <p>1.3 Develop design criteria and design brief, and consult with client to finalise agreement of brief and construction budget</p> <p>1.4 Negotiate cost structures of design development and timelines with client</p>
2. Assess the project site	<p>2.1 Inspect site of the landscape project</p> <p>2.2 Record physical elements and features of site on base plan</p> <p>2.3 Assess soil conditions, topography, aspect, existing vegetation and climatic factors and record on site analysis</p> <p>2.4 Complete functional analysis of existing site and record on base plan</p> <p>2.5 Assess any other relevant information and record on site analysis or base plan</p> <p>2.6 Research and identify opportunities and constraints on development including local council, legislative and regulatory requirements</p>
3. Prepare a concept design	<p>3.1 Prepare concept to illustrate location and layout of proposed landscape works according to design brief</p> <p>3.2 Specify hard landscaping requirements, including irrigation, demolition and removal of existing features and installation of new works</p> <p>3.3 Compile planting schedules for incorporation into design plan</p> <p>3.4 Apply industry practice and consistent graphic styles to concept design</p> <p>3.5 Consult with client to establish agreement on options and approaches for design development</p>
4. Revise and amend design development documentation	<p>4.1 Select materials, surface treatments and plants</p> <p>4.2 Identify construction and drainage requirements, and seek specialist advice where required</p> <p>4.3 Research and apply appropriate landscape construction principles to landscape design according to national construction code and Australian standards</p> <p>4.4 Assess design development documentation against design brief</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	and budget 4.5 Discuss design development documentation with client and seek agreement
5. Produce a final design	5.1 Include specifications, detail drawings and notes on design to assist interpretation 5.2 Finalise and document detailed design plan according to design brief, concept design and client consultations using industry standard graphic, text and layout styles 5.3 Present final design to client

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding local council, legislative and regulatory requirements
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client, using clear language to discuss and establish design purpose, finalise design brief and present design plan

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES505 Prepare a landscape design	AHCDES502 Prepare a landscape design	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDES505 Prepare a landscape design

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared a landscape design on at least one occasion and has:

- developed a design brief in consultation with client to establish design purpose and requirements
- consulted with clients
- interpreted architectural designs and details
- negotiated and established design budget
- assessed landscape sites
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- researched, interpreted and applied local council, legislative and regulatory requirements relevant to landscape design and construction
- designed scaled concept drawing and construction plans
- specified hard landscaping requirements
- used industry standard graphic techniques to illustrate landscape design components
- identified and selected plants for the landscape design
- identified dimensions and qualities of materials
- applied national construction code and Australian standards relevant to landscape design and construction
- determined survey levels, site grading and drainage requirements
- implemented professional landscape design practices
- assessed design against client budget
- operated Computer-Aided Design (CAD) software
- drafted plans by hand.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of preparing a landscape project design, including:
 - interpreting client budget and design requirements
 - an understanding of own role and the use of specialist advice, including structural engineers and hydrologists
 - landscape construction and design costing and budgeting principles
 - landscape construction and engineering principles relevant to landscape design
 - hard landscaping requirements, including irrigation
 - national construction code and Australian standards relevant to landscape design and construction
 - drafting techniques for landscape plans and drawings
 - functional analysis techniques relevant to landscape design
 - scaled concept drawings, landscape plans and construction drawings
 - determining survey levels, site grading and drainage requirements
 - environmental implications of landscape project works
 - products and materials relevant to landscape design and construction
 - botany, plant physiology, taxonomy and nomenclature relevant to landscape design
 - how to identify and treat soils for application in landscape works
 - plant identification, selection and culture, and planting schedule
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to landscape design and construction
- local council, legislative and regulatory requirements relevant to landscape design and construction.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - client brief and budget
 - landscape site
 - site information and data applicable to sustainable landscape design and construction
 - computer hardware and CAD software
- specifications:
 - national construction code and Australian standards relevant to landscape design and construction

- local council, legislative and regulatory requirements applicable to landscape design and construction
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures applicable to landscape design and construction
- relationships:
 - clients
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDES506 Design for construction of landscape features

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to design for the construction of landscape features, specify hardscape and softscape quality requirements and develop a design and project report.

The unit applies to individuals who apply specialist skills and knowledge to construct landscape features, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Design aspects of construction for	1.1 Develop concept designs for construction of selected landscape features according to client requirements and budget

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
landscape features in a range of materials	1.2 Source and record survey levels, site gradients and elevations 1.3 Draw construction details for landscape features according to landscape design concepts 1.4 Draw drainage plans according to national construction code and landscape design concept 1.5 Incorporate a range of materials used in construction of landscape features into design
2. Specify hardscape and softscape quality and requirements	2.1 Determine difference in quality of available materials and specify quality criterion in design 2.2 Identify dimensions, footings and qualities of materials selected 2.3 Determine effect of plant selection on landscape features, including root development, crown development and soil hydrology 2.4 Determine impacts of using poor quality materials
3. Develop a design and project report	3.1 Develop site strategy for design project 3.2 Identify and document timelines for project 3.3 Develop and document final design, project budget and project report 3.4 Present design and project report to client

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Calculate project costs, including labour, materials, equipment and machinery

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES506 Design for construction of landscape features	AHCDES504 Design for construction of landscape features	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDES506 Design for construction of landscape features

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has designed for construction of landscape features on at least three occasions and including a minimum of five different construction features, and has:

- consulted with client
- identified and recorded survey levels, site gradients, elevations, existing site structures and vegetation
- drawn plans to construction standards, client requirements and budget
- drawn drainage plans according to national construction codes (NCC) and landscape design concept
- selected appropriate landscape construction materials
- specified dimensions, footings, quantity and quality of materials
- documented and presented project timelines, final design, project budget and project report.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of designing for construction of landscape features, including:
 - NCC relevant to designing for construction of landscape features
 - drainage issues and the available resources to resolve problems
 - how to select appropriate plants and materials
 - materials available in the marketplace and their quality
 - plant specifications for a range of plants appropriate to the design
 - principles of surveying and determining site levels
 - site services, including electrical and water provision

- landscape construction techniques and materials.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - landscape construction materials
 - landscape construction site
 - site information and data applicable to designing for landscape features
- specifications:
 - NCC applicable to designing for construction of landscape features
- relationships:
 - client and stakeholders
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDES507 Produce drawings for landscape design projects using CAD software

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to produce drawings for residential and commercial landscape design projects using computer-aided design (CAD) software.

The unit applies to individuals who apply specialist skills and knowledge to produce drawings for landscape design projects using CAD software, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for landscape design CAD drawing work	1.1 Interpret concept and project information 1.2 Identify and confirm design drawing requirements with client or relevant project personnel 1.3 Identify CAD hardware, software, tools and equipment requirements for design project 1.4 Set up CAD hardware and software according to operating instructions and workplace procedures 1.5 Identify and retrieve digitised information relevant to project
2. Create landscape design drawing template files	2.1 Establish and record critical dimensions and data for required designs 2.2 Identify requirements in relation to accuracy, tolerances and other key information 2.3 Create layering strategy according to design drawing requirements 2.4 Create text and dimension styles according to design drawing requirements 2.5 Create line types and styles according to design drawing requirements 2.6 Create title box and page numbering system according to design drawing requirements
3. Create landscape design CAD drawings	3.1 Produce drawings using CAD software programs and functions 3.2 Add layers and drawing notations according to Australian standards and design drawing requirements 3.3 Add drawing scales and dimensions to drawing according to Australian standards and design drawing requirements 3.4 Hatch and render or fill selected areas
4. Import files	4.1 Import digital text, drawing and image files into CAD drawings as required 4.2 Insert external drawing files into CAD drawings as required 4.3 Scan, save and import hard copy documents into CAD drawings as required
5. Edit landscape design drawing components	5.1 Remove unnecessary elements and text from drawings as required 5.2 Use editing commands to modify drawing elements and text

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.3 Use tools to measure lengths and areas of specific elements of drawing
6. Print CAD drawings	6.1 Setup drawing file page layout to suit printing requirements 6.2 Setup printing parameters for printer 6.3 Select correct print media for drawings 6.4 Print, monitor and collate printed drawings
7. Save and back up files	7.1 Create drawing project file directory 7.2 Save and retrieve drawing files 7.3 Backup project files according to workplace procedures
8. Export files	8.1 Copy and send drawing files to client or relevant project personnel 8.2 Create PDF files for client or relevant project personnel 8.3 Review design drawings with client or relevant project personnel
9. Finalise landscape design drawings	9.1 Check design drawings against concept and project information 9.2 Identify and make adjustments to design drawings according to client or relevant project personnel review feedback 9.3 Store drawing files according to workplace procedures 9.4 Submit final design drawings according to agreed time requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and evaluate detailed information, instructions and technical information to prepare and produce CAD drawings
Writing	<ul style="list-style-type: none"> Record key design information and notations using correct conventions and terminology
Oral communication	<ul style="list-style-type: none"> Use questioning and careful listening to elicit information from

Skill	Description
	clients and relevant project personnel
Numeracy	<ul style="list-style-type: none"> • Identify and record layers, measurements and other numerically expressed information required for design drawings • Operate numerical functions of CAD equipment to produce accurate scales, dimensions, ratios and measurements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES507 Produce drawings for landscape design projects using CAD software	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDES507 Produce drawings for landscape design projects using CAD software

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has produced drawings for landscape design projects using computer-aided drawing (CAD) software on at least one occasion and has:

- identified and confirmed design drawing requirements
- selected CAD hardware and software to suit project requirements
- followed CAD operating instructions and workplace procedures
- used features and functions of CAD software to produce design drawings
- applied numeracy skills to calculate and record layers, scales, dimensions, ratios and measurements
- applied creative design, drawing and drafting skills, including:
 - characteristics, decorative styles and text styles
 - drafting methods
 - drafting technologies
 - drafting equipment
- used client or relevant project personnel feedback to refine and produce final design drawings within agreed time requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of drawing landscape design projects using CAD software, including:
 - CAD hardware, software, tools and equipment used for drawing landscape design projects
 - CAD operating instructions

- CAD software program features and functions, including; drawing tools, view displays, edit functions, working with layers, plotting, printing and file save functions
- hard copy and digital file management procedures
- Australian standards and workplace procedures relevant to producing CAD drawings for landscape design projects.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - site, concept and project information, and data applicable to producing drawings for landscape design projects using CAD software
 - CAD software, hardware, printers and peripheral equipment
- specifications:
 - CAD operating instructions
 - Australian standards and workplace procedures applicable to producing CAD drawings for landscape design projects
- relationships:
 - client or relevant project personnel
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDES508 Design sustainable landscapes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to design sustainable landscapes, including assessing requirements for sustainable land use, preparing an integrated design, planning implementation into design, and auditing implementation for improvement of long-term ecological sustainability of landscapes.

The unit applies to individuals who apply specialist skills and knowledge to design sustainable landscapes, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess requirements	1.1 Consult with client to discuss purpose and requirements of design

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
for sustainable land use	<p>and create brief establishing specific sustainability requirements for design</p> <p>1.2 Research and identify legislative and regulatory requirements and document in improvement plan</p> <p>1.3 Identify specific requirements for sustainability from business plan or documentation</p> <p>1.4 Assess land area for biophysical factors, biodiversity, historical, heritage and cultural attributes, services, site modifications and threats to sustainability</p> <p>1.5 Identify environmental implications of range of landscape works and research, identify and report to relevant personnel with recommendations</p>
2. Prepare an integrated design to improve land use	<p>2.1 Develop concept plan for improvement that reflects client preferences and requirements, heritage issues, site factors and any identified environmental requirements</p> <p>2.2 Present concept plan to client or landowner for discussion and approval</p> <p>2.3 Research, report and reference specific technical documents or reports regarding energy efficiency and use, current and developing technologies and legislative and workplace requirements</p> <p>2.4 Consider design of products, materials and finishes that are efficient, low risk and cyclic and confirm availability from local source</p> <p>2.5 Evaluate impact of resources, materials, equipment and machinery required for works on sustainable use of site</p> <p>2.6 Select plants and soils or soil ameliorant techniques for their integrated roles for designed outcomes in specific site conditions, system of irrigation and environmental parameters</p> <p>2.7 Review environmental conditions for functional analysis of site and planned design</p> <p>2.8 Prepare detailed plan or design</p> <p>2.9 Present plan or design to client or landowner for acceptance</p>
3. Plan the implementation into the design	<p>3.1 Outline staged implementation and development including site access</p> <p>3.2 Incorporate timelines for development according to</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>implementation plan and principles of sustainability</p> <p>3.3 Determine schedules for planting and post-planting care according to requirements of plant species, site conditions and planning requirements</p> <p>3.4 Integrate protection of water resources, riparian zones or storm water drainage systems (SUDS), specified trees and existing vegetation into design plan</p> <p>3.5 Review chemical, non-chemical, ameliorant application and waste disposal procedures and processes to select designs of minimal environmental consequence and potential contamination of soils and ground water</p> <p>3.6 Review implementation outline for integration of approach to land and water management</p>
4. Audit the implementation of sustainable practices	<p>4.1 Monitor use of work materials, waste and debris from site works for low risk energy sustainable methods</p> <p>4.2 Sample and test soil and ground water quality where applicable to site and implement recommendations</p> <p>4.3 Confirm soil conservation measures and erosion sediment controls during construction and project life according to Environmental Protection Authority (EPA) legislation</p> <p>4.4 Verify protection measures for specified trees, protected flora and fauna and areas and objects of cultural significance</p> <p>4.5 Maintain or improve biodiversity, heritage, cultural and historical attributes, soil and water quality</p> <p>4.6 Present report to client according to design brief and contractual requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding legislative and

Skill	Description
	regulatory requirements, and specific requirements for sustainability
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client, using clear language to discuss and establish design purpose, finalise design brief and present plan or design

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES508 Design sustainable landscapes	AHCDES501 Design sustainable landscapes	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDES508 Design sustainable landscapes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has designed sustainable landscapes on at least one occasion, and has:

- consulted with clients
- developed a design brief in consultation with client to establish design purpose and requirements
- researched, interpreted and applied legislation and regulations relevant to sustainable landscape design
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- assessed land area for sustainable use
- designed for the health and sustainability of soils and plants
- interpreted specifications and plans
- selected plants and soils for their integrated functional roles
- used graphic techniques for illustrating landscape design components
- prepared a detailed plan or design for sustainable land improvement
- implemented sustainable practices
- outlined an integrated approach to land and water management
- designed for integrated protection of water resources, riparian zones or storm water drainage systems (SUDS) and vegetation in a development area
- assessed soil and water quality tests where applicable to site
- applied relevant Environmental Protection Authority (EPA) legislation.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislation and regulations relevant to sustainable landscape design
- workplace health and safety and environmental and biosecurity legislation and regulations and workplace procedures relevant to sustainable landscape design
- EPA legislation relevant to sustainable landscape design
- principles and practices of designing sustainable landscapes, including:
 - sustainable landscape design principles
 - assessment techniques
 - environmental controls and codes of practice applicable to the business and to the improvement works
 - biophysical factors, biodiversity, historical, heritage and cultural attributes, services, site modifications and threats to sustainability
 - botany, plant physiology, taxonomy and nomenclature
 - identification and selection of soils, growing media, plants, shrubs and trees
 - irrigation practices
 - legislation and regulations relating to soil and water degradation issues and construction
 - surface and subsurface hydrology
 - storm water drainage systems (SUDS)
 - sustainable land and water use principles and practices applicable in the region
 - types, properties and characteristics of a wide range of soils, soil amelioration techniques and growing media.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - landscape site
 - site information, documentation and data applicable to sustainable landscape design
- specifications:
 - legislation and regulations relating to soil and water degradation issues and construction, and sustainable landscape design
 - workplace health and safety and environmental and biosecurity legislation and regulations and workplace procedures applicable to sustainable landscape design
 - EPA legislation applicable to sustainable landscape design
- relationships:
 - clients
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDES509 Assess landscape sites

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to collect and collate initial information, conduct a landscape site assessment and document a site report.

The unit applies to individuals who apply specialist skills and knowledge to assess landscape sites, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Design (DES)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect and collate initial information	1.1 Consult with client to confirm objectives of assessment 1.2 Source and verify site plans and maps

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify and collect resources for site assessment 1.4 Prepare base plan of site and relevant surrounds 1.5 Verify location, ownership and site boundaries 1.6 Identify and record protected flora and fauna, current land use and environmental threats and problems 1.7 Identify and record covenants, legislative and regulatory requirements that could affect the project, design or report 1.8 Determine climate and weather conditions from historical data
2. Undertake initial site visit	2.1 Meet site entry conditions and obtain approval where required 2.2 Identify hazards and risks associated with site visit according to workplace health and safety procedures 2.3 Undertake site orientation 2.4 Identify and record existing on-site and adjacent site features that may impact upon the project, plan or report objectives 2.5 Identify, measure, and record or confirm site dimensions, levels and gradients
3. Compile a site inventory	3.1 Sample and identify soil types, properties and relevant physical characteristics and record on-site inventory 3.2 Record and identify vegetation species, health, age and location, and impact on surrounding environment 3.3 Geolocate or triangulate the position of structural elements and confirm existing services and facilities 3.4 Record presence, location and extent of site constraints 3.5 Record offsite elements including microclimates, trees, buildings and terrain that may affect project design
4. Determine the impact of development for trees on site	4.1 Obtain consulting arborist report to assess trees on site 4.2 Determine and record tree protection zones and structural root zones 4.3 Document impact of proposed development on each tree 4.4 Identify trees exempt from approval requirements 4.5 Identify and locate on site plan trees impacted by development, according to regulations applying in the local jurisdiction 4.6 Include trees identified by consulting arborist report requiring

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	pruning or removal in development application
5. Document a site assessment report	5.1 Interpret soil test results and analyse for further testing requirements 5.2 Record specific recommendations of remedial action for site problems 5.3 Formulate recommendations for appropriate risk controls of site hazards according to workplace health and safety procedures 5.4 Document site information 5.5 Incorporate all relevant data into assessment report according to client brief and local, state and federal regulatory requirements 5.6 Document and present assessment report to the client

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client, using clear language to discuss and confirm assessment objectives and present assessment report
Numeracy	<ul style="list-style-type: none"> Survey and calculate locations of existing features using geolocation or triangulation

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDES509 Assess landscape sites	AHCDES503 Assess landscape sites	Minor changes to application Minor changes to performance criteria	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDES509 Assess landscape sites

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assessed two separate and varying landscape sites and has:

- consulted and advised clients
- collected and collated information on site features
- interpreted and produced plans
- verified existing site details
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- identified protected flora and fauna, current land use and environmental threats and problems
- applied local, state and federal regulations relevant to assessing landscape sites
- identified site entry conditions and approval requirements where applicable
- sampled soils and growing media
- identified and recorded vegetation species, health, age and location, and impact on surrounding environment
- documented assessment and recommendations in a site plan and assessment report.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of assessing landscape sites, including:
 - current land use and environmental threats, and problems with site
 - interpretation of results from assessment and testing
 - local, state and federal regulations relevant to assessing landscape sites
 - accessing survey and regulatory information online
 - measurement and surveying techniques

- protected flora and fauna and environmental threats and problems
- vegetation species, including health and age
- impact of vegetation species on surrounding environment
- plant nutrition
- protocols of site access
- soil types, structure, texture and pH
- soil chemical and physical properties
- soil field tests and soil sampling techniques
- techniques to ameliorate soil properties
- vegetation common within the region, using botanical and regionally accepted common names, age, health and conditions of vegetation
- workplace health and safety and environmental and biosecurity legislation and regulations and workplace procedures relevant to assessing landscape sites.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - landscape sites
 - site information and data applicable to sustainable landscape design
 - arborist report
 - software and hardware for accessing survey and regulatory information
 - resources for assessing site, including soil testing tools and equipment
- specifications:
 - workplace health and safety and environmental and biosecurity legislation and regulations and workplace procedures applicable to assessing landscape sites
 - local, state and federal regulations relevant to assessing landscape sites
- relationships:
 - clients
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRG202 Maintain drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to inspect and carry out routine cleaning and maintenance of draining systems.

The unit applies to individuals who maintain drainage systems under general supervision with limited autonomy and accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Drainage (DRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Inspect drainage systems	<p>1.1 Confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to minimise risks to self and others</p> <p>1.2 Select, fit and use personal protective equipment applicable to the task</p> <p>1.3 Inspect drainage system visually for blockages, leaks and operating faults</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Assist with system component maintenance	2.1 Inspect components for wear or blockage 2.2 Service mechanical equipment as directed 2.3 Replace simple components as directed
3. Remove silt and weed growth	3.1 Clean silt from channels, drains, sumps and crossings 3.2 Remove weed growth 3.3 Flush drainage system 3.4 Observe water flow through channels and from outlets to confirm it is unobstructed
4. Record and report maintenance activities	4.1 Record blockage or leakage by type and location of the section of the system affected 4.2 Record and report damaged or faulty equipment 4.3 Record and report all routine maintenance activities 4.4 Check drainage system regularly

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	<ul style="list-style-type: none"> Use clear language to report drainage system damaged or faulty equipment and routine maintenance activities
Numeracy skills	<ul style="list-style-type: none"> Identify replacement component part numbers
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRG202 Maintain drainage systems	AHCDRG201 Maintain drainage systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRG202 Maintain drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has maintained drainage systems on at least two occasions and has:

- inspected and maintained simple drainage system components
- inspected components for wear
- monitored and removed weeds and silt build up
- recorded and reported damage, blockages and leakages.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of drainage system maintenance, including:
 - drainage system cleaning procedures
 - equipment used to clean and maintain drainage systems
 - manual and mechanical weed removal methods
 - types of drainage systems.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to maintaining drainage systems
 - drainage system maintenance tools and equipment
 - personal protective equipment applicable to maintaining drainage systems

- specifications:
 - work instructions
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRG305 Install drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare, coordinate, undertake and complete surface and subsurface drainage system installation.

The unit applies to individuals who install drainage systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Drainage (DRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for drainage system installation activities	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Identify drainage system construction site 1.3 Select required materials, tools, equipment and machinery and complete safe operation and pre-operation checks 1.4 Select, fit, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	applicable to the task
2. Coordinate installation work	2.1 Schedule work tasks in a sequential, timely and effective manner 2.2 Identify environmental considerations of drainage installation activities 2.3 Maintain a clean and safe work area throughout work
3. Prepare the site for installation of drainage system	3.1 Interpret symbols and terminology to ensure drainage system plan is clearly understood 3.2 Identify layout of services, check depths and report discrepancies 3.3 Complete survey, measurement and marking out of site and confirm soil characteristics relevant to the system
4. Undertake installation of drainage system	4.1 Complete excavations without damage to services, facilities, features and established plants 4.2 Install drainage system to plan specifications 4.3 Test drainage system configuration, flow rates and capacity 4.4 Confirm remedial action to be taken when the drainage system operation does not meet the plan specifications
5. Complete installation of drainage system	5.1 Finish earthworks to the required specifications 5.2 Restore site and remove and dispose of waste material 5.3 Clean, maintain and store tools, equipment and machinery 5.4 Record work outcomes and report works as per the executed drawings, including adjustments

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report drainage system installation activities
Numeracy skills	<ul style="list-style-type: none"> Measure drainage system site and drain depths
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRG305 Install drainage systems	AHCDRG301 Install drainage systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRG305 Install drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has installed drainage systems on at least one occasion and has:

- applied workplace health and safety requirements
- prepared for installation activities
- selected materials, tools, equipment and machinery appropriate to the scope of works
- interpreted drainage system plans and drawings
- interpreted site specifications, soil types and drainage system plans
- measured materials required to install drainage systems
- set out drainage system works
- set out, surveyed, tested and excavated the installation site
- levelled and aligned earthworks
- installed drainage system works
- tested the drainage system
- restored site and removed and disposed of waste material.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for installing drainage systems
- principles and practices of drainage installation
- drain types, components and installation techniques
- purposes of drainage systems and the application of drainage system plans
- soil characteristics and their impact on drainage systems.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work specifications and workplace procedures applicable to installing drainage systems
 - drainage system installation equipment
 - drainage system installation tools and equipment and procedures
 - personal protective equipment applicable to installing drainage systems
- specifications:
 - workplace requirements applicable to health and safety in the workplace and installing drainage system
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRG306 Measure drainage system performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to measure, record and report on soil moisture, salinity and water table depth to determine system performance and efficiency.

The unit applies to individuals who measure drainage system performance under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Drainage (DRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Confirm the location of the drainage system 1.2 Select materials, tools, equipment and machinery 1.3 Carry out pre-operational and safety checks on tools, equipment and machinery 1.4 Identify potential hazards and risks and implement safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select, fit, use and maintain personal protective equipment applicable to the task
2. Assess drainage and collection systems	2.1 Determine damaged or broken components 2.2 Inspect areas for signs of water pooling and problems 2.3 Take measurements to determine drainage performance 2.4 Identify and record factors external to the system which may cause interference 2.5 Minimise environmental impacts of drainage system performance measurement activities
3. Record and report system performance status	3.1 Record water quality and quantity 3.2 Record water table depth, soil moisture and salinity 3.3 Document strategies that minimise the negative environmental impacts and maximise the positive impacts of the drainage system 3.4 Report system performance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	<ul style="list-style-type: none"> Use clear language to report drainage system performance
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRG306 Measure drainage system performance	AHCDRG302 Measure drainage system performance	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRG306 Measure drainage system performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has measured drainage system performance on at least one occasion and has:

- selected materials, tools, equipment and machinery appropriate to the scope of works
- applied workplace health and safety requirements
- identified and minimised adverse environmental impacts of drainage systems
- recorded and reported drainage system data.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for measuring drainage system performance
- measuring and monitoring procedures for factors contributing to drainage system performance
- water quality monitoring methods and techniques
- how to measure a water table and salinity
- soil moisture measurement procedures
- positive and negative environmental impacts of drainage systems
- the environmental role of drainage systems.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- drainage system equipment
- drainage system performance measuring tools and equipment
- personal protective equipment applicable to measuring drainage system performance
- specifications:
 - workplace requirements applicable to health and safety in the workplace and measuring drainage system performance
 - measuring procedures
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRG307 Troubleshoot drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to troubleshoot issues in drainage systems.

The unit applies to individuals who troubleshoot drainage systems under broad direction and take responsibility for their own work.

This unit is for industry specific drainage application not home-based.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Drainage (DRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Identify drainage system issues and develop plans to rectify them 1.2 Locate the affected section of drainage system 1.3 Determine work requirements and responsibility for repair 1.4 Select materials, tools, equipment and machinery 1.5 Identify potential hazards and risks and implement safe working

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	practices to manage risks 1.6 Minimise environmental impacts of drainage system maintenance activities 1.7 Select, fit, use and maintain personal protective equipment applicable to the task 1.8 Carry out pre-operational and safety checks on tools, equipment and machinery
2. Determine access to drainage system	2.1 Read drainage system plan and locate access points 2.2 Carry out digging to access drainage system without unnecessary damage to buildings, site, environment or existing fixtures and fittings
3. Carry out work	3.1 Use safe manual lifting and handling techniques for drainage related equipment 3.2 Access drainage system and rectify identified issue 3.3 Test drainage system to confirm issue has been rectified 3.4 Repair or reseal drainage system to permit normal use 3.5 Advise relevant personnel when repairs are completed and drainage system has been commissioned for use
4. Complete work	4.1 Clean work area and dispose of debris and waste 4.2 Clean and maintain tools and equipment 4.3 Report and record repair activities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	<ul style="list-style-type: none"> Use clear language to report drainage system repair activities
Navigate the world of	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety

Skill	Description
work	requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRG307 Troubleshoot drainage systems	AHCDRG303 Troubleshoot drainage systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRG307 Troubleshoot drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has troubleshoot and repaired a drainage system on at least one occasion and has:

- identified a range of drainage system issues, including surface and sub-surface issues
- planned and prepared for the work
- inspected the site to determine access to drainage system
- completed a range of rectification works for drainage systems
- tested the system and cleaned up after rectifying identified issues.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- drainage system repair work instructions and procedures
- types and operational parameters of drainage systems
- types of drainage systems and issues common these systems
- principles and practices of drainage system troubleshooting
- components used in drainage systems
- safe working practices applicable to troubleshooting and repairing drainage systems
- environmental impacts of drainage systems.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- drainage system repair work instructions and workplace procedures
- drainage system equipment
- drainage system repair tools, equipment and machinery
- personal protective equipment applicable to repairing drainage systems
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRG308 Maintain and repair irrigation drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to access drainage lines, repair irrigation drainage systems, clear blockages and maintain drainage earthworks and equipment of irrigation drainage systems.

The unit applies to individuals who maintain and repair irrigation drainage systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Drainage (DRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to carry out irrigation drainage system maintenance	1.1 Inspect site and assess drainage system 1.2 Confirm necessity for repair and notify appropriate people 1.3 Determine work requirements from plans, drawings, specifications or instructions 1.4 Identify potential hazards and assess risks and implement safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select required tools and equipment and check for safe operation 1.6 Select, fit and use personal protective equipment applicable to the task 1.7 Confirm excavation methods meet safety requirements of the task and site 1.8 Make appropriate drainage and inflow diversion arrangements 1.9 Minimise environmental impacts of irrigation drainage maintenance activities
2. Digging to access drainage lines	2.1 Access plan of irrigation system and locate access points 2.2 Gain access to drainage lines to allow blockage to be cleared 2.3 Carry out digging without unnecessary damage to buildings, site, environment or existing fixtures and fittings
3. Carry out repairs on an irrigation drainage system	3.1 Conduct routine inspections of designated work areas 3.2 Identify system faults and take corrective actions with consideration of structure type, location and specifications 3.3 Use mechanical equipment to open and close drains 3.4 Repair or replace components and associated fittings as required 3.5 Construct cast in situ components 3.6 Document irrigation drainage repair and maintenance activities
4. Clear blockages in an irrigation drainage system	4.1 Perform clearing blockages procedures 4.2 Test drainage lines to confirm blockages have been cleared from pipe system 4.3 Repair and reseal drainage lines to permit normal use 4.4 Clean and align work area and dispose of debris and waste
5. Maintain drainage earthworks and equipment and carry out vegetation clearing procedures	5.1 Confirm that earthworks and embankments meet system requirements 5.2 Manage and maintain drainage area vegetation 5.3 Control weeds within drainage area 5.4 Implement and record a maintenance program for drainage equipment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	<ul style="list-style-type: none"> Use clear language to notify appropriate people of repair works and report irrigation drainage repair and maintenance activities
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRG308 Maintain and repair irrigation drainage systems	AHCDRG304 Maintain and repair irrigation drainage systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRG308 Maintain and repair irrigation drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has maintained and repaired an irrigation drainage system on at least one occasion and has:

- applied workplace health and safety requirements
- selected materials, tools, equipment and machinery appropriate to the scope of works
- isolated appliances, fixtures, fittings and related assemblies
- identified and minimised adverse environmental impacts of drainage systems
- gained access and carried out repairs
- used manual and mechanical drain clearing equipment
- removed blockages
- levelled and aligned the site
- implemented and recorded a drainage and equipment maintenance program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for maintaining irrigation drainage systems
- principles and practices for maintaining irrigation drainage systems, including:
 - components used in irrigation drainage systems
 - isolation processes and procedures
 - levelling and alignment processes
 - types and operational parameters of irrigation drains
 - environmental impacts of drainage systems.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation drainage system maintenance and repair equipment and tools
 - personal protective equipment applicable to maintaining irrigation drainage systems
- specifications:
 - workplace requirements applicable to health and safety in the workplace and maintaining irrigation drainage systems
 - work instructions and workplace procedures applicable to maintaining irrigation drainage systems
 - irrigation drainage system principles and practices
 - recording procedures
- relationships:
 - appropriate people, supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRG403 Coordinate and supervise installation of an irrigation drainage system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop and implement irrigation drainage system construction procedures, coordinate, supervise and commission irrigation drainage system installation and supervise work area rehabilitation.

The unit applies to individuals who apply specialised skills and knowledge in coordinating and supervising the installation of irrigation drainage systems and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Drainage (DRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop and implement construction and environmental procedures	1.1 Develop employment and contract management procedures for contractors 1.2 Develop procedures for controlling and recording site deliveries

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Develop procedures for recording the hire of plant and equipment 1.4 Determine workplace health and safety procedures, including risk assessment for installation works 1.5 Develop procedures for dealing with and minimising environmental impacts associated with construction work 1.6 Notify client, authorities and agencies of the scheduled works
2. Interpret the irrigation drainage system design for the site	2.1 Determine the purpose, scale and required output of the irrigation system 2.2 Assess the landscape of the site 2.3 Determine construction requirements and verify with designer 2.4 Select components to meet design specifications and site requirements
3. Organise resource requirements	3.1 Nominate tasks and timelines for the scheduled works, including the coordination of required resources 3.2 Organise and coordinate labour requirements 3.3 Verify the correct parts and equipment have been delivered to the site and checked 3.4 Select and check equipment and machinery 3.5 Allocate tasks to the work team 3.6 Carry out safety induction for the task and site
4. Supervise preparatory work	4.1 Interpret construction plan to confirm works to be carried out 4.2 Take levels and plan earth works based on irrigation drainage design 4.3 Confirm site is cleaned and marked out 4.4 Confirm drainage structures are pegged out
5. Supervise construction and testing of the drainage system	5.1 Interpret plan and supervise construction work 5.2 Confirm trenches are excavated to specification 5.3 Confirm earth works are carried out appropriately 5.4 Confirm construction of drainage structures are to specifications 5.5 Inspect the lay out and joining of pipes 5.6 Check fitting and adjustment of fittings and valves and confirm all

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	joints are secured 5.7 Supervise the installation and testing of pumping system
6. Commission the irrigation drainage system	6.1 Start up the system according to operating instructions 6.2 Identify operating faults and take corrective actions as required 6.3 Use testing and monitoring equipment to monitor system performance 6.4 Make adjustments as required
7. Supervise the rehabilitation of the works area	7.1 Monitor the resurfacing and sealing earthworks 7.2 Confirm the planting and maintenance of vegetation areas have been carried out 7.3 Confirm disposal of waste and surplus materials has been carried out according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding installation requirements for irrigation drainage system
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff, contractors, suppliers and designer using clear language to communicate installation requirements, tasks, timelines, and procedures
Numeracy	<ul style="list-style-type: none"> Calculate soil quantity and volume to be removed Confirm trench excavation against design specifications
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility Monitor self and others adherence to workplace requirements including safety requirements
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information about installation timelines and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRG403 Coordinate and supervise installation of an irrigation drainage system	AHCDRG401 Coordinate and supervise installation of an irrigation drainage system	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRG403 Coordinate and supervise installation of an irrigation drainage system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has coordinated and supervised the installation of an irrigation drainage system on at least one occasion and has:

- developed operational procedures
- conducted a workplace health and safety risk assessment
- interpreted irrigation designs
- documented requirements for structures
- estimated quantities and volumes of soil to be moved.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental impacts and role of drainage systems
- regulatory requirements, codes of practice and relevant workplace service standards relating to blockage removal, disconnection and reconnection activities
- water authority standards and procedures
- principles and practices of irrigation drainage system installation, including:
 - components used in drainage systems
 - drainage appliances, fixtures and fittings
 - isolation processes and procedures
 - levelling and alignment processes
 - types and operational parameters of drains
- soil moisture measurement procedures
- water quality monitoring methods and techniques
- water table and salinity measures
- development of procedures
- supervision of task allocation, coordination of resources and induction procedures

- trench excavation and earth works procedures
- measuring and monitoring procedures for factors contributing to drainage system performance.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - irrigation drainage system design specifications
 - workplace procedures applicable to health and safety in the workplace and installation of an irrigation drainage system
 - water authority standards and procedures
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRG404 Monitor and control irrigation drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to assess drainage and collection systems, monitor, control, and troubleshoot irrigation drainage systems, clear drainage system blockage or replace blocked section and record and report system performance status.

The unit applies to individuals who apply specialised skills and knowledge to the monitoring and controlling of irrigation drainage systems and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Drainage (DRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess irrigation drainage and collection systems	1.1 Measure drainage performance according to current industry standards 1.2 Measure drainage and tail water quality according to current industry standards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Measure water table depth where required according to current industry standards</p> <p>1.4 Measure soil salinity where required according to current industry standards</p> <p>1.5 Record results according to current industry standards</p> <p>1.6 Identify and record factors external to the system which may cause interference</p> <p>1.7 Analyse drainage system data and compare to the performance specified in the irrigation drainage plan</p>
2. Regulate flows	<p>2.1 Inspect flow regulating systems and apply adjustments to achieve specified discharge requirements</p> <p>2.2 Monitor discharge flows and apply diversions to facilitate repair or emergency</p>
3. Control and operate drainage system structures and processes	<p>3.1 Identify processes to maintain specified performance</p> <p>3.2 Develop and implement maintenance procedures</p> <p>3.3 Identify, address and report operational conditions of the drainage system</p> <p>3.4 Integrate processes to improve drainage network performance</p>
4. Troubleshoot drainage problems	<p>4.1 Identify potential hazards and risks and implement safe working practices to manage risks</p> <p>4.2 Minimise environmental impacts of drainage system troubleshooting activities</p> <p>4.3 Select, fit and use personal protective equipment applicable to the task</p> <p>4.4 Conduct a visual inspection to determine damaged or broken components and record results</p> <p>4.5 Inspect drained areas for signs of water pooling and record problems</p>
5. Clear drainage blockage or replace blocked section	<p>5.1 Access drainage lines to allow blockage to be cleared</p> <p>5.2 Clear blockage or replace blocked section</p> <p>5.3 Test drainage line to confirm blockage is cleared from pipe system</p> <p>5.4 Repair or reseal drainage line to permit normal use</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.5 Rehabilitate drainage site according to current industry standards
6. Record and report system performance status	6.1 Record and report water quality 6.2 Record and report water table depth, soil moisture and salinity 6.3 Document strategies for dealing with and minimising environmental impacts and maximising positive impacts of the drainage system

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding monitoring and controlling irrigation drainage systems
Oral communication	<ul style="list-style-type: none"> Use clear language to report operational conditions of the drainage system and system performance status
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRG404 Monitor and control irrigation drainage systems	AHCDRG402 Monitor and control irrigation drainage systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRG404 Monitor and control irrigation drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has monitored and controlled an irrigation drainage system on at least one occasion and has:

- applied soil moisture testing techniques
- measured, recorded and reported water table depth, soil moisture and salinity
- calculated water volumes from rate and depth
- analysed drainage system data
- isolated drainage lines
- controlled and operated drainage system structures and processes
- applied workplace health and safety requirements
- identified and minimised adverse environmental impacts of drainage systems
- cleared and refilled drainage lines
- cleared blockages from drainage systems.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- measuring and monitoring procedures for factors contributing to drainage system performance
- water quality monitoring methods and techniques
- soil moisture measurement procedures
- principles and practices for monitoring irrigation drainage systems, including:
 - components used in drainage systems
 - isolation processes and procedures
 - levelling and alignment processes
 - types and operational parameters of drains

- safe working practices applicable to troubleshooting and clearing irrigation drainage systems and replacing blocked sections of irrigation drainage systems
- workplace requirements applicable to health and safety in the workplace for monitoring and controlling irrigation drainage systems
- environmental impacts of drainage systems.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation drainage system troubleshooting and clearing tools and equipment
 - personal protective equipment applicable to troubleshooting and clearing irrigation drainage systems
- specifications:
 - workplace requirements applicable to health and safety in the workplace and monitoring and controlling irrigation drainage systems
 - irrigation drainage system water and soil testing equipment and procedures
 - workplace procedures applicable to health and safety in the workplace and monitoring, controlling, troubleshooting and clearing an irrigation drainage systems
 - irrigation drainage plan
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRG502 Design drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to identify design requirements, determine specifications, capital expense and operating expense budgets and design the drainage system.

The unit applies to individuals who apply specialised skills and knowledge to the design of drainage systems, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Drainage (DRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine design requirements	1.1 Determine water transfer, recharge, reuse and harvesting system needs 1.2 Identify processes of collecting, disposing and storing drainage water to avoid degrading water quality 1.3 Investigate regional geology and geography to predict drainage

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>parameters</p> <p>1.4 Apply hydrological calculations to predict volumes and rates of surface run-off</p> <p>1.5 Conduct site investigations to assess depth of clay, depth of ground water, soil and water salinity, and structural or chemical impediments</p> <p>1.6 Determine the most cost effective drainage system</p> <p>1.7 Document predictions of leaching fractions and salt movements, and develop soil amelioration and drainage management plans</p> <p>1.8 Determine the need for leachate interception and dewatering system and if required prepare construction specification for interception and collection, disposal, reuse or recycle</p> <p>1.9 Confirm drains and structures are capable of carrying the design water volumes and intensities according to workplace standards</p> <p>1.10 Identify construction specifications required to make drainage systems according to environmental and workplace health and safety requirements</p> <p>1.11 Identify and protect environmentally sensitive areas according to local, state and federal legislation and regulations</p>
2. Design a drainage system	<p>2.1 Select systems, including relevant equipment, to move water efficiently to water storage or treatment and at the flow and pressure required in design specifications</p> <p>2.2 Select system combinations that are efficient, reliable, functional, serviceable and flexible for the intended application</p> <p>2.3 Determine energy requirements and check layout of electricity lines with local authority if electrical pumps and motors are used in the system</p> <p>2.4 Select and integrate structures, pipes, valves and accessories into a functional system that can be monitored and maintained</p> <p>2.5 Define the work required to make suitable drainage systems available to the workplace in the design specifications</p> <p>2.6 Confirm power supply design specification with power authorities if electrical pumps and motors are used in the system</p> <p>2.7 Minimise drainage system design damage based on current industry practice</p> <p>2.8 Document drainage system design based on current industry</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	practice 2.9 Confirm design output with an appropriately experienced and qualified person
3. Determine capital expense budget	3.1 Estimate materials required from plans and specifications 3.2 Estimate labour requirements based on documented work schedule with reasonable allowance for variances in work schedules 3.3 Base costing for each component on quoted information from suppliers, or sound analysis of individual elements 3.4 Document design calculations, performance indicators and decisions and relevant information in plans, specifications and manuals 3.5 Document capital expense budget based on current industry practice 3.6 Confirm capital expense budget output with an appropriately experienced and qualified person
4. Determine operating expense budget	4.1 Optimise the relationship between capital and operational costs including a comparison of energy sources 4.2 Collate all operating expense applicable to the completed drainage system and calculate an operating expense budget 4.3 Document operating expense budget based on current industry practice

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with local authorities, using clear language to communicate energy requirements and check layout of electricity lines, and confirm power supply design specification with power authorities Use clear communications with appropriately experienced and qualified person to discuss design output and capital expense

Skill	Description
	budget outputs
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRG502 Design drainage systems	AHCDRG501 Design drainage systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRG502 Design drainage systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has designed at least one drainage system on at least one occasion and has:

- developed specifications for water transfer, recharge, reuse and harvesting systems
- identified design requirements
- completed hydrological calculations
- identified performance indicators for the drainage system
- predicted volumes and rates of surface run-off and system leakage
- identified adverse environmental impacts of drainage and appropriate remedial action
- assessed the requirements for pumping capacity in a drainage system and power requirements
- developed capital and operating budgets.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of drainage design, including:
 - developments in drainage technology
 - leachate interception and dewatering systems
 - leaching fractions and salt movements prediction
 - monitoring systems
 - the design processes
 - water transfer, recharge, reuse and harvesting systems
- local, state and federal workplace health and safety and environmental protection legislation, regulations, codes of practice and workplace requirements applicable to drainage system design
- budgeting, contract development and obligations

- cost/benefit analysis.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - regional geology and geography information
 - drainage system site
 - industry energy and water efficiency benchmarks
 - local, state and federal workplace health and safety and environmental protection legislation, regulations, codes of practice and workplace requirements applicable to drainage system design
 - drainage system water and soil testing equipment and procedures
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRY202 Milk livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to extract milk from a range of livestock. It requires the ability to prepare site and equipment for milking, move and handle livestock, identify and report on abnormal livestock conditions and complete tasks after milking operations.

This unit applies to individuals who undertake routine tasks to support milking operations on a dairy farm under the direction of a supervisor. They may work independently or as part of a team.

All work is carried out to comply with workplace procedures, according to state/territory work health and safety, food safety, animal welfare, environmental and biosecurity legislation, regulations and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Dairy (DRY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for milking	1.1 Identify and confirm milking tasks, associated workplace procedures, health and safety, hygiene and food safety hazards,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>standards, personal protective equipment (PPE) and practices with supervisor</p> <p>1.2 Prepare self, dairy sheds, yards, machinery and equipment used for milking operations according to work health and safety, hygiene and food safety requirements</p> <p>1.3 Confirm cleanliness of milk storage tank according to hygiene and food safety requirements</p> <p>1.4 Prepare and check teat spray applicators according to manufacturer specifications or animal health professional advice</p> <p>1.5 Move and yard livestock in readiness for milking operations according to animal welfare requirements</p>
2. Carry out milking	<p>2.1 Assist livestock to move carefully and calmly into position according to animal welfare requirements</p> <p>2.2 Monitor livestock health and condition, and segregate and report livestock health problems and conditions as required</p> <p>2.3 Conduct milking according to food safety requirements and monitor progress to prevent over-milking</p> <p>2.4 Check milk temperature and functionality of cooling equipment according to food safety requirements</p> <p>2.5 Segregate and report livestock producing milk unsuitable for bulk sales as required</p> <p>2.6 Identify and isolate unsuitable milk from bulk supplies</p> <p>2.7 Identify equipment faults during milking and repair minor malfunctions or report complex faults immediately to supervisor</p> <p>2.8 Apply teat disinfection to livestock teats according to workplace requirements</p>
3. Complete milking operation	<p>3.1 Return livestock to designated feeding area without causing stress or injury</p> <p>3.2 Carry out cleaning procedures of dairy facilities, machinery and equipment according to hygiene and food safety and work health and safety requirements</p> <p>3.3 Dispose of waste according to workplace and environmental requirements</p> <p>3.4 Identify and report machinery, equipment and plant wash malfunctions for repair or replacement</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.5 Monitor levels of consumable equipment used in the milking process and report replacement needs 3.6 Complete records according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret text in work instructions and workplace procedures
Writing	<ul style="list-style-type: none"> Use clear language, industry terminology and accuracy to complete workplace records
Oral communication	<ul style="list-style-type: none"> Ask questions and use active listening to clarify task requirements Describe abnormal livestock health conditions, unsuitable milk quality or quantity, and machinery and equipment malfunctions using clear language and industry terminology
Numeracy	<ul style="list-style-type: none"> Count and categorise livestock and consumable equipment Measure quantities, volume, weight, area, ratio and time Interpret numerical information in manufacturer instructions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRY202 Milk livestock	AHCDRY201 Milk livestock	Changes to performance criteria, performance and knowledge evidence Foundation skills added Assessment conditions expanded	Not equivalent

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRY202 Milk livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supported at least two milking operations, including:

- prepared and maintained self and dairy facilities and equipment to industry safety, hygiene and food safety standards
- prepared and applied teat spray solutions according to instructions
- operated milking equipment to carry out milking in functional and safe manner
- handled livestock in a safe, low stress and humane manner in moving herd to and from dairy
- recognised and isolated unsuitable milk
- identified and reported signs of sickness or abnormal behaviour in livestock
- responded to equipment faults during milking
- disposed waste
- completed records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types, functions, cleaning and maintenance of dairy facilities, machinery and equipment
- basic anatomy and physiology and key aspects of reproduction cycle, lactation and behaviour of animal species applicable to milking operations
- work health and safety requirements for milking operations
- personal and workplace hygiene and food safety requirements and practices used during milking operations
- animal welfare practices and requirements for handling and moving livestock for milking operations
- work routines and procedures for milking operations
- workplace criteria and methods for determining milk quality

- types, characteristics, signs of common health issues and prevention in the livestock species
- types, handling, use and disposal of cleaning and sanitising chemicals used for milking operations and work health and safety and environmental practices for these agents.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a dairy milking facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - livestock
 - machinery and equipment used for milking operations
 - personal protective equipment suitable for milking and handling cleaning and sanitising chemicals
- specifications:
 - work instructions and workplace policies and procedures for milking operations, including advice on health and safety, food safety, hygiene, animal welfare and environmental requirements
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRY303 Coordinate and monitor milking operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to coordinate and monitor the milking operations of a dairy facility. It requires the ability to determine requirements and procedures for milking operations, implement livestock health program and monitor operations.

This unit applies to individuals who work as farm hands on a dairy facility and are responsible for coordinating, implementing and monitoring milking operations on a daily basis. They may work independently or lead a team.

All work is carried out to comply with workplace policies and procedures, according to state/territory work health and safety, food safety, animal welfare, environmental and biosecurity legislation, regulations and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Dairy (DRY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine requirements for milking	1.1 Identify milk operations according to production requirements and clarify with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
operations	<p>1.2 Identify requirements for determining and maintaining milk quality according to food safety plan</p> <p>1.3 Identify resources and equipment requirements, including personal protective equipment (PPE)</p> <p>1.4 Identify milking shed and equipment cleaning and hygiene requirements</p> <p>1.5 Identify work health and safety and biosecurity hazards, assess risks and determine control measures</p>
2. Prepare for milking operations	<p>2.1 Identify milking routines and procedures for milking operations, in consideration to a range of variable conditions</p> <p>2.2 Check availability of water supply and serviceability of milking equipment</p> <p>2.3 Adjust milking equipment as required in consultation with relevant personnel or report complex repairs for specialist attention</p> <p>2.4 Carry out manufacturer specified vat cleaning routines and monitor water temperature circulating chemical concentrations throughout cleaning cycle</p> <p>2.5 Determine milking procedures with minimum stress to livestock and maximum yield according to workplace timeframes</p>
3. Implement livestock health treatment program	<p>3.1 Monitor livestock health and condition according to workplace health program</p> <p>3.2 Carry out livestock testing according to health program and seek advice from supervisors and experts for potential health issues as required</p> <p>3.3 Carry out livestock health treatments according to veterinary or manufacturer specifications</p> <p>3.4 Implement hygiene practices to prevent cross-infection during milking operations</p> <p>3.5 Take milk samples and label according to workplace procedures</p> <p>3.6 Complete and maintain livestock health records</p> <p>3.7 Carry out all livestock handling and husbandry according to workplace animal welfare policies</p>
4. Monitor milking operations	4.1 Monitor milking procedures for operational efficiency and effectiveness and compliance requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.2 Monitor and maintain milk quality according to quality standards 4.3 Monitor cleanliness of work areas and equipment, and disposal of organic and non-organic waste according to hygiene requirements 4.4 Complete documentation and records for milking operations and cleaning and hygiene regimes according to workplace requirements 4.5 Report issues and suggested changes for future milking cycles to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information from a range of documentation
Writing	<ul style="list-style-type: none"> Maintain accurate documentation and records using clear language and industry terminology
Oral communication	<ul style="list-style-type: none"> Use open-ended questioning and active listening to gather information and confirm work requirements
Numeracy	<ul style="list-style-type: none"> Count and categorise livestock Calculate volume, weight, ratio, time and application rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRY303 Coordinate and monitor milking operations	AHCDRY301 Coordinate milking operations	Changes to unit title elements, performance criteria, performance and knowledge evidence for clarity Foundation skills added	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Assessment conditions expanded	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRY303 Coordinate and monitor milking operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has coordinated and monitored milking operations on at least one occasion, including:

- determined requirements for the milking operation, and:
- identified hazards and safe operating procedures
- identified criteria for monitoring milk quality
- identified cleaning and hygiene requirements
- Identified personal protective equipment requirements (PPE)
- monitored the milking operation, and:
- recognised and rectified machinery malfunctions
- monitored health, condition and welfare of livestock
- conducted milk sampling and testing
- maintained dairy records
- monitored cleanliness of work areas and milking equipment according to work health and safety, hygiene and food safety requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types, functions, cleaning, monitoring and maintenance of milking facilities, machinery and equipment
- workplace and industry requirements for resources, manpower and equipment used for milking operations
- criteria, methods and industry food safety standards for determining milk quality
- factors affecting milk quality, and their impacts on production targets and viability
- workplace routines and procedures for milking operations

- work health and safety legislation, regulations and codes of practice relevant to milking operations
- hygiene, biosecurity and food safety practices and requirements for milking operations
- reproduction cycle, lactation and behaviour of the animal species applicable to milking operations
- animal welfare practices and requirements for milking operations
- livestock health testing and sampling, treatment and preventive medicine applicable to milking operations
- types, characteristics, signs of ill health, prevention and treatment of relevant diseases in the livestock species
- types and maintenance of required documentation used to record milking operations
- types, handling, use and disposal of detergents and cleaning agents, work health and safety and environmental practices for these agents
- waste and debris storage and disposal requirements and methods.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a dairy milking facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - livestock
 - machinery and equipment used for milking operations
 - sampling and testing equipment, including personal protective equipment (PPE)
- specifications:
 - workplace policies and procedures for milking operations, including advice on health and safety, hygiene, and animal welfare requirements
 - workplace food safety plan.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRY304 Carry out routine service of milking equipment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to identify faults that do not require the services of qualified tradespeople and carry out routine service, adjustment and maintenance of milking equipment.

This unit applies to individuals who work as farm hands or milking machine technicians and carry out routine servicing and maintenance of milking machine components on a dairy facility.

All work is carried out to comply with workplace policies and procedures, according to state/territory work health and safety, animal welfare, environmental and biosecurity legislation, regulations and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Dairy Production (DRY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for servicing and maintenance of milking machines	1.1 Identify service and maintenance requirements 1.2 Communicate and coordinate activities with other workers who

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>may be affected by maintenance activities</p> <p>1.3 Identify work health and safety hazards, assess risks and determine control measures</p> <p>1.4 Select tools and equipment for tasks and check for serviceability</p> <p>1.5 Prepare and fit required personal protective equipment (PPE)</p>
2. Identify faults in milking machines	<p>2.1 Identify sub-optimal performance of milking equipment from observations during milking routines</p> <p>2.2 Observe animal behaviour during milking and record abnormalities</p> <p>2.3 Conduct fault finding and fault diagnosis according to manufacturer specifications with minimum disruption to milking routines</p> <p>2.4 Identify and isolate faulty components and refer to qualified tradesperson</p>
3. Carry out operational service and maintenance of milking machines	<p>3.1 Carry out minor machine adjustments to rectify sub-optimal performance characteristics</p> <p>3.2 Repair or replace defective parts or components according to manufacturer specifications</p> <p>3.3 Complete programmed maintenance routines to replace consumables and maintain lubrication</p>
4. Complete post servicing and maintenance activities	<p>4.1 Clear and clean work area and tools and equipment</p> <p>4.2 Dispose of waste according to workplace and environmental requirements</p> <p>4.3 Report spare parts to be replaced and faults to be repaired by technician or specialist</p> <p>4.4 Record servicing and maintenance activities according to workplace requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information from a range of documentation
Writing	<ul style="list-style-type: none"> Complete records using clear language and industry terminology
Oral communication	<ul style="list-style-type: none"> Use clear language and industry terminology when describing faults and service requirements
Numeracy	<ul style="list-style-type: none"> Count and categorise consumable equipment Interpret numerical information in manufacturer specifications

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRY304 Carry out routine service of milking equipment	AHCMKH301 Carry out minor service of milking equipment	Change to unit title and sector Elements added Changes to elements, performance criteria, performance and knowledge evidence Foundation skills added Assessment conditions expanded	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRY304 Carry out routine service of milking equipment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has carried out the following routine servicing and maintenance of milking equipment, on at least two occasions:

- identified faults in milking equipment and those that need to be referred to qualified tradesperson through observations during milking operations and further fault diagnosis and made minor adjustments
- completed a routine service and maintenance of equipment

In completing the above, there must also be evidence that individual has for each occasion:

- applied work health and safety requirements and risk control
- applied manufacturer specifications
- observed animal behaviour during milking and recorded abnormalities
- fitted and used personal protective equipment (PPE)
- communicated activities related to maintenance coordination with other workers
- recorded servicing and maintenance activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- work health and safety and risk assessment requirements and practices used for servicing milking equipment
- types, functions and manufacturers specifications for cleaning, monitoring and maintenance of milking machines and components
- criteria and methods for assessing optimal performance of milking machines and their components
- signs and methods for assessing livestock health and welfare relevant to milking operations

- possible faults, problems and sub-optimal performance with milking machines and their components, impact on milking operations and manufacturer specifications and corrective actions for these faults and problems
- possible electrical faults of milking machines and requirement to refer these to qualified electricians.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a dairy milking facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - milking equipment and components
 - tools and equipment used to service and maintain equipment
 - personal protective equipment (PPE)
- specifications:
 - workplace procedures for servicing and maintaining milking equipment, including advice on health and safety requirements
 - manufacturer specifications.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRY305 Conduct mechanical tests on milking machines

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to mechanically test and make recommendations on the performance of milking machines used on dairy farms.

This unit applies to individuals who conduct mechanical tests as part of service and maintenance of milking machines for dairy facilities.

All work is carried out to comply with workplace policies and procedures, according to state/territory work health and safety, animal welfare, environmental and biosecurity legislation, regulations and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Dairy (DRY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for testing of milking machine	1.1 Identify and confirm testing requirements with facility records and personnel 1.2 Identify facility health and safety hazards, assess risks and determine control measures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Select testing tools and equipment and check for serviceability 1.4 Prepare and fit required personal protective equipment (PPE)
2. Establish milking machine specifications	2.1 Establish herd details and health status 2.2 Determine expected performance from machine specifications, testing procedures and performance criteria 2.3 Assess and record condition of components
3. Calculate required milking machine performance	3.1 Calculate effective reserve based on facility specifications 3.2 Calculate vacuum pump capacity from effective reserve 3.3 Record manufacturer recommended component specification and matching
4. Measure milking machine performance	4.1 Measure working vacuum levels against required performance 4.2 Adjust vacuum to optimise milking facility performance 4.3 Measure and report air consumption of component groups and pipeline leakage 4.4 Test pulsators according to procedures and report results relative to manufacturer performance recommendations 4.5 Establish recommended air consumption of components and measure consumption according to testing procedures
5. Make recommendations to optimise machine performance	5.1 Interpret test results against desired performance and herd details 5.2 Provide recommendations and written report on safety considerations for specific installation tested 5.3 Provide recommendations on milking facility performance 5.4 Complete report on component condition according to manufacturer requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information from a range of documentation
Writing	<ul style="list-style-type: none"> Complete accurate records and reports using clear language and industry terminology
Oral communication	<ul style="list-style-type: none"> Use open-ended questioning and active listening to gather information Use clear language and industry terminology when communicating recommendations to others

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRYH305 Conduct mechanical tests on milking machines	AHCMKH305 Mechanically test milking machines	Change to unit title and sector Element added for clarity Changes to performance criteria performance and knowledge evidence Foundation skill added Assessment conditions expanded	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRY305 Conduct mechanical tests on milking machines

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted mechanical testing of milking machines on at least five occasions, including for each:

- identified and recorded milking machine specifications
- calculated and measured milking machine performance
- developed a report describing machine conditions and made recommendations to optimise machine performance
- applied work health and safety requirements, including using personal protective equipment (PPE).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types, functions, cleaning, monitoring and maintenance of milking machines and their components and milking facility equipment
- relevant work health and safety requirements related to testing milking machines and their components
- requirements, criteria and assessment methods for optimal performance of milking machines and their components
- udder physiology, invasive pathogens and the interaction between the milking machine and the lactating animal
- information required, criteria and methods for assessing herd health status
- requirements and methods for determining the performance targets of a milking facility from the herd status and milking installations
- possible faults, problems and poor performance with milking machines and their components, impacts on milking operations and corrective actions for these faults and problems

- key aspects and components of reports and recommendations to a milking facility.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a dairy milking facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - milking machines, their components and associated equipment as specified in performance evidence
 - tools, equipment and materials used to test milking machines
 - personal protective equipment
- specifications:
 - workplace policies and procedures for testing milking machines, including advice on health and safety, hygiene, and animal welfare requirements
 - manufacturer specifications.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRY306 Operate a dairy waste utilisation system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare, operate, maintain and monitor a dairy waste utilisation system.

This unit applies to individuals who work as farm hands and are responsible for managing the solid and effluent waste generated in a dairy facility.

All work is carried out to comply with workplace procedures, according to state/territory work health and safety, food safety, environmental and biosecurity legislation, regulations and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Dairy (DRY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for dairy waste utilisation operations	1.1 Confirm maintenance requirements for dairy waste utilisation operations to be undertaken from work program and food safety plan 1.2 Communicate and coordinate activities with other workers who may be affected by maintenance activities

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify work health and safety hazards, assess risks and determine control measures</p> <p>1.4 Select, check and prepare personal protective equipment (PPE)</p> <p>1.5 Select, check and prepare tools and equipment according to work requirements</p>
2. Maintain and operate system	<p>2.1 Service and maintain dairy waste removal and disposal equipment according to manufacturer specifications</p> <p>2.2 Use dairy waste disposal system according to system design and regulatory requirements</p> <p>2.3 Carry out irrigation from dairy waste storages</p> <p>2.4 Remove litter, flush and drain in-shed dairy waste pits</p> <p>2.5 Maintain tools' condition and storage location</p>
3. Monitor waste utilisation system	<p>3.1 Check flow rates, pit levels and equipment to maintain effective operation of the system</p> <p>3.2 Carry out cleaning procedures and hygiene practices</p> <p>3.3 Identify environmental impact of dairy waste disposal, assess likely outcomes and take responsive action in line with workplace environmental, legislative and regulatory requirements</p>
4. Conduct post operation activities	<p>4.1 Clean equipment according to manufacturer specifications</p> <p>4.2 Clean and store attachments and other ancillary equipment as required</p> <p>4.3 Dispose of containers, leftover fluids, waste and debris according to workplace and environmental requirements</p> <p>4.4 Complete required records and documentation according to workplace and regulatory requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information from manufacturer documentation and regulations
Writing	<ul style="list-style-type: none"> Maintain records and documentation accurately using clear language and industry terminology
Oral communication	<ul style="list-style-type: none"> Use open-ended questioning and active listening to gather information and confirm work requirements
Numeracy	<ul style="list-style-type: none"> Calculate volume, weight, area, percentage, ratio, time and application rates Measure volumes and calculate ratios to achieve correct concentration of effluent

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRY306 Operate a dairy waste utilisation system	AHCDRY302 Operate a dairy recycling system	Changes to unit title elements, performance criteria, performance and knowledge evidence Foundation skills added Assessment conditions expanded	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRY306 Operate a dairy waste utilisation system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has maintained and operated a dairy waste utilisation system according to work health and safety, food safety and environmental legislation and regulations on at least two occasions, including for each occasion:

- made preparations for dairy waste disposal and recycling operations, consisting of having identified safety requirements, prepared tools and equipment and coordinated work activities with others
- selected, checked and used personal protection equipment (PPE)
- serviced both the dairy waste storage and disposal system
- conducted a check on the system for effective operation and hygiene
- carried out irrigation from dairy waste storages
- cleaned and stored equipment, disposed of waste and maintained records post operations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of waste generated in dairy industry
- legislation, regulations and industry requirements for dairy waste disposal operations, including biosecurity requirements and environmentally sustainable practices
- environmental impacts of dairy waste disposal operations and dairy waste irrigation, and strategies to mitigate negative impacts
- organisational work program and food safety program requirements for dairy waste disposal operations
- work health and safety requirements for operating a dairy waste utilisation system
- tools, equipment and systems used for dairy waste disposal operations (dairy waste handling, removal and disposal) and their functions, cleaning, maintenance, servicing and storage of such tools, equipment and systems

- irrigation techniques for dairy waste
- functions, maintenance and service of effluent pits
- methods for safe and appropriate disposal of containers, leftover fluids, waste and debris from effluent operations
- documentation and type of records that need to be completed for effluent operations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a dairy facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - dairy waste utilisation system and associated tools and equipment
 - personal protective equipment (PPE)
 - record system
- specifications:
 - work program
 - food safety plan
 - manufacturer specifications
 - workplace policies and procedures for dairy waste disposal and recycling operations, including advice on health and safety, food safety, hygiene, and biosecurity and environmental regulatory requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCDRY402 Manage milking shed operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to manage milking shed operations for a dairy facility according to regulatory and quality requirements.

This unit applies to individuals who manage and monitor the operations of a dairy facility.

All work is carried out to comply with workplace procedures, according to state/territory work health and safety, food safety, animal welfare, environmental and biosecurity legislation, regulations and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Dairy (DRY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish and monitor regulatory and quality requirements for milking shed operations	1.1 Identify legislative and regulatory requirements and industry standards relevant to milking shed routines, and consequences of non-compliance 1.2 Identify milk buyer quality standards and specifications 1.3 Identify environmental impacts of milking shed routines, assess

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>likely outcomes and identify practices to minimise adverse effects according to workplace environmental policies</p> <p>1.4 Identify animal welfare requirements and practices to ensure the welfare of livestock</p> <p>1.5 Monitor own work practices and those of others to ensure compliance with regulations and quality standards</p> <p>1.6 Review workplace policies and procedures for effectiveness in complying with regulations and quality standards</p>
2. Manage shed maintenance	<p>2.1 Plan maintenance schedules according to manufacturer recommendations and production requirements</p> <p>2.2 Implement programmed replacement of consumables in line with recorded usage and replacement schedule or manufacturer specifications</p> <p>2.3 Identify and replace worn or unsafe components, and those that impact milk quality</p> <p>2.4 Identify and rectify milking equipment maintenance problems</p> <p>2.5 Engage specialist services for non-routine service and repairs and programmed maintenance</p>
3. Manage shed milking routines	<p>3.1 Determine milking shed routines and schedules according to production requirements, available labour and resources</p> <p>3.2 Allocate and communicate responsibilities to staff</p> <p>3.3 Implement and monitor in-shed hygiene routines according to regulatory, biosecurity and food safety requirements</p> <p>3.4 Establish and implement milk production recording procedures</p> <p>3.5 Implement industry or supplier quality assurance practices and procedures in programmed shed routines</p> <p>3.6 Implement and monitor workplace health and safety requirements</p> <p>3.7 Implement and monitor workplace animal welfare requirements</p>
4. Manage livestock health problems	<p>4.1 Establish and monitor shed procedures for identification of livestock herd health problems</p> <p>4.2 Manage isolation of milk from livestock with health problems to maintain overall milk quality</p> <p>4.3 Select and administer treatments according to veterinary or product advice as required</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.4 Implement plans for livestock with health problems according to veterinary advice
5. Maintain milk quality	5.1 Monitor milk quality to comply with buyer specifications and food safety standards 5.2 Identify deviation from milk quantity and quality and rectify according to professional advice 5.3 Monitor milk cooling equipment and storage to maximise and maintain milk quality

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret complex textual information from a range of sources to identify relevant and key information about compliance and quality requirements
Writing	<ul style="list-style-type: none"> Complete workplace documentation using clear language and industry terminology
Oral communication	<ul style="list-style-type: none"> Gather information through open-ended questioning, active listening, paraphrasing and summarising Use appropriate language and tone to communicate with staff and external services
Numeracy	<ul style="list-style-type: none"> Calculate time and application rates when determining schedules Interpret numerical information in documentation and cooling equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCDRY402 Manage milking shed operations	AHCDRY401 Manage milking shed routines	Element added Changes to elements, performance criteria, performance and knowledge evidence Foundation skills added Assessment conditions expanded	Not equivalent

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCDRY402 Manage milking shed operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively developed and managed the operations of a milking shed, including:

- conducted a review of milking shed policies and procedures for compliance with regulations and quality standards
- overseen the routine maintenance and service of milking equipment or replacement of consumables on at least one occasion
- managed the conduct of at least two milking operations, including:
 - determined and communicated the milking schedule
 - maintained practices for milk quality in co-operation with relevant personnel
 - identified possible causes of decline in milk quantity and quality and managed the segregation of unsuitable milk from livestock with health problems
 - identified any faults in milking equipment and taken action to have rectified
 - overseen cleaning and disinfection of milk collection area and equipment after milking
 - maintained records of the food safety components of the milking operation
 - implemented and monitored work health and safety, food safety, animal welfare and environmental policies and procedures throughout the operation

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- industry legislation, regulations and standards relevant to milking operations, milk quality assurance and milking shed operations:
 - work health and safety
 - food safety plan and practices
 - animal welfare

- environmental impacts of milking operations and strategies to mitigate negative impacts
- hygiene and biosecurity
- production targets and requirements for milking operations, including required resources, both human and equipment
- types, functions, cleaning, monitoring and maintenance of milking facilities, machinery, equipment and consumables
- types, characteristics, signs of ill health, prevention and treatment of relevant diseases in the livestock species and their impact on milking operations and milk quality
- criteria, methods and industry standards for determining milk quality
- reproduction cycle, lactation and behaviour of the animal species applicable to milking operations
- livestock health testing and sampling, health treatment and preventive medicine applicable to milking operations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a dairy facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - machinery and equipment used for milking operations
- specifications:
 - facility maintenance plans and schedules
 - food safety plan
 - supplier specifications
 - workplace policies and procedures, quality standards relevant to managing milking operations and milking shed routines
- relationships:
 - staff.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR101 Support ecological restoration

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to support natural area conservation work in parks, natural areas, agricultural lands or areas undergoing restoration.

The unit applies to individuals who assist others undertaking conservation works and who undertake defined routine activities under close supervision and undertake defined activities and work in a structured context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare materials, tools and equipment for conservation work	1.1 Interpret instructions and directions from supervisor 1.2 Identify materials, tools and equipment required for job 1.3 Conduct checks on materials, tools and equipment, and report insufficient or faulty items 1.4 Demonstrate manual handling techniques when loading and unloading materials

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select and use relevant personal protective equipment 1.6 Identify workplace health and safety hazards, and report to supervisor
2. Undertake conservation and restoration work as directed	2.1 Conduct conservation and restoration work according to work instructions and workplace health and safety procedures 2.2 Interact with others in a positive and professional manner 2.3 Handle materials and dispose of waste according to instruction 2.4 Report difficulties in completing work to required standards to supervisor
3. Store and stockpile materials	3.1 Store debris and waste material according to instructions 3.2 Prepare and process debris and waste materials 3.3 Stockpile surplus materials for removal 3.4 Maintain a clean and safe work site while completing conservation activities
4. Clean up on completion of conservation work	4.1 Store materials according to instructions 4.2 Clean, maintain and store tools and equipment according to instructions 4.3 Report work outcomes to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Listen to work instructions and clarify both written and oral instructions as required Report on own work to supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR101 Support ecological restoration	AHCNAR101 Support natural area conservation	<p>Changed unit code and title to reflect new unit sector</p> <p>Changes to Application and Performance Criteria for clarity</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR101 Support ecological restoration

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, supported natural area conservation work, and has:

- interpreted supervisor instructions and prepared tools and equipment
- provided support for natural area conservation work
- stockpiled waste and surplus materials for removal or storage according to supervisor instructions
- cleaned site, tools and equipment
- conducted all work according to workplace health and safety requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- recognition of the purpose and value of conservation management projects
- tools and equipment used in conservation work, including:
 - safe operation and use
 - basic maintenance
 - cleaning and storing
- basic restoration techniques, including:
 - planting
 - basic plant protection installation
 - direct seeding
 - assisted natural regeneration
 - protection of remnant vegetation
- basic manual weed control techniques and their purpose, including:

- recognition of target species
- deseeding
- crowning
- digging out
- workplace health and safety requirements, including:
 - basic hazard recognition and reporting
 - workplace health and safety procedures
 - personal protective equipment required for conservation work
- basic principles of biosecurity and sustainability practices related to work instructions
- basic ecological principles for conservation work related to work instruction, including:
 - recognition of basic ecosystems, their aspect, and simple structure required for locating planting and conservation work areas
 - recognition of plant types and positioning in the ecosystem when planting or seeding.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a conservation work site or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools and equipment
 - materials required for ecological restoration works
 - specific items of personal protective equipment
- specifications:
 - workplace instructions
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR102 Support native seed collection

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to support native seed collection across a range of landscapes and environments.

The unit applies to individuals who work under close supervision and undertake defined routine conservation activities and work in a structured context.

Legislation, regulations and by-laws relating to the collection and removal of plant materials from public and private land apply nationally and in some states, territories and jurisdictions. Users are advised to check with the local, relevant authority.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare materials, tools and equipment for native seed collection	1.1 Interpret instructions and directions from supervisor 1.2 Identify materials, tools and equipment required 1.3 Check materials, tools and equipment, and report identified problems to supervisor 1.4 Load and unload transported materials according to workplace health and safety manual handling techniques

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select, check and use personal protective equipment 1.6 Identify workplace health and safety hazards, and report identified hazards to supervisor
2. Support native seed collection	2.1 Undertake seed collection activities according to supervisor instructions, biosecurity and sustainable seed collection procedures and workplace health and safety procedures 2.2 Provide assistance to support the activities of others 2.3 Provide support to collect seeds 2.4 Provide assistance to separate viable seed and check seed quality 2.5 Provide assistance to weigh, label and store seeds 2.6 Record seed information according to instructions
3. Clean up on completion of seed collection work	3.1 Collect seed waste and plant materials and dispose of according to instructions 3.2 Clean, maintain and store tools and equipment 3.3 Report work outcomes to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Prepare labels for seed following instructions and ensuring accuracy and legibility of information
Oral communication	<ul style="list-style-type: none"> Listen to work instructions and clarify both written and oral instructions as required Report on own work to supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR102 Support native seed collection	AHCNAR102 Support native seed collection	<p>Changed unit code to reflect new unit sector</p> <p>Minor changes to Application</p> <p>Changes to Performance Criteria moved some components to Knowledge Evidence</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR102 Support native seed collection

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has followed directions from supervisor to collect, extract, weigh, label and store at least ten species of native seeds from at least three of the following types of plants or plant environments:

- grasses and sedges
- herbaceous plants
- woody shrubs below four metres high
- trees above four metres high
- freshwater aquatic plants
- marine plants
- marshland or intertidal plants.

There must also be evidence that the individual has:

- applied safe work practices while collecting seed
- provided seed collecting support
- prepared, used and cleaned tools and equipment used during seed collection
- conducted seed collection work and maintained biosecurity and sustainable seed collection practices specified in instructions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- laws governing seed collecting from public and private land, including:
 - basics of commonwealth, state or territory laws
 - licensing requirements
- basic ecological principles for seed collection related to work instruction, including:

- recognising plants and range of seed species required for collection
- recognition of broad ecological systems for locating seed collection target species
- range of processes for collecting, treating and storing seed, including:
 - recognising mature seed ready for collection
 - identifying seed and where to locate it on plants
 - methods to separate viable seed from waste materials
 - recognising common seed disorders that affect the health and viability of seed
 - labelling seed and the need for accuracy and completeness in documentation
 - seed treatments and storage requirements for seed species collected
- organisational and site standards, requirements, policies and procedures for collecting seed, including:
 - collecting seed sustainably, minimising seed collection impact on the environment
 - collecting seed hygienically using biosecurity principles to prevent the spread of pests and disease
- seed collecting resources and equipment, including:
 - safe use and operation
 - basic maintenance
 - cleaning and storing
- recording and reporting requirements
- workplace health and safety requirements, including:
 - safety and environmental hazards and controls associated with the collection, treatment and storage of seed
 - personal protective equipment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field while collecting native seed from a range of plants as specified in the Performance Evidence
- resources, equipment and materials:
 - seed collecting tools and equipment specific to the seed type and location
 - items of personal protective equipment relevant to the seed collection site, including sun protection
- specifications:
 - workplace instructions with seed collection specifications
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR201 Capture digital media for fieldwork

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to use compact cameras, mobile phones and tablets to capture and record basic digital media in the field, store media and perform basic digital editing.

The unit applies to individuals who work in conservation and ecosystem management under supervision, and exercise limited autonomy with some accountability for own work. This includes undertaking defined activities and work in a structured context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to take digital media	1.1 Determine the intended purpose of digital media 1.2 Confirm imagery and audio specification for subject, purpose and workplace requirements 1.3 Source and follow workplace health and safety policies and procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Obtain permits and releases have been obtained according to workplace procedures and copyright requirements
2. Identify and select equipment	2.1 Select digital capture device suitable for the intended purpose 2.2 Select and prepare accessories to use with digital capture device 2.3 Select, install and check digital capture equipment for power and correct operation 2.4 Transport and store equipment and accessories to prevent damage
3. Record digital media	3.1 Implement safety controls and safe work practices 3.2 Set up digital capture device according to operator instructions 3.3 Select digital capture device settings to suit conditions and subject 3.4 Compose and sequence imagery and audio according to the subject, situation and purpose of the shoot 3.5 Capture digital media according to operator instructions and intended purpose 3.6 Check captured digital media is fit for purpose 3.7 Use capture techniques for subject, environment and purpose 3.8 Record field notes according to workplace procedures
4. Perform basic editing, store and catalogue digital media files	4.1 Transfer digital media from camera to storage device according to workplace procedures 4.2 Edit digital media using basic software according to intended purpose 4.3 Name digital image files according to workplace naming convention 4.4 Check, edit and enter metadata according to workplace procedures 4.5 Maintain imagery records and filing system according to workplace procedures and copyright requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret digital media equipment operating instructions to ensure correct operation Interpret policies and procedures for permission and model release forms
Writing	<ul style="list-style-type: none"> Complete model release and permission forms accurately

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR201 Capture digital media for fieldwork	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR201 Capture digital media for fieldwork

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has captured digital media in the field using compact camera, smartphone or tablet for any two of the following media types:

- still photographs
- video
- video with audio
- audio.

There must also be evidence that the individual has:

- determined the purpose and requirements of the imagery
- ensured that permissions and releases have been obtained for planned work
- followed work health and safety policies and procedures
- selected, transported and stored the digital capture devices and accessories for work
- set up and adjusted digital capture device settings to obtain planned outcomes
- recorded field notes according to purpose and workplace procedures
- transferred digital media from capture device to storage/editing device
- edited digital media to achieve performance required
- named and stored digital media and metadata according to workplace procedures and copyright requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic digital capture devices used in the field, including:
 - compact cameras

- mobile smartphones
- wireless touch screen personal computers (tablets)
- simple digital media and its use in conservation and land management, including:
 - still photographs
 - video and video with audio
 - audio
- basic methods of photography, photographic techniques and audio capture applicable to fieldwork
- legal requirements for capturing and using digital images and audio, including:
 - copyright
 - privacy and model releases
 - site access and permission to use images and audio
 - releases
 - environmental protection relating to taking photos for fieldwork
- work health and safety hazards, risks and controls
- purpose, setting up and operation of digital capture devices used in fieldwork
- principles of digital photography
- principles of video
- principles of audio capture
- media and methods used for documenting conservation activities
- managing digital media files, including:
 - file names
 - storing and transferring files
 - managing image metadata
- use of basic software applications to manipulate digital images and audio files.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital capture device and accessories
- specifications:
 - specific workplace procedures and forms for permissions and releases
 - manufacturer operating instructions for specific digital devices
 - workplace specifications for media purpose.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR202 Maintain wildlife habitat refuges

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to maintain wildlife habitats and refuges to protect desirable animal species from invasive species.

The unit applies to individuals who work under supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess the scope of the refuge maintenance job	1.1 Identify target species to be protected from invasive pests and recognise their behaviour pattern 1.2 Identify characteristics of refuges required for target species according to supervisor instructions 1.3 Determine locations of refuges from supervisor instructions and site plan

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.4 Estimate time to complete the work 1.5 Identify environmental risks associated with the work 1.6 Determine vehicles, equipment and materials required to complete the work
2. Prepare for the refuge maintenance job	2.1 Determine location and boundaries for the wildlife habitat refuge work according to supervisor instructions 2.2 Identify hazards, assess risk and implement controls according to workplace health and safety procedures 2.3 Control environmental and biosecurity risks associated with work 2.4 Check and prepare vehicles, equipment and materials for serviceability according to manufacturer instructions and workplace biosecurity procedures
3. Monitor upkeep of wildlife habitat refuges for protection of desirable species from invasive pests	3.1 Operate vehicles and equipment according to manufacturer instructions and workplace procedures 3.2 Monitor upkeep of wildlife habitat refuges according to supervisor instructions and industry practices 3.3 Implement strategies to control invasive pests in a wildlife habitat according to supervisor instructions 3.4 Identify harbours used by pest animals and report to supervisor 3.5 Collect and dispose of waste from site according to industry and environmental practices and workplace health and safety procedures
4. Clean and store equipment and material	4.1 Clean and store equipment and materials according to workplace and biosecurity procedures 4.2 Record job completion according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Interpret wildlife habitat maintenance plans, and use the information to comply with the standards and requirements of maintenance works

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR202 Maintain wildlife habitat refuges	AHCNAR202 Maintain wildlife habitat refuges	Changed unit code to reflect new unit sector Edited Application Changes made to Performance Criteria for clarity and brevity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR202 Maintain wildlife habitat refuges

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has identified the scope of work and implemented maintenance practices for wildlife habitat refuges in one of the following environments:

- terrestrial
- marine or aquatic
- arboreal.

There must also be evidence that the individual has:

- maintained wildlife habitats and refuges to protect desirable fauna
- identified native species that are present in the wildlife refuge
- confirmed the features required for a wildlife habitat refuge
- provided harbours and modified habitat according to plan to provide refuge for native species
- conducted a health and safety risk assessment and implemented controls for the site
- implemented strategies to control invasive pests in a wildlife habitat according to maintenance plan
- applied biosecurity and sustainable practices during maintenance work.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- appearance of fauna and common names of native fauna, predators and vertebrate pests for a specified site
- ecological principles for habitat and refuges, including:
 - recognition of basic ecosystems and animal behaviour and habitat
 - interactions between flora and fauna and impact on success of habitat and refuges

- types and positioning of habitat refuges for best protection from elements and predators
- importance of biodiversity in an ecological community, and impact on wildlife management practices and habitat refuge, including:
 - terrestrial plant communities and relation to animal habitat and refuges
 - marine and water refuges for aquatic species
- invasive vertebrate pests and their impact on other fauna and habitat, including:
 - harbours and refuges used by vertebrate pests
 - basic control strategies for vertebrate pests in natural ecosystems
 - impact of control strategies on native fauna
- invasive plants pests and their impact on fauna and habitat
- work health and safety requirements, risk assessment processes and personal protective equipment (PPE)
- wildlife habitat and refuges used by desirable marine, aquatic or terrestrial animal species, including:
 - tree hollows
 - ground burrows
 - ground and arboreal nests
 - coral and coral outcrops
 - rock outcrops, ledges and crevices
 - thickets and dense vegetation and forests
 - tall vegetation, grass and grasslands
- wildlife habitat modification techniques.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field in one of the environments specified in the Performance Evidence
- resources, equipment and materials:
 - specific tools and vehicles used in maintaining habitat refuges
 - personal protective equipment
- specifications:
 - specific workplace procedures for maintaining habitat refuges
 - workplace instructions/job specifications
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR203 Perform basic ecological restoration works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to carry out basic ecological restoration works following a restoration plan and instructions.

The unit applies to individuals engaged in conservation and land and water management programs and who undertake defined routine activities under supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify activities and inspect site for required works	1.1 Locate work site from plans, and interpret goals for project from supervisor instructions 1.2 Locate elements within site that are intact and require protecting 1.3 Identify areas on site that have potential for natural or assisted regeneration

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify or confirm areas requiring reintroduction of biota</p> <p>1.5 Identify treatments for specific locations on site according to supervisor instructions</p> <p>1.6 Confirm site works to be performed with supervisor</p>
2. Prepare for basic ecological restoration work	<p>2.1 Identify site-specific environmental and workplace health and safety hazards, assess risks and report to supervisor</p> <p>2.2 Select, prepare and transport tools, equipment and machinery for site works</p> <p>2.3 Carry out pre-operational and safety checks on tools, equipment and machinery</p> <p>2.4 Identify and implement biosecurity control measures</p> <p>2.5 Select, check and use personal protective equipment</p> <p>2.6 Prepare tools and materials for ecological restoration treatments and transport to site</p>
3. Implement basic ecological restoration treatments	<p>3.1 Apply substrate and hydrological treatments according to instructions</p> <p>3.2 Apply control treatments to competing undesirable biota</p> <p>3.3 Install basic habitat elements</p> <p>3.4 Reintroduce desirable biota to assist with ecological restoration</p> <p>3.5 Follow workplace health and safety policies and procedures during works</p>
4. Complete basic ecological restoration works	<p>4.1 Install and maintain security, support or protection devices</p> <p>4.2 Undertake follow-up of control of competing species or adjust substrate, hydrology or habitat elements</p> <p>4.3 Clear and dispose of site waste according to environmental procedures</p> <p>4.4 Clean, maintain and store tools, equipment and machinery</p> <p>4.5 Report work outcomes according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret written instructions to identify work requirements Interpret safety data sheets
Oral communication	<ul style="list-style-type: none"> Communicate with supervisor using clear language and industry terminology to clarify and confirm work requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR203 Perform basic ecological restoration works	AHCNAR201 Carry out natural area restoration works	Change to code to reflect new unit sector Minor updates to Performance Evidence and Knowledge Evidence	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR203 Perform basic ecological restoration works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed ecological restoration works for at least two different ecological environments.

There must also be evidence that the individual has:

- established activities for works from the supervisor instructions and confirmed with supervisor
- confirmed project goal, approaches, methods and treatments from plans and supervisor instructions
- inspected site for intact elements, including:
 - biota
 - soil profiles
 - other substrates
- identified treatments from instructions, including:
 - substrate
 - hydrological
 - habitat
 - competition
 - reintroduction
- protected existing biota, habitat features and substrates
- prepared and carried out at least two of the following assisted regeneration treatments:
 - removal of competing biota
 - installation of habitat features
 - applied disturbance to trigger recovery
- transported tools and materials to site
- carried out biological reintroduction treatments according to instructions, including two of the following methods:

- transplanted stock from natural area
- planted nursery stock
- sown seed or other propagules
- secured and protected the restored area
- removed waste and cleaned the site according to workplace environmental procedures
- carried out work according to instructions and workplace health and safety requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic principles of ecological restoration, and the application of industry standards
- the concept of ecosystem resilience and its application in areas of different degradation level
- basic mechanisms of natural recovery, including:
 - re-sprouting
 - clonal division
 - seed and propagule banks
- basic ecological restoration approaches suited to different degrees of degradation
- basic ecological restoration techniques suited to different species and degrees of degradation
- common names of key native plants, animals and other organisms present in restoration area
- native plant and animal growth and habitat requirements specific to the ecosystems in a restoration area
- safety data sheets for types of chemicals that can be used in ecological restoration
- work health and safety requirements and biosecurity requirements of ecological restoration
- common names of weeds, pest animals and other undesirable organisms present in restoration area
- key physiological characteristics of undesirable species relevant to their control
- the role of genetic diversity and integrity in fragmented ecosystems, with a basic consideration of implications of climate change.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field as specified in the Performance Evidence
- resources, equipment and materials:
 - tools and equipment required for ecological restoration works
 - materials required for treatments

- specifications:
 - specific workplace procedures and processes
 - specific safety data sheets for chemical treatments
 - workplace instructions and project brief
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR301 Maintain native ecosystem areas

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan and implement maintenance work within native ecosystem areas.

The unit applies to individuals who work on land management projects under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan maintenance works	1.1 Plan access to site to minimise disturbance and degradation 1.2 Identify legislative requirements, codes of practice and relevant management strategy and plan 1.3 Identify relevant environmental factors in maintenance works 1.4 Consult stakeholders about pending maintenance works 1.5 Determine and obtain equipment, machinery and materials for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	maintenance works 1.6 Conduct pre-operational machinery checks according to environmental, biosecurity and safety requirements 1.7 Identify hazards, assess risk and implement controls according to workplace health and safety procedures
2. Undertake maintenance	2.1 Follow environmental sustainability and biosecurity policies and procedures when undertaking maintenance work 2.2 Undertake ecological restoration site maintenance works according to plans 2.3 Confirm maintenance works conform to relevant risk control measures and practices 2.4 Implement interim protective measures to avoid degradation and disturbance during maintenance works 2.5 Monitor activities of personnel and visitors to reduce risks to the significance of site
3. Complete activities	3.1 Clean and restore site on completion of works 3.2 Clean and store equipment and machinery 3.3 Remove and store or dispose of excess materials from site according to workplace requirements 3.4 Report completed maintenance works to supervisor according to workplace and legislative requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret plans, specifications and legislative requirements, and consolidate information to determine maintenance tasks and performance standards
Oral communication	<ul style="list-style-type: none"> Participate in verbal exchanges with stakeholders using appropriate collaborative and inclusive techniques relevant to the

Skill	Description
	individual, including active listening, questioning and reading of verbal and non-verbal signals to convey and clarify maintenance activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR301 Maintain native ecosystem areas	AHCNAR301 Maintain natural areas	Change to unit code to reflect new unit sector Change to title Change to Application Minor changes to Performance Criteria for clarity and consistency Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR301 Maintain native ecosystem areas

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned and prepared resources to maintain a natural area, as well as maintained a natural area in any two different ecological environments.

There must also be evidence that the individual has:

- accessed site and minimised damaging impact
- consulted with stakeholders, including traditional owners, about pending maintenance works
- carried out planned maintenance works with minimal damaging impacts to environment, and according to workplace health and safety practices
- selected and applied protective structures, devices and signs
- cleaned site and removed surplus materials and waste
- reported completion of activities to supervisor
- applied biosecurity measures and sustainable practices during work.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- ecological principles related to maintaining natural areas, including:
 - recognition of fundamental ecosystem structures and required maintenance
 - interactions between flora and fauna and impact on ecological stability when poorly maintained
 - vegetation types and their general characteristics for replication in maintenance activities
- importance of biodiversity in an ecologically stable community:
 - terrestrial plants and basic plant community structures

- marine and water plants and interaction with marine creatures
- contribution of maintenance works on preserving biodiversity
- intricate relationships between microbiota, including insects, molluscs, worms and microbes, and impact on maintenance practices
- environmental factors to be considered in maintenance works, including:
 - ecology in land based, coastal zones or marine parks
 - marine, shore and terrestrial species
 - natural and human threats to places of natural significance
 - pollution sources and damage potential
 - soil type and geology for access and performing maintenance activities
- basic protection/restoration or rehabilitation methods
- protocols of engaging with traditional owners and the consultation process
- seeding techniques, including:
 - hand seeding
 - broadcast sowing
 - ripping trailed machinery
- vegetation replacement methods and their application in restoration programs, including:
 - assisted natural regeneration
 - planting
 - seeding
 - transplanting
- recognition of common weeds and pests and their impact on natural areas, including:
 - weed control methods and application, including use of herbicides
 - basic plant protection, fences and guards from impact of animals
 - damaging effects on natural areas caused from pests
- purpose and processes for natural area restoration, including implementing biosecurity procedures to minimise the transfer of pests and diseases into natural areas, including weed seed, plants, animals and microbial organisms
- standards and procedures for planting nursery stock and transplants into natural areas, including:
 - basic soil or substrate identification
 - soil or substrate preparation and amelioration
 - soil or substrate and plant root contact
 - irrigation methods and procedures for watering in planted materials
- workplace health and safety procedures, including:
 - safety hazards and associated risks on restoration sites
 - personal protective equipment
 - mixing and using herbicides
 - sun protection

- requirements of traditional land owners, government and non-government agencies, special interest groups and other stakeholders about diversity of natural area usage, including:
 - natural areas on private land
 - natural areas on public land
 - commercial use
- applicable state or territory and commonwealth legislation covering parks, conservation, environmental protection and heritage.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a natural area as specified in the Performance Evidence
- resources, equipment and materials:
 - use of tools appropriate to the maintenance tasks identified in the maintenance plan
 - use of personal protective equipment
- specifications:
 - workplace policies and procedures for safety, biosecurity and maintenance tasks
 - workplace instructions, and natural area maintenance plan with specifications specific to the site
 - legislative requirements for records
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR302 Collect and preserve biological samples

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify sampling method, and collect and preserve biological samples for later processing and/or analysis.

The unit applies to individuals who work in an environment where biological tests are required, and who work under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

Legislation, regulations and by-laws relating to the collection and removal of plant materials from public and private land apply nationally and in some states, territories and local jurisdictions. Users are advised to check with the local, relevant authority.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan for collection	1.1 Confirm the purpose and schedule for sampling with manager 1.2 Identify sampling site location and obtain approval for site access from stakeholders 1.3 Identify samples to be collected and preserved

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify and comply with legislative and regulatory requirements governing biological samples and sampling methods 1.5 Organise equipment required for biological sampling and preserving 1.6 Assess range of likely operating conditions, hazards and sensitive environments for impact on sampling and testing 1.7 Identify hazards, assess risk and implement controls according to workplace health and safety policies and procedures
2. Prepare equipment and resources	2.1 Obtain equipment required for sampling and preserving 2.2 Check equipment for availability and serviceability 2.3 Clean and sanitise equipment to maintain integrity of samples and biosecurity conditions 2.4 Collect record sheets necessary for task 2.5 Transport resources and personnel safely to sampling sites and prepare for use
3. Carry out biological sampling and preserving procedures	3.1 Collect samples according to sampling plan 3.2 Apply environmental sustainability and biosecurity practices to collection processes 3.3 Preserve and record samples in accordance with sampling standards and guidelines 3.4 Prepare, package and dispatch samples for external analysis in accordance with sampling schedule and laboratory standards 3.5 Observe and record ambient and antecedent environmental conditions 3.6 Operate equipment and undertake work according to workplace health and safety requirements 3.7 Report and deliver presentable sample collection according to workplace procedures
4. Complete collection of biological sampling activities	4.1 Clean, sanitise and store equipment and clothing 4.2 Repair damaged or malfunctioning equipment 4.3 Record site sampling results and observations according to workplace recording procedures 4.4 Report changes in field conditions and equipment to manager

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately complete workplace sampling records and reports using clear language and industry terminology
Numeracy	<ul style="list-style-type: none"> Use appropriate measurement techniques to ensure accuracy when collecting weights and volumes of biological samples

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR302 Collect and preserve biological samples	AHCNAR302 Collect and preserve biological samples	Change to unit code to reflect new unit sector Minor changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR302 Collect and preserve biological samples

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has collected and preserved at least ten biological samples from at least two different monitoring sites.

There must also be evidence that the individual has:

- established the sampling purpose and schedule
- planned and arranged the collection with stakeholders
- prepared equipment and facilities
- carried out biological sampling according to monitoring program and enterprise procedures
- preserved and recorded samples and forwarded for testing according to monitoring program requirements
- recorded sampling data and observations
- reported outcomes of collection
- applied workplace health and safety and biosecurity procedures throughout collection process.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of biological samples that may be included in the plan, including:
 - water
 - microorganisms
 - fungi
 - micro and macro invertebrates
 - plants
 - animals including fish

- industry biological sampling and preserving guidelines and protocols
- identifying and selecting representative sampling sites
- field procedures for collecting and preserving biological samples for different environments and conditions, including:
 - random sampling
 - stratified sampling
 - systematic sampling
- collecting equipment and methods for specific environments and biological specimens, including:
 - marine and aquatic
 - terrestrial
 - arboreal
- preservation equipment and processes, including:
 - storage containers
 - labels and labelling information
 - preserving techniques and materials
- recognition of fauna and flora to be sampled
- health and safety considerations when sampling, including:
 - weather conditions and impact on site safety
 - personal protective equipment
 - toxicological and other personal health risks
 - physical site conditions and hazards.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated at a sampling site as specified in the Performance Evidence
- resources, equipment and materials:
 - specific tools and equipment required for the specified biological sampling to be performed
 - personal protective equipment
 - preservatives and cleaning agents
- specifications:
 - workplace procedures and processes for sample collection preservation and storage
 - specific safety data sheets for preservatives and cleaning agents
 - workplace sampling plan
 - standards and protocols for biological sampling.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR303 Implement biological reintroduction works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement biological reintroduction works for ecological restoration areas with plants, other biota and animals not subject to animal ethics and animal welfare requirements.

The unit applies to individuals who work in conservation and ecosystem management in terrestrial, marine or aquatic environments under broad direction. They use discretion and judgement in the selection and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for biological reintroduction works	1.1 Identify goal and objectives for biological reintroduction project from restoration plan 1.2 Identify method and timing of biological reintroduction work 1.3 Identify the need for habitat features 1.4 Select tools and materials required and check functionality and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	cleanliness 1.5 Identify, obtain and store biological materials required for reintroduction 1.6 Determine and organise labour and machinery requirements 1.7 Prepare a works schedule and provide to management or client
2. Prepare the biological reintroduction site	2.1 Identify site health and safety hazards, assess risks and implement controls according to workplace procedures 2.2 Define boundaries of biological reintroduction site according to site plan 2.3 Undertake site preparation according to biological reintroduction plan 2.4 Assess site for conditions that will inhibit biological reintroduction performance outcomes 2.5 Select and apply treatments to rectify inhibiting conditions 2.6 Use substrate nutrients and amelioration according to biological reintroduction plan specifications 2.7 Install protective structures according to site safety controls
3. Undertake biological reintroduction works	3.1 Select, check and use personal protective equipment 3.2 Carry out biological reintroduction works according to biological reintroduction plan using sustainable practices 3.3 Inspect biological stock before works and discard defective materials according to restoration plan and biosecurity procedures 3.4 Reintroduce biological stock and treat with required nutrients/ameliorants according to biological reintroduction plan 3.5 Install plant protection systems for protecting, securing or anchoring new plants 3.6 Confirm the biological reintroduction program outcomes have been achieved 3.7 Identify and report potential threats to biological reintroduction works 3.8 Select and implement retention or addition of habitat features to restoration plan 3.9 Maintain records and reporting according to workplace requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Maintain revegetated site	4.1 Monitor biological reintroduction site and identify factors detrimental to plant growth 4.2 Undertake remedial action and plant protection to rectify identified detrimental factors 4.3 Apply site maintenance procedures according to biological reintroduction plan 4.4 Clean, maintain and store tools and equipment according to workplace and biosecurity procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret biological reintroduction plans and use the information to comply with the standards and requirements of biological reintroduction works
Numeracy	<ul style="list-style-type: none"> Transpose dimensions from scale drawings to define the site boundaries using basic survey techniques

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR303 Implement biological reintroduction works	AHCNAR303 Implement revegetation works	Changed to unit code to reflect new unit sector Title changed Changes to Application and Performance Criteria to reflect a broader application Changed Performance	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Evidence, Knowledge Evidence and Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR303 Implement biological reintroduction works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared and implemented biological reintroduction works on two different ecological environments.

There must also be evidence that the individual has:

- conducted biological reintroduction works according to biological reintroduction plan, sustainable practices and biosecurity procedures
- prepared the site for biological reintroduction works
- conducted a site hazard assessment and implemented controls
- assessed the site for inhibitors to biological reintroduction works, and implemented treatments
- treated weeds and competing plants
- cleaned and maintained the revegetated site
- used, cleaned, maintained and stored machinery and equipment according to manufacturer instructions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- biological reintroduction techniques
- ecological principles related to biological reintroduction including:
 - locations on the revegetation site where natural regeneration can be facilitated
 - recognition of fundamental ecosystem structures
 - interactions between flora and fauna and impact on ecological stability
 - vegetation types and their general characteristics relevant to biological reintroduction activities
 - ecological environments and their fundamental differences

- importance of biodiversity when revegetating for an ecologically stable community, including:
 - terrestrial plants and basic plant community structures
 - marine and water plants and interaction with marine creatures
 - contribution of biological reintroduction works on preserving biodiversity
 - intricate relationships between microbiota, including insects, molluscs, worms and microbes and impact on biological reintroduction practices
- genetic principles for ecological restoration, including genetic integrity and genetic diversity
- environmental factors to be considered in biological reintroduction works, including:
 - ecology in land based, coastal zones or marine parks
 - existing boundaries of regeneration potential
 - marine, shore and terrestrial species
 - natural and human threats to places of natural significance
 - pollution sources and damage potential
 - substrate factors for accessing sites and conducting biological reintroduction work
- defining the biological reintroduction site boundaries, including:
 - ecosystem and habitat boundaries
 - basic surveying techniques
 - tools and equipment for marking out site boundaries
- factors affecting the timing and method of planting, including:
 - weather
 - climate
 - tidal influences
 - soil/substrate type and condition
 - access to site
 - impact on fauna natural cycles
 - impact of plant growth cycles
- assessing site condition requiring rectification/treatment prior to biological reintroduction, including:
 - accumulated waste
 - polluting materials
 - weeds, including staging site preparations to accommodate weed invasion
 - pests and diseases affecting vegetation
- maintenance activities and practices to support revegetated plant growth, including:
 - controlling plant competition from weeds and vigorous regrowth
 - erosion control strategies
 - animal grazing and damage
- workplace health and safety procedures, including:
 - safety hazards and associated risks on biological reintroduction sites

- personal protective equipment
- handling, mixing and using hazardous treatments
- sun protection
- materials handling safety
- exclusion fencing
- identification and control of weeds, and pests and diseases
- basic plant physiology of plant growth, including:
 - detrimental effects from pollution
 - competition from weeds
 - nutrients and ameliorants used for planting and their impact on plant health
- techniques for protecting, securing or anchoring plantings.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on ecological environments requiring biological reintroduction works
- resources, equipment and materials:
 - tools, materials and equipment required by the biological reintroduction plan
 - personal protective equipment
- specifications:
 - workplace policies and procedures for safety, biosecurity and biological reintroduction activities
 - ecological biological reintroduction plan with specifications specific to a site.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR304 Undertake direct seeding

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to regenerate and rehabilitate natural areas using direct seeding methods according to the revegetation plan.

The unit applies to individuals who work in the conservation and land management industry under broad supervision and who take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare resources for direct seeding	1.1 Interpret and clarify requirements for seeding from site revegetation plan 1.2 Select equipment and materials according to revegetation plan and site conditions 1.3 Identify health and safety hazards, assess risks and implement

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>controls according to workplace health and safety procedures</p> <p>1.4 Check equipment operation and conduct pre-start checks</p> <p>1.5 Identify site environmental and heritage issues, and implement control measures according to workplace procedures</p>
2. Prepare seed for direct seeding	<p>2.1 Source seed from provenance specified in revegetation plan</p> <p>2.2 Determine type and proportion of cover crop according to revegetation plan and site conditions</p> <p>2.3 Check seed species and quality against required specifications in revegetation plan, and report inconsistencies to supervisor</p> <p>2.4 Prepare seed to promote and improve germination according to revegetation plan</p> <p>2.5 Prepare revegetation site to receive seed</p>
3. Conduct direct seeding operations	<p>3.1 Conduct seeding operations according to workplace health and safety and biosecurity procedures</p> <p>3.2 Implement direct seeding methods and quantities to achieve plant coverage specified in the revegetation plan</p> <p>3.3 Use direct seeding equipment and techniques that minimise damage to site and according to environmental procedures</p> <p>3.4 Conduct seeding activities according to the season and growing conditions specified in the revegetation plan</p> <p>3.5 Carry out soil fertilising and amelioration of site according to site revegetation plan</p>
4. Complete operations	<p>4.1 Clean and store seeding equipment according to manufacturer, enterprise and biosecurity procedures</p> <p>4.2 Record and document seeding activities according to workplace requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret revegetation plans and use the information to comply with work requirements and the standards of direct seeding operations
Numeracy	<ul style="list-style-type: none"> Transpose dimensions from scale drawings to define the size of the site and calculate seed quantities to achieve planned revegetation plant densities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR304 Undertake direct seeding	AHCNAR304 Undertake direct seeding	<p>Changed unit code to reflect new unit sector</p> <p>Changes to Application and Performance Criteria to rationalise and clarify</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR304 Undertake direct seeding

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared at least one revegetation site for direct seeding and used techniques and equipment to distribute seed according to planned specifications.

There must also be evidence that the individual has:

- conducted work according to workplace health and safety and biosecurity procedures
- prepared the site for seeding with consideration to environmental impacts
- conducted seeding to maximise germination response
- completed seeding operations with no damage to the environment
- operated, cleaned, maintained and stored equipment safely and according to manufacturer instructions and workplace requirements.
-

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- seeding techniques used on natural area and revegetation sites
- ecological principles related to revegetation and seeding of sites, including:
 - recognition of fundamental ecosystem structures
 - interactions between flora and fauna and impact on ecological stability
 - vegetation types and their general characteristics relevant to seeding operations
- importance of biodiversity when restoring a site for ecological stability:
 - terrestrial plants and basic plant community structures
 - marine and water plants and interaction with marine creatures
 - contribution of revegetation and seeding work for promoting biodiversity

- relationships between microbiota and seed germination
- basic genetic principles for ecological restoration, including:
 - protecting the genetic integrity of local genotypes
 - ensuring sufficient genetic diversity for survival and adaptation
- identifying ecological areas with natural regeneration potential
- operation, maintenance and safety of seeding equipment
- environmental factors to be considered for direct seeding operations, including:
 - ecology in land based, coastal zones or marine parks
 - marine, coastal shore and terrestrial species
 - pollution and potential damage to seed germination
 - soil type and geology for accessing sites and conducting seeding operations
- factors affecting the timing and method of seeding, including:
 - weather
 - climate
 - tidal influences
 - soil/substrate type and condition
 - access to site
 - impact of plant growth cycles
- workplace health and safety procedures, including:
 - safety hazards and associated risks on revegetation sites
 - personal protective equipment
 - handling, mixing and using hazardous treatments
 - sun protection
 - materials handling safety
 - exclusion fencing
- basic plant physiology of seeds and seed germination, including:
 - process of seed germination
 - environmental conditions supporting seed germination
 - soil conditions supporting seed germination
 - inhibitor to seed germination
 - seed treatments to promote germination and success
 - viable and non-viable seed.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a revegetation site or in an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - seed specified in revegetation plan
 - tools and equipment for preparing site and dispersing seed
 - personal protective equipment
- specifications:
 - specific workplace procedures and processes
 - manufacturer operating instructions for equipment and machinery used
 - revegetation plans and specifications.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR305 Collect native seed

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to collect, treat and store seed for native revegetation projects.

The unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources to collect seed in a bush environment.

Legislation, regulations and by-laws relating to the collection and removal of plant materials from public and private land apply nationally and in some states, territories and jurisdictions. Users are advised to check with the local, relevant authority

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to collect seed	1.1 Identify and follow environmental, legislative and organisational requirements for collecting seed 1.2 Review work plan for seed collection 1.3 Identify potential locations for seed collection 1.4 Obtain necessary approvals and permissions for access to site and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	removal of seeds 1.5 Plan seed collecting operations to ensure safe working conditions 1.6 Communicate with others involved in seed collection project 1.7 Select and prepare materials, tools, equipment and personal protective equipment, check scales have been calibrated where appropriate
2. Select and assess seed	2.1 Follow workplace health and safety policies and procedures when collecting and cleaning seed 2.2 Follow environmental protection and biosecurity measures for the site 2.3 Identify plant species required 2.4 Assess plant species and conditions to ensure seed quality standards are met 2.5 Select method of seed collection according to conditions and best practice 2.6 Collect seed with minimal damage to the parent plant 2.7 Place seed in storage container and accurately label according to workplace requirements
3. Clean and store seed	3.1 Separate seed from inert and waste materials 3.2 Weigh and store seed according to species and workplace requirements 3.3 Accurately record seed information 3.4 Record and report seed collection information and results

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy:	<ul style="list-style-type: none"> Accurately weigh seeds using milligrams (mg), grams (g), kilograms (kg)

Skill	Description
Learning:	<ul style="list-style-type: none"> Use scales accurately including the use of 'tare'

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR305 Collect native seed	AHCNAR305 Collect native seed	Change to unit code to reflect new unit sector Minor changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR305 Collect native seed

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has collected and stored native seed from at least ten different species. The collected seeds must have at least one representative from each of the following seed types:

- fleshy fruits
- dry dehiscent seed
- dry indehiscent seed.

There must also be evidence that the individual has:

- sought and obtained permission and approval to collect seed from at least one of the following protected environments or people, including:
 - local government or roadside
 - state forest
 - national park
 - Indigenous elders or custodians on country
 - private property
- used and maintained materials, equipment and resources efficiently and safely
- identified seed species accurately
- followed workplace policies and procedures for collecting seed
- assessed the seed against quality standards for seed collection
- accurately recorded seed collection information and results.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental protection requirements and procedures for minimising environmental impact

- laws governing seed collecting from public and private land, including:
 - basics of commonwealth, state or territory laws
 - licensing requirements and application procedures for seed collection on public land
 - permits and access to Indigenous lands
 - negotiating access to private land
- ecological principles for seed collection, including:
 - identifying plants and range of seed species required for collection
 - basic ecological ecosystems for locating seed collection targets
 - native plant and seed characteristics of revegetation site
- assessing seed quality characteristics, including:
 - types of diseases and pests likely to infect seed species
 - seed size, viability and stage for collection
 - provenance
- ethical considerations for collecting seed, including plant scarcity and impact of seed collection on natural regeneration
- procedures for collecting, treating, storing and labelling seed, including:
 - recognising seed ready for collection
 - weather and environmental conditions
 - location on plants to collect seed
 - extracting seed from plant receptacles
 - winnowing and separating seed waste
 - labelling seed and the need for accuracy in documentation
 - seed treatments and storage requirements for seed species
 - seed storage life expectancy
- organisational and site standards, requirements, policies and procedures for collecting seed, including:
 - collecting seed sustainably, minimising seed collection impact on the environment
 - collecting seed hygienically using biosecurity principles to prevent the spread of pests and disease
- seed collecting resources and equipment, including:
 - safe use and operation
 - basic maintenance
 - cleaning and storing
- recording and reporting requirements
- seed collecting timeframes, including availability and viability
- workplace health and safety requirements, including:
 - safety and environmental hazards associated with the collection, treatment and storage of seed
 - personal protective equipment
 - collecting seed from height.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field collecting a range of seed specified in the Performance Evidence, from an area requiring approvals, or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live plants with accessible seeds
 - tools and equipment required to collect seed or seed receptacles and for extracting, cleaning seed
 - seed storage containers and storage environment
 - specific items of personal protective equipment when collecting seed
- specifications:
 - workplace procedures and processes for seed collection
 - forms and procedures for applying for permission and approval for site access and seed collection
 - workplace instructions and specifications for seeds to collect
 - legislation and regulations for flora protection and biosecurity.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR306 Conduct photography for fieldwork

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to set up and use photographic equipment and techniques to take photographs in the field.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to take photographs	1.1 Determine the purpose and intended use of photographs 1.2 Prepare a photograph specification for subject, purpose and requirements 1.3 Assess workplace health and safety hazards and risks for fieldwork photography, and apply controls according to workplace procedures 1.4 Confirm permits and releases have been obtained according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures and copyright requirements
2. Identify and select appropriate equipment	2.1 Select camera suitability for the intended use 2.2 Select and prepare photographic equipment and accessories required to capture intended images 2.3 Transport and store photographic equipment and accessories to prevent damage
3. Take photos using correct methods and techniques	3.1 Implement safety controls and safe work practices 3.2 Select and set up camera in position to take photographs 3.3 Select camera settings to suit conditions and subject 3.4 Select the perspective, framing and sequencing of photographs according to subject and purpose of photographs 3.5 Capture photograph and check image according to selected camera type to ensure fit for purpose 3.6 Apply specialist photography techniques appropriate to subject, environment and purpose 3.7 Record field notes according to workplace procedures
4. Store and catalogue photographs	4.1 Transfer photographs from camera for storage according to workplace procedures 4.2 Maintain photograph records and filing system according to workplace procedures and copyright requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret documents for preparing permits and camera settings to determine photographic outcomes
Writing	<ul style="list-style-type: none"> Accurately prepare applications and update records using clear language and appropriate terminology

Skill	Description
Numeracy	<ul style="list-style-type: none"> Perform basic calculations when interpreting and setting camera settings

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR306 Conduct photography for fieldwork	AHCNAR306 Conduct photography for fieldwork	Change to unit code to reflect new unit sector Minor change in Application Removal of mapping to Core Skills for Work from Foundation Skills Minor edit to Performance Evidence	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR306 Conduct photography for fieldwork

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has conducted photography fieldwork, including:

- determined the purpose of the photograph and prepared a specification
- ensured that appropriate permits and releases have been obtained for planned photographs
- assessed work health and safety risks and applied suitable controls
- selected, transported and stored the appropriate camera and equipment for specified photographs
- set up and adjusted camera settings to obtain planned photograph outcomes
- used at least three specialised photography techniques according to plan and industry standards, including:
 - macro photography
 - photo points
 - evidentiary photography
- captured photographs and checked against the photograph specification
- recorded field notes according to purpose and workplace procedures
- transferred photographs from camera, recorded and stored images according to workplace procedures and copyright requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic types of photography and photographic techniques applicable to fieldwork
- legal requirements of copyright, privacy, permission, releases and environmental protection relating to taking photos for fieldwork
- work health and safety hazards, risks and controls

- purpose, setting up and operation of photographic equipment used in fieldwork
- principles of photography, including aperture, shutter speed, depth of field, ISO, white balance, exposure compensation and dynamic range
- purpose and technique for specialist photography in land management, including:
 - identifying flora and fauna
 - vegetation communities and landscapes
 - photo-point surveys
 - photography for compliance evidentiary purposes
 - photography for publications
 - project monitoring and reporting
 - underwater
- media and methods used for documenting, labelling and storing photographs for analogue and digital photography.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an accessible field environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - camera, lens, equipment and media for capturing photographs
 - personal protective equipment
- specifications:
 - workplace documents, including policies, procedures, processes, instructions and forms
 - manufacturer operating instructions for specific cameras and equipment
 - photographic specifications or briefs
 - copyright legislation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR307 Read and interpret maps

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to read and interpret road and topographical maps for navigation or positioning and plotting purposes.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan a route using a map	1.1 Select maps, equipment and navigation aids and check for accuracy, currency and operational effectiveness for intended use 1.2 Identify relevant symbols, information and navigation on map 1.3 Identify and locate current position in the field on map using geographical features 1.4 Identify and locate required destination on map

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Assess and select route to destination using map data 1.6 Plan a safe route to destination 1.7 Measure and estimate distance to destination using map scale for selected route
2. Navigate using a map	2.1 Navigate and traverse a route according to plan 2.2 Orient the map or plan to surroundings and planned route 2.3 Use navigation aids to assist progress according to manufacturer instructions 2.4 Plan and navigate alternative routes to avoid inefficient route progress
3. Plot sites and locations using maps and Global Positioning System (GPS)	3.1 Identify and locate point on map using landmarks and key geographical features 3.2 Use GPS in conjunction with paper maps and charts according to workplace procedures 3.3 Adjust GPS settings to required datum and measurement units 3.4 Use GPS data to precisely record locations 3.5 Document navigation activity

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret symbols and features on maps to assist in navigating routes
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to interpret map spatial measurements and determine navigation routes and distances

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR307 Read and interpret maps	AHCNAR307 Read and interpret maps	<p>Changed unit code to reflect new unit sector</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Added Performance Criteria to clarify GPS use</p> <p>Removed reference to Core Skills for Work from Foundation Skills</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR307 Read and interpret maps

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has read and interpreted maps, including:

- identified, selected and checked maps and equipment suitable for the navigation activity
- interpreted map data, symbols, lines and features on maps to identify locations
- assessed and selected routes to a location using a map
- navigated and traversed a route of at least 2km using maps and navigational aids
- identified current position by comparing nearby geographic features on maps, and recorded details with datum in coordinate system
- identified impediments to efficient navigation, and planned alternative routes
- interpreted map scale and estimated route distances
- marked location points on a map using map geographical features
- transferred information between Global Positioning System (GPS) and paper maps/charts, including:
 - adjusted GPS settings to required datum and measurement units
 - used GPS data to precisely record locations
 - entered point data from map/chart to GPS
- documented navigation activity.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of maps and map reading
- types of maps and their use
- symbols and representations of topographical and geographical information used on maps, including:

- date of information
- common scales used on maps, and their purpose
- datums
- geographic coordinate system
- horizontal and vertical datum and production information dates
- features and use of common navigational aids, including:
 - map distance meter (analogue and digital)
 - compasses and dividers
 - rulers and protractors
- operation and functions of GPS navigation equipment
- transferring geographic information between paper maps and charts, and GPS systems
- advantages and disadvantages of different map and chart types, and sources of error
- techniques for determining routes and estimating distances.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an outdoor setting suitable for map reading and navigational purposes or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - maps and navigational charts
 - navigational aids for map reading
 - GPS
- specifications:
 - manufacturer instructions for navigation aids.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR308 Conduct a site inspection for ecological restoration

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to conduct a site inspection, including verification of the location, ownership, orientation and boundaries of a site, and assess the condition and recovery potential of the site's native ecosystem.

The unit applies to individuals who work under broad direction and take responsibility for their own work, including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect information	1.1 Obtain site location and details of proposed works 1.2 Source and review available maps and plans for site 1.3 Source and review available documents relevant to historical and current land use 1.4 Identify scope of inspection according to stakeholder requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>and local regulations</p> <p>1.5 Determine biophysical, climate and weather conditions for site from historical data and climate change prediction tools</p> <p>1.6 Seek approval to visit site</p> <p>1.7 Identify and record covenants affecting the site</p> <p>1.8 Check availability of remote sensing tools relevant to the site</p>
2. Prepare for a site visit	<p>2.1 Identify and prepare resources required for site inspection</p> <p>2.2 Plan methods for recording inspection, and confirm record-keeping procedures according to industry requirements</p> <p>2.3 Evaluate scope of proposed works and prepare field notes to checklist specific concerns</p> <p>2.4 Evaluate environmental factors to determine likely site conditions and risks</p> <p>2.5 Consider access and traffic management requirements for site</p>
3. Visit site and confirm site parameters	<p>3.1 Carry out site orientation and verify ownership and site boundaries according to maps and plans</p> <p>3.2 Identify site hazards, assess risks and implement control measures for site inspection according to workplace health and safety procedures</p> <p>3.3 Identify, estimate and record site dimensions, gradients and ecological features</p> <p>3.4 Identify and record existing on-site services</p> <p>3.5 Identify and record impact of features and characteristics of properties adjacent to site</p> <p>3.6 Identify substrate types from reference charts and texts</p>
4. Inspect site for biotic and abiotic elements	<p>4.1 Collect substrate samples, conduct and record field tests according to workplace procedures</p> <p>4.2 Identify hydrological elements affecting site ecology</p> <p>4.3 Identify the specific ecological communities on site</p> <p>4.4 Identify ecosystem functions and processes occurring on site</p> <p>4.5 Determine condition and recovery potential of natural areas within the site</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.6 Identify threatening processes affecting site conditions 4.7 Investigate and record signs of fauna on site
5. Document information	5.1 Assess site information and determine reference ecosystem relevant to site restoration 5.2 Prepare a base plan of site, including zones of varying condition 5.3 Document site inspection according to stakeholder requirements and workplace procedures 5.4 Complete documents and submit to stakeholder or supervisor according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret plans, maps, guides and texts from a variety of sources and consolidate information
Writing	<ul style="list-style-type: none"> Accurately record results of inspections and investigations and prepare documentation using industry standard terminology and formatting

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR308 Conduct a site inspection for ecological restoration	Not applicable	The unit has been created to address a skill or task required by industry that is not covered by an existing unit	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR308 Conduct a site inspection for ecological restoration

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted a site inspection for at least two different ecological restoration sites.

There must also be evidence that the individual has:

- identified biota and ecological communities of the site
- identified abiotic elements and ecological processes for the site
- identified threatening processes affecting the site
- identified a reference ecosystem relevant to the restoration
- recognised symptoms of ecosystem degradation and potential for recovery
- recognised recovery potential of site, including:
 - zones of high recovery potential
 - zones of low recovery potential
- identified hazards, assessed risk and identified controls
- collected samples and conducted substrate field tests according to site conditions and stakeholder requirements
- estimated dimensions and gradients of site
- identified anticipated effects of climate change on site
- reported findings to stakeholder or supervisor according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic ecological principles relevant to site inspections for restoration works
- basic ecological restoration principles
- biotic elements and ecosystem functions and processes, including resilience and succession after disturbance

- plan and map interpretation
- substrate type and condition and relevant field tests for soils and/or aquatic environments, including:
 - substrate type and structure
 - pH
 - soluble salts
- hydrological conditions for site and impact on ecosystem restoration
- native and non-native species identification and biology
- habitat conditions for plants and animals for restoration activities
- ecosystem resilience and recovery mechanisms of plants and animals
- threatening processes to native ecosystems
- anticipated effects of climate change on ecosystems
- measuring and estimating methods for linear measurements and gradients
- current ecosystems and their use and environmental threats
- site hazards, risks and control strategies associated with undertaking site inspections
- protocols for accessing and visiting ecological site
- legislative and regulatory requirements, including environmental protection legislation
- government regulations relating to the site components and access
- documenting site inspections using industry standard language, including:
 - inspection reports
 - site inventory reports
 - base plans
- codes of practice and current industry standards for ecological site inspections, reporting and terminology.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on at least two different ecological sites
- resources, equipment and materials:
 - equipment for performing substrate tests
 - equipment or forms for maintaining records and reporting
 - items of personal protective equipment when accessing site
 - maps and plans for site orientation and boundary establishment
- specifications:
 - workplace documents such as policies, procedures and forms
 - workplace instructions and job specifications for inspection
 - relevant legislation/codes of practice
- relationships:

- stakeholder
- supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR309 Conduct an ecological and cultural site inspection prior to works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to inspect a site for ecological, biosecurity, cultural and heritage risk and report discrepancies in planned works prior to commencing works.

The unit applies to individuals who work in conservation and land management under broad supervision. They take responsibility for their own work and use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Define and confirm location and setting	1.1 Confirm location and proposed activities/works with supervisor, plans and specifications 1.2 Identify legislation, regulations and agreements that affect aspects of the location and planned work

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify key stakeholders, partners and other stakeholders 1.4 Confirm permits and licences required with supervisor
2. Determine impact of work on ecosystem and landscape	2.1 Inspect location and identify biotic and abiotic elements impacted by planned work 2.2 Identify and locate communities and species that are subject to legal protection 2.3 Identify biotic and abiotic elements, and ecological functions and processes that vary from plans 2.4 Identify threats to biotic and abiotic elements 2.5 Identify risks of activity/work breaching legislative requirements 2.6 Identify risk to ecosystem and landscape elements, functions, processes, and legal obligations, and report concerns to supervisor for direction 2.7 Record changed conditions and risk
3. Determine impact of work on culture and heritage	3.1 Identify known cultural and heritage considerations from plans and other documentation, and confirm these with supervisor or cultural advisor 3.2 Confirm workplace procedure for responding to new cultural and heritage discoveries during work 3.3 Locate known cultural and heritage features and boundaries in the field 3.4 Confirm field observations against plans and specifications 3.5 Identify and record potential threat to culture and heritage from work, and report this to supervisor
4. Determine biosecurity implications of work	4.1 Identify biosecurity hazards and threats for site 4.2 Inspect site and identify and record previously reported biosecurity hazards and threats 4.3 Identify and record new or unreported biosecurity threats 4.4 Identify and locate species on site that are subject to legislative requirements 4.5 Identify and record actions to mitigate biosecurity risk
5. Report identified risks and threats	5.1 Compile identified risks and threats according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.2 Report risks and threats to supervisor for determinations and action

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret site plans and specifications for site works, and reconcile against actual site conditions
Writing	<ul style="list-style-type: none"> Prepare records and reports accurately and succinctly using standard industry terminology

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR309 Conduct an ecological and cultural site inspection prior to works	Not applicable	The unit has been created to address a skill or task required by industry that is not covered by an existing unit	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR309 Conduct an ecological and cultural site inspection prior to works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, conducted a site inspection for impact of works on ecological, cultural or heritage assets on a site, and has:

- confirmed site location and proposed works with supervisor, plans and specifications
- identified key stakeholders, partners and other interested parties
- identified biotic and abiotic elements, including:
 - annual rainfall and dominant weather patterns
 - gradient, drainage, and local base levels
 - landform, soil type and native topsoil condition
 - native vegetation types and classification
 - altered native vegetation and classification systems that apply
 - presence or signs of native fauna
 - apex predators and keystone species
 - key habitat features
- identified and located protected elements, including at least three of the following:
 - threatened rare or priority taxa
 - threatened ecological communities
 - clearing of native vegetation
 - stormwater flows and containment
 - registered cultural or heritage sites
 - declared pest and weed species
- identified and assessed the impact of proposed work on biotic and abiotic elements
- identified previously recorded culture and heritage values
- located known cultural and heritage assets and boundaries on site
- identified and assessed the impact of works on cultural and heritage values
- identified and recorded biosecurity hazards and threats

- inspected site for biosecurity threats
- reconciled landscape, ecological, cultural and biosecurity field observations against recorded or reported documentation
- identified threats posed by works
- compiled risks and threats and reported to supervisor for determination.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- maps, plans, Global Positioning System (GPS) and basic spatial methods
- relevant legislation, regulations, agreements, permits and licences relating to:
 - threatened rare or priority taxa
 - threatened ecological communities
 - clearing of native vegetation
 - stormwater flows and containment
 - registered cultural or heritage sites
 - declared pest and weed species
- stakeholder groups and consultation processes
- workplace procedure for interactions with stakeholders and the media
- foundation ecological principles for native ecosystems, including:
 - physical aspects – biotic and abiotic factors
 - ecological functions and processes, including energy transfer and major nutrient flows
 - major ecosystem properties, including trophic levels, resource availability and population dynamics
 - ecosystem services, and the value of terrestrial and aquatic native ecosystems to humans
 - common forms of damage to biotic and abiotic factors, ecosystem functions and processes
 - animal habitat features and impacts on both native and feral species, including water points, thickets, undergrowth, perches and tree hollows
 - altered native vegetation, including regrowth or rangeland
- abiotic elements both physical and chemical affecting ecosystems, including:
 - climate – rainfall, wind, temperature, regular and episodic changes and patterns, including seasons, floods and drought
 - terrain, relief, aspect and altitude
 - drainage principles, including catchments, gradients and base levels
 - geology, soil type and chemical properties, including, salt, nutrients and pH
 - processes of erosion – wind, water, chemical, heat and mass movement
 - pollution of waterbodies
 - long-term changes and trends, including climate change
- biotic elements in the ecosystem, including:

- native and introduced plants and their vegetation classification
- native and introduced animals, both vertebrates and invertebrates
- microorganisms and their role in the environment
- important landscape habitat features for native fauna
- major threats and causes of degradation to native ecosystems, including the role of local industries, (including at least one of primary production, landscaping, mining or tourism)
- sources and effects of pollution on ecosystems
- value of remnant vegetation, topsoil and original soil profiles in ecological restoration system works
- common biosecurity threats from pest animals, pest plants and diseases
- hygiene practices to mitigate biosecurity threats
- principles of prevention and control of pests and diseases
- local cultural and heritage values
- potential incidental cultural and heritage discoveries
- procedures for responding to incidental cultural and heritage discoveries
- evaluating risk for ecosystems, biosecurity, culture and heritage.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field
- specifications:
 - site-specific plans and maps for work
 - work plans detailing current biosecurity threats, and cultural and heritage assets
 - legislation, regulations and agreements
 - correct resources, equipment and materials
- relationships:
 - supervisor
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR310 Implement assisted regeneration works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to assist the regeneration of a degraded terrestrial or aquatic ecosystem harnessing potential from on-site components or colonisation from nearby areas, through ecological interventions and treatments specific to site.

The unit applies to individuals who work under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Interpret work requirements for site	1.1 Conduct site inspection to identify intact ecological features and potential threats to regeneration species 1.2 Record the ecosystems and communities present on site 1.3 Identify boundaries of the assisted regeneration zones for site

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify factors preventing natural recovery of biota across site</p> <p>1.5 Identify assisted primary and secondary regeneration treatments to trigger recovery of species for ecosystem</p> <p>1.6 Identify timing of primary and secondary treatments</p>
2. Prepare for assisted regeneration works	<p>2.1 Identify hazards, assess risks and implement controls according to workplace health and safety and environmental procedures</p> <p>2.2 Identify biosecurity and environmental risks and threats</p> <p>2.3 Identify and obtain permits required for specific treatments</p> <p>2.4 Select, check and prepare tools and materials according to project brief and biosecurity requirements</p> <p>2.5 Coordinate work team for regeneration works</p> <p>2.6 Organise and coordinate site activities for regeneration work</p>
3. Undertake initial assisted regeneration works	<p>3.1 Apply biosecurity and environmentally sustainable work practices</p> <p>3.2 Carry out initial assisted regeneration treatments according to project brief</p> <p>3.3 Select, check and use personal protective equipment according to workplace health and safety procedures</p> <p>3.4 Apply techniques for securing, protecting or supporting the recovering species</p> <p>3.5 Update and maintain records and reports according to workplace procedures</p>
4. Undertake follow-up assisted regeneration works	<p>4.1 Record responses of desirable and undesirable biotic and abiotic site elements</p> <p>4.2 Undertake remedial assisted regeneration works to secure the recovery of desirable biota</p> <p>4.3 Clean, maintain and store tools and equipment</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret project briefs and other documentation and consolidate information for administering project works
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational records and reports using standard industry terminology
Oral Communication	<ul style="list-style-type: none"> Interact effectively using both verbal and non-verbal communication for team work and reporting purposes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR310 Implement assisted regeneration works	Not applicable	The unit has been created to address a skill or task required by industry that is not covered by an existing unit	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR310 Implement assisted regeneration works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed ecological restoration works for at least two different ecological environments.

There must also be evidence that the individual has:

- identified intact ecosystem features of site, including:
 - remaining native organisms
 - intact substrates
 - habitat
- identified boundaries of natural regeneration, assisted regeneration and reconstruction zones on site
- identified assisted regeneration treatments that are appropriate to individual species typical of the ecosystem and type and intensity of the treatment matched to the degradation level of the site, which must include locally applicable treatments for the following:
 - substrate physical treatments, including surface contouring and debris laying
 - substrate chemical treatments, including removal of contaminants, pH correction, saline flushing, nutrient stripping
 - hydrological treatments, including adjusting water chemistry, increasing or reducing water availability to site
 - habitat reinstatement, including rocks, shell, artificial hollows or crevices, debris piles and dispersal perches
 - applied disturbances, including soil disturbance, clearing fire or smoke treatments
 - removal of competition, including any undesirable species
- recognised and minimised threats to regeneration at the restoration site
- conducted a site hazard identification and risk control assessment
- used, cleaned, maintained and stored machinery and equipment according to manufacturer instructions and enterprise standards

- complied with workplace health and safety, biosecurity and environmentally sustainable work practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- identification of locally native and non-native plants and animals
- naming of ecosystems and habitats already present on site
- consideration of the effects of climate change on the prior ecosystem and implications for regeneration
- post-disturbance recovery mechanisms of specific relevant organisms and triggers for their recovery
- habitat requirements of locally native biota
- principles and methods for prevention and control of pest or undesirable biota
- common techniques used to assist regeneration for a range of native and non-native biota in damaged ecosystems, including:
 - substrate physical treatments, including surface contouring and debris laying
 - substrate chemical treatments, including removal of contaminants, pH correction, saline flushing, nutrient stripping
 - hydrological treatments, including increasing or reducing water availability
 - habitat reinstatement, including rocks, shell, artificial hollows or crevices, debris piles and dispersal perches
 - applied disturbances, including soil disturbance, clearing fire or smoke treatments
 - removal of competition, including any undesirable species
- factors affecting the timing, method of primary and secondary assisted regeneration treatments and the consequences of insufficient secondary treatments
- safety requirements when handling and using hazardous goods.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field as specified in the Performance Evidence
- resources, equipment and materials:
 - tools and equipment required for ecological restoration works
 - materials required for treatments
 - security guards, pegs
 - workplace procedures and processes
 - safety data sheets for chemical treatments
 - workplace instructions and project brief

- relationships:
 - work team
 - supervisor
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR311 Implement ecosystem reconstruction works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the specialist skills and knowledge required to implement terrestrial or aquatic ecosystem reconstruction works on an ecological restoration site following a plan or brief.

The unit applies to individuals engaged in conservation and land and water management programs and who work under general supervision, exercising limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context to current industry standards.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine scope of ecosystem reconstruction works	1.1 Determine boundaries between ecosystem reconstruction area and assisted regeneration area according to project brief 1.2 Identify potential for habitat corridors or linkages with adjoining properties from project brief

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify reference model for reconstruction area according to project brief and anticipated climate change</p> <p>1.4 Identify and document potential threats to ecosystem reconstruction works</p> <p>1.5 Identify timing and method of ecosystem reconstruction work</p>
2. Prepare for ecosystem reconstruction works	<p>2.1 Select, check and prepare tools, equipment and materials according to project brief and biosecurity requirements</p> <p>2.2 Identify species for ecosystem reconstruction works from project brief</p> <p>2.3 Obtain and store biological materials for reconstruction works</p> <p>2.4 Identify and ensure required permits have been obtained for reconstruction works</p> <p>2.5 Coordinate work team for reconstruction works</p> <p>2.6 Organise and coordinate site activities for work team for reconstruction works</p> <p>2.7 Identify hazards, assess risks and implement controls according to workplace health and safety procedures</p>
3. Prepare ecosystem reconstruction site	<p>3.1 Identify hazards, assess risks and document controls according to environmental and biosecurity procedures</p> <p>3.2 Select and apply treatments according to environmental and biosecurity risk controls</p> <p>3.3 Identify desirable and undesirable organisms and contamination, and select methods for control</p> <p>3.4 Treat undesirable organisms and contamination according to selected controls</p> <p>3.5 Undertake site and substrate pre-treatments</p> <p>3.6 Install protective measures according to identified environmental risk controls</p>
4. Undertake ecosystem reconstruction works	<p>4.1 Select, check and use personal protective equipment according to workplace health and safety procedures</p> <p>4.2 Inspect biological materials for quality, and discard defective materials</p> <p>4.3 Pre-treat plants, seeds or other propagules according to project brief</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.4 Reintroduce biota according to current industry standards and project brief 4.5 Apply techniques for protecting, securing or anchoring reintroduced biota 4.6 Maintain records and reports according to workplace procedures
5. Maintain ecosystem reconstruction site	5.1 Monitor growth of plants, seeds or other propagules for health and performance 5.2 Maintain site according to ecosystem reconstruction project brief 5.3 Undertake remedial action and protection according to species requirements 5.4 Clean, maintain and store tools and equipment according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret project briefs and other documentation and consolidate information for implementing reconstruction works
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational records and reports using standard industry terminology

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR311 Implement ecosystem reconstruction works	Not applicable	The unit has been created to address a skill or task required by industry that is not covered by an existing	Newly created

Code and title current version	Code and title previous version	Comments	Equivalence status
		unit	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR311 Implement ecosystem reconstruction works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed ecological restoration works for at least two different ecological environments.

There must also be evidence that the individual has:

- recognised boundaries between assisted regeneration areas and reconstruction areas at a restoration site
- identified potential linkages for habitat area and connectivity from project brief
- identified species for an ecosystem reconstruction site from project brief
- conducted a site hazard identification and risk control assessment
- recognised and treated undesirable species for ecosystem restoration site
- prepared site for ecosystem reconstruction works
- prepared site substrates for reconstruction activities
- carried out reintroduction ecosystem reconstruction works according to current industry standards using at least two of following methods:
 - replanting nursery stock
 - direct seeding or introduced propagules
 - translocation
- protected the restored area with guards, barriers or other techniques
- used, cleaned, maintained and stored machinery and equipment according to manufacturer instructions
- complied with workplace health and safety, biosecurity and environmentally sustainable work practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- recognition and common names of native flora, fauna and other key biota of specific restoration areas
- ecological principles, including:
 - recognition of basic ecosystem elements and functions
 - recognition of ecological communities
 - interactions between flora, fauna and other biota and the impact of these on restoration objectives and outcomes
 - importance of biodiversity in an ecological community
 - the role of habitats to reinstating functional ecosystems
 - connectivity principles for expanding area and effective linkages
 - substrates in different ecological environments and their preparation, including terrestrial and aquatic environments
 - physiology of growth of desirable and non-desirable organisms
- ecological restoration principles, including:
 - recognising levels of resilience and recovery potential of species requiring reconstruction intervention for a range of levels and types of degradation
 - role of reference models, including different models for difference zones within the one site
 - impact of potential climate change on reference ecosystems and effect on reconstruction works
 - setting restoration goals and identifying indicators of recovery outcomes
 - the importance and value of genetic integrity and diversity in selecting the provenance of propagules, including under climate change
 - configuration of species with respect to potential for successful breeding and recruitment
 - factors affecting the timing and method of reintroduction
- a range of biological reintroduction techniques, including:
 - reintroduced nursery stock
 - hand seeding, broadcast sowing and mechanical seeding
 - transplanted stock from natural areas
- a range of sector-appropriate tools, equipment and machinery
- concepts and methods for establishment of biota on reconstruction sites, including:
 - species requirement for water on reconstruction site (hydrological requirements)
 - physiology of desirable organisms propagation and growth
 - nutrient requirements and materials and methods for amelioration for site species
 - techniques for protecting, securing or anchoring reintroduced organisms
 - techniques for providing water for reintroduced organisms
- pests and diseases and the principal control strategies for their prevention and control on reconstruction sites, including:
 - methods for minimising the transfer of undesirable organisms (biosecurity)
 - methods for biological, cultural, mechanical and chemical pest control

- safety requirements when handling and using hazardous materials.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field as specified in the Performance Evidence
- resources, equipment and materials:
 - tools and equipment required for ecological reconstruction works
 - live biota for reconstruction works
 - materials required for treatments
- specifications:
 - specific workplace procedures and processes for reconstruction works
 - manufacturer operating instructions for specific equipment and machinery
 - workplace instructions and project brief.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR401 Supervise ecological restoration works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop work programs, organise resources and supervise ecological restoration works for revegetation programs.

The unit applies to individuals who apply specialist skills in ecological restoration and who provide solutions to technical and unpredictable problems. They work autonomously, instruct, and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify scope of ecological restoration works	1.1 Identify nature and scope of works and extent of responsibilities against project brief 1.2 Confirm or create site map for works 1.3 Determine personnel and resources required for project

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Develop a work program to meet scheduled project outcomes</p> <p>1.5 Identify potential environmental impact of proposed restoration work, and implement controls</p> <p>1.6 Identify workplace health and safety hazards, assess risks and implement, monitor and review controls</p>
2. Coordinate the supply of materials and equipment	<p>2.1 Identify and organise materials, equipment and resources required for project</p> <p>2.2 Calculate quantities and order materials according to quality specified in project brief</p> <p>2.3 Confirm delivery requirements with suppliers</p> <p>2.4 Reconcile specified quantity and quality of delivered materials against order and specifications</p> <p>2.5 Return substandard materials for replacement</p> <p>2.6 Store materials ready for use in line with manufacturer's guidelines</p> <p>2.7 Check equipment availability and serviceability for use on site</p>
3. Supervise and monitor restoration works	<p>3.1 Coordinate work team to carry out restoration works</p> <p>3.2 Monitor changes to project brief and adjust program works to meet project outcomes</p> <p>3.3 Provide instructions to supplementary workers according to workplace procedures</p> <p>3.4 Identify, record and report difficulties in meeting project outcomes to stakeholders</p> <p>3.5 Calculate the cost of reported difficulties and forward variations for approval according to workplace procedures</p> <p>3.6 Conduct periodic quality inspection of work against project outcomes and arrange progress payments to contractors</p> <p>3.7 Monitor site for safety and environmental health throughout works, and implement action to rectify concerns</p> <p>3.8 Monitor team to ensure adherence to workplace health and safety, environmental sustainability and biosecurity policies and procedures</p>
4. Prepare site for completion	<p>4.1 Inspect site for completion of works according to project brief</p> <p>4.2 Identify incomplete works and rectify according to the contract specification and workplace procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.3 Report restoration works to stakeholders according to workplace procedures and project brief 4.4 Process documentation for contractors for final payment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse project plans and specifications and consolidate information into schedules, programs, materials and equipment requirements, and to monitor contractor performance
Writing	<ul style="list-style-type: none"> Develop programs and prepare reports to stakeholders, and prepare reports and documents to administer contractors, using clear and accurate language
Oral communication	<ul style="list-style-type: none"> Use collaborative and inclusive techniques, including active listening and questioning and reading of verbal and non-verbal signals, to convey and clarify instruction to workers and contractors and provide reports to stakeholders
Numeracy	<ul style="list-style-type: none"> Interpret and perform calculations to analyse materials and resource requirements and to determine labour costs and quantities to accurately report on progress and determine payments

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR401 Supervise ecological restoration works	AHCNAR401 Supervise natural area restoration works	Changed unit code to reflect new unit sector Title changed Changes to Application and Performance Criteria	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR401 Supervise ecological restoration works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has determined resource requirements, acquired resources and supervised restoration work of at least two ecological restoration projects.

The must also be evidence that the individual has:

- conducted a site safety risk assessment and implemented controls during project
- scoped the work requirements against specifications in project brief
- developed a work program and sourced labour, equipment and materials required to undertake the work
- coordinated work team to achieve performance targets
- monitored work program progress and made adjustments to achieve outcomes
- inspected completed work and ensured specifications and environmental targets were met
- reported project completion to stakeholders according to workplace requirements
- monitored the application of sustainability practices, workplace health and safety procedures and biosecurity measures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- ecological restoration principles, approaches, strategies, tactics and techniques to avoid negative environmental impacts
- scheduling work, including:
 - work team and contractors
 - availability of consumables and materials
 - availability and operational performance of machinery and equipment
- working with plans and contracts and assessing performance targets
- environmental factors to be considered in restoration works, including:

- the role of native plants and animals in the ecosystem of the site
- vertebrate pests and options for control
- impact of weeds and pests and appropriate control methods
- ability to assess restoration potential of sites
- ecological principles related to restoration of ecological sites, including:
 - recognition of fundamental ecosystem structures
 - interactions between flora and fauna and impact on ecological stability
 - vegetation types and their general characteristics relevant to restoration activities
 - ecology in land based, coastal zones or marine parks
 - marine, shore and terrestrial species
 - inland aquatic systems
 - natural and human threats to places of natural significance
 - environmental threats and damage potential
 - soil type and geology for accessing sites and conducting revegetation work
- supervisory skills and working with work teams and contractors:
 - assessing performance
 - rectifying performance issues
 - reporting procedures
- engagement of contractors and procedures, including:
 - work contracts and specifications
 - work progress reports and progress payments
 - site safety expectations
 - practical completion certification
- workplace health and safety procedures, including:
 - safety hazards and associated risks on restoration sites
 - personal protective equipment required by work teams
 - sun protection
 - materials handling safety.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated for an active ecological restoration worksite or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - materials and other resources as specified in project brief
 - specific tools and equipment required to perform restoration activities
- specifications:

- specific workplace policies and procedures for safety and supervision work
- ecological restoration plan and specifications
- relationships:
 - stakeholders
 - work team and contractors
- timeframes:
 - according to timeframes specified in project brief.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR402 Plan the implementation of revegetation works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to confirm and assess resources, program works and schedules and prepare a plan for the implementation of revegetation works.

The unit applies to individuals who work in a supervisory role in revegetation works and provide and communicate solutions to a range of predictable and sometimes unpredictable problems. They work autonomously, instruct, and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out preliminary planning activities for implementation of revegetation works	1.1 Confirm scope, preferences, contract requirements and goals for revegetation works 1.2 Identify statutory obligations and site responsibilities affecting revegetation works 1.3 Conduct site visit to verify the biophysical, environmental and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>historical conditions</p> <p>1.4 Identify site health and safety hazards, assess risk and develop controls</p> <p>1.5 Verify availability, quantity and costs of resources specified in project plan</p>
2. Prepare a staged plan for revegetation works	<p>2.1 Identify, cost and confirm availability of materials, tools and equipment required for revegetation work</p> <p>2.2 Assess and resolve site access and establishment difficulties</p> <p>2.3 Assess sequence of works for site establishment and maintenance</p> <p>2.4 Consider seasonal factors and impact on sequencing strategy</p> <p>2.5 Identify habitat development and enhancement requirements for site</p> <p>2.6 Prepare a program plan and schedule of revegetation works</p> <p>2.7 Document a staged implementation plan according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse scoping documentation, legislation and regulations to identify objectives, resources and compliance requirements and consolidate into programs, schedules and revegetation plans
Writing	<ul style="list-style-type: none"> Prepare, proofread and edit programs, schedules and plans for revegetation works, ensuring clarity of meaning, accuracy and consistency of information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of materials and the respective costs Estimate the time required for equipment, materials and labour, and cost of securing these resources

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR402 Plan the implementation of revegetation works	AHCNAR402 Plan the implementation of revegetation works	<p>Changed unit code to reflect new unit sector</p> <p>Changes to Application and Performance Criteria for clarity and brevity</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR402 Plan the implementation of revegetation works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared a plan for implementing revegetation works for at least one natural area site, and has:

- confirmed the scope of the project, including preferences and contract requirements
- assessed site for opportunities and constraints associated with implementation of revegetation works
- established the purpose and client preferences for the site to be revegetated
- carried out a site visit and confirmed any planning requirements
- developed a plan for the site, detailing the resources required and the program of works, which must include:
 - environmental impact and mitigation
 - health and safety risks and mitigation
- developed schedules for the establishment and maintenance phases of the project, which must include:
 - site setup and development
 - revegetation works establishment period
 - maintenance
 - impact of seasons and climate on staging strategy
 - impacts in the staging strategy
- documented the staged implementation plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- role of revegetation works in the restoration of the natural environment
- environmental and biosecurity issues associated with revegetation works, including:

- legislative frameworks that govern revegetation activities
- compliance with legislation
- minimising impact on the natural environment
- preventing pest and disease incursion into revegetation sites
- biophysical environmental and historical aspects of natural areas, including:
 - biotic factors affecting the site
 - abiotic factors and their influence on revegetation and accessing natural areas
 - changes to the physical and biological conditions and impact on revegetation activities
- impact of seasonal effects of weather and climatic conditions on revegetation works planning and scheduling, including:
 - plant species, supply and care
 - site access during inclement weather
 - machinery use
 - fire hazards
 - plant establishment phase
 - site-specific health and safety
- ecological principles related to revegetation of natural areas, including:
 - ecosystem structures and habitat
 - interactions between flora and fauna and impact on ecological stability
 - vegetation types and their general characteristics
- importance of biodiversity when revegetating for an ecologically stable community, including:
 - terrestrial plants and basic plant community structures
 - marine and water plants and interaction with marine fauna
 - contribution of revegetation works on preserving biodiversity
- intricate relationships between microbiota, including insects, molluscs, worms and microbes, and impact on revegetation practices
- environmental factors to be considered in revegetation works, including:
 - revegetation in land based, coastal zones or marine parks
 - marine, shore and terrestrial species
 - natural and human threats to places of natural significance
 - pollution sources and damage potential
 - soil type and geology for accessing sites and conducting revegetation work
- identification, propagation and establishment techniques of specific native plant species, including:
 - maintenance requirements and practices for native plants prior to and after initial establishment
 - growth habits and cultural requirements of specific native plants under a range of soil and environmental conditions
- site evaluation techniques including methods of analysing soils, waterways and their condition

- practical understanding of the advantages and disadvantages of options for revegetation works procedures
- workplace health and safety hazards associated with undertaking revegetation works, and the controls necessary to remove or minimise associated risks
- contract documents including specifications, plans of landscape works, services, supplies and surveyors documents.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on an active natural area restoration worksite or in an environment that accurately represents workplace conditions
- specifications:
 - workplace policies and procedures for preparing plans
 - scope of works, specifications and contract requirements
 - legislation and regulations relevant to revegetation works and biosecurity.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR501 Manage natural areas on a rural property

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to manage natural areas on privately owned rural properties and enhance the sustainable ecological and economic capacity and outcomes of the land.

The unit applies to individuals who manage land management projects and who analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge in specific technical areas within land management. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine location, size and type of area to be managed	1.1 Confirm location, boundaries and ownership of rural property 1.2 Compile register of native animal and plant species specific to locality

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Determine features, characteristics and topography of site 1.4 Identify and confirm accuracy of vegetation association and conservation value data 1.5 Obtain details of the presence of and threats from weeds and pests 1.6 Assess ecological value of natural areas on property 1.7 Compile documented evidence of physical impacts on area 1.8 Assess the ecological context of the site in the wider region
2. Prepare management strategies	2.1 Identify budgetary constraints for management strategies 2.2 Design boundary control appropriate to natural area protection guidelines 2.3 Develop management strategies according to budget requirements 2.4 Liaise with planning and specialist authorities 2.5 Identify habitat enhancement strategies within regional biodiversity context 2.6 Develop strategies to integrate management of natural areas into land use and production systems for property 2.7 Incorporate biosecurity, environmental sustainability and workplace health and safety procedures into management plan 2.8 Confirm management plan complies with relevant national, state, territory and local legislation or regulations 2.9 Prepare and present management plan to stakeholders
3. Implement management strategies	3.1 Develop work schedules consistent with production requirements and budget constraints 3.2 Organise people, materials and equipment for work according to management strategies 3.3 Schedule works for operational personnel, according to seasonal weather conditions 3.4 Identify permits or licenses required for natural area works 3.5 Inform stakeholders of planning and implementation of work

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and extract relevant planning information from maps, legislation and regulations, and incorporate into planning and implementation documents
Writing	<ul style="list-style-type: none"> Generate detailed written plans and schedules demonstrating control over a broad range of writing styles for a diverse range of purposes and audiences
Oral communication	<ul style="list-style-type: none"> Establish and maintain effective spoken communication in a broad range of contexts and to a diverse audience
Numeracy	<ul style="list-style-type: none"> Interpret complex financial information, perform calculations and translate financial and budgetary data into planning documents

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR501 Manage natural areas on a rural property	AHCNAR501 Manage natural areas on a rural property	<p>Changed unit code to reflect new unit sector</p> <p>Minor changes to Application and Performance Criteria for clarity</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR501 Manage natural areas on a rural property

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, engaged in a process to manage a natural area located on a rural property, and has:

- determined features and characteristics of natural areas
- sourced topographical and conservation data about a site
- assessed the ecological value of natural areas on a property
- identified the condition of area using a standard condition classification system
- developed management strategies in accordance with workplace procedures and industry best practice
- liaised and consulted with stakeholders
- prepared a coordination program for a work team to carry out work in natural areas according to management strategies
- developed and implemented management strategies according to national, state, territory and local government legislation, regulations and industry standards
- prepared strategies for risk mitigation incorporating health and safety, biosecurity legislative requirements and environmentally sustainable practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- natural area restoration and management principles, including:
 - the planning process
 - site evaluation techniques
 - methods of analysing soils, hydrology, waterways and their condition
 - ecological restoration standards and practices
- sustainable land management strategies, including:

- reducing sources of degrading impacts
- environmental sustainability as a 'whole-system' approach
- economic benefits of sustainable land use
- property planning and enterprise budgeting systems and procedures
- role of different stakeholders and authorities in management, including:
 - property owner
 - consultants and specialists
 - local government and other agencies
 - regional biodiversity management staff
 - rural fire authorities
 - special interest groups
- environmental issues, including:
 - water use and water catchments
 - pollution sources and damage potential, including air and noise pollution
 - waste minimisation
 - natural and human threats to natural areas
 - soil type and geology for accessing sites
 - interactions between production systems and natural areas
- ecological principles related to management of natural areas, including:
 - maintaining ecosystem structures and habitat
 - interactions between flora and fauna and impact on ecosystems
 - disturbance regimes for particular ecosystems
 - natural recovery processes in ecosystems
 - vegetation types and their general characteristics for management
- importance of biodiversity in managing natural areas, including:
 - terrestrial plants and basic plant community structures
 - water plant communities and interaction in freshwater and saline environments
 - methods for maintaining biodiversity
- state/territory legislative requirements related to environmental protection and biosecurity standards
- workplace health and safety hazards and the controls necessary to remove or minimise risk.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a farm property with an area of natural area to be conserved or in an environment that accurately represents workplace conditions
- resources, equipment and materials:

- maps and site plans
- specifications:
 - specific workplace policies, procedures and processes for managing a rural property
 - legislation, regulations and codes of practice relevant to rural property and natural area management
- relationships:
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR502 Conduct biological surveys

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan and conduct biological surveys and produce a biological survey report, according to client requirements and biological components to be surveyed.

The unit applies to individuals working as land restoration managers who analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge in specific technical areas within land management. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out preliminary design activities for the biological survey	1.1 Identify survey scope, objectives and constraints according to client brief 1.2 Source, collate and evaluate current data relevant to survey requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Develop processes for data collection and processing consistent with the survey scope, objectives and constraints</p> <p>1.4 Design survey plan reflecting client requirements and present to client for approval</p> <p>1.5 Incorporate workplace health and safety and environmental sustainability and biosecurity procedures into plan</p>
2. Determine requirements of the biological survey	<p>2.1 Identify biological survey indicators and evaluate constraints and opportunities for data collection</p> <p>2.2 Identify data collection points that are repeatable and statistically representative</p> <p>2.3 Identify hazards associated with a biological survey, assess risks and develop controls, determine costs, and document in the survey design</p> <p>2.4 Secure permits and approvals required for survey according to ethical standards, workplace procedures and legislative requirements</p> <p>2.5 Determine tools, equipment and machinery required for the survey and confirm availability with suppliers</p> <p>2.6 Schedule survey activities and surveyor access according to the survey design</p> <p>2.7 Document survey procedures and schedules and present to stakeholders and client for approval</p>
3. Conduct the biological survey	<p>3.1 Conduct field visit to verify existing data and update information</p> <p>3.2 Conduct the biological survey according to the survey design</p> <p>3.3 Monitor survey activities for accuracy, compliance to the survey design and legislative and ethical standards</p> <p>3.4 Undertake staged data collection according to the survey design, scheduling and surveyor access requirements</p> <p>3.5 Record all monitoring and survey data according to specifications of the survey design</p>
4. Compile a biological survey report	<p>4.1 Analyse data and draw conclusions based on evidence and reasoned arguments</p> <p>4.2 Prepare a biological survey report according to agreed timeframes and client outcomes and workplace standards</p> <p>4.3 Present report to the client</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Draw on a broad range of strategies to interpret, build and maintain understanding from data sets and reference materials when planning, collating and interpreting survey data
Writing	<ul style="list-style-type: none"> Record outcomes of surveys and incorporate into biological survey reports, expressing ideas and exploring complex issues, and ensuring it is constructed logically, succinctly and accurately
Numeracy	<ul style="list-style-type: none"> Capture, record and analyse survey data and use calculations to help formulate conclusions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR502 Conduct biological surveys	AHCNAR502 Conduct biological surveys	<p>Changed unit code to reflect new unit sector</p> <p>Minor changes to Application and Performance Criteria</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR502 Conduct biological surveys

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned and conducted at least one biological survey with at least two of the following biological elements:

- flora
- vertebrate fauna
- fungi
- invertebrate fauna
- microorganisms

The survey must also be conducted in at least one of the following environments:

- terrestrial
- marine or aquatic
- arboreal

There must be evidence that the individual has:

- planned, conducted and reported on biological surveys according to client requirements, workplace policies and industry best practice
- identified scope, objectives and constraints for a biological survey
- assessed current data and determined data collection and processing needs
- identified biological indicators that are repeatable and statistically representative
- developed a survey plan that documents survey methods and indicators
- secured permits and approvals
- scheduled survey activities and established access to the site
- conducted a biological survey with data collection staged and recorded according to the survey plan and health and safety requirements, and that must include:
 - species, identified by biological and vernacular name
 - frequency
 - distribution

- condition
- habitat
- produced a biological survey report with analysis and conclusions, including:
 - survey findings according to the survey scope and objectives
 - identified areas requiring remedial action and improvements
 - detailed recommendations for action
 - description and assessment of the specified biological components
- ensured survey plan and activities complied with animal welfare codes of practice and environmental and biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- biological classification systems
- plant and animal recognition relevant to survey area
- environmental factors that impact on vegetation and animal populations
- survey equipment, machinery and methods for specific environments, including:
 - marine and aquatic
 - terrestrial
 - arboreal
- survey techniques and methods for different biological elements, including:
 - microorganisms
 - fungi
 - micro and macro invertebrates
 - plants
 - animals including fish
 - methods for obtaining statistically representative sample
- requirements for ensuring the legality of biological surveys, including:
 - animal welfare
 - codes of practice
 - legislative requirements
 - ethical standards and approvals
- ecological principles and terminology, including
 - ecosystem structures and habitat
 - interactions between flora and fauna
 - vegetation types and their characteristics
 - energy flows and trophic structures of communities
- assessment, reporting and client liaison procedures and best practice techniques
- workplace team management procedures
- workplace health and safety legislative requirements and codes of practice, including:

- hazard identification, assessment and control measures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field and according to the conditions specified in the Performance Evidence or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - survey equipment relative to the type of survey undertaken
- specifications:
 - specific workplace policies and procedures for conducting surveys and recording results
 - client brief and specifications for survey
 - specific legislation and codes of practice for ethical surveys
- relationships:
 - client
- timeframes:
 - according to time specified in client brief.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR503 Design an ecological restoration project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare a design for an ecological restoration project in conservation or for ecosystem management.

The unit applies to individuals who work in conservation and ecosystem management and who analyse information and exercise judgement to complete a range of skilled design, development and project management activities, demonstrating a deep knowledge in technical areas within conservation and ecosystem management. They have accountability for the work of others and analyse, design and communicate solutions to complex problems.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop an ecological restoration project design brief	1.1 Identify client and key stakeholders for the project 1.2 Consult with client and key stakeholders to establish purpose, scope, cultural considerations and budget of design 1.3 Develop and confirm measurable ecological targets, goals and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	objectives for project 1.4 Respond to design brief and agree on extent, scope and scale of project 1.5 Prepare project budget with the client 1.6 Obtain or prepare a site base plan 1.7 Identify legislative and regulatory implications for restoration work for site 1.8 Review existing site data and information before site visit
2. Undertake a site analysis	2.1 Identify the ecosystem and respective reference ecosystem for the project according to current industry standards 2.2 Specify and document reference ecosystem's attributes according to current industry standards 2.3 Inspect project site in preparation for design work 2.4 Quantify, and indicate on base plan, elements and features of site biological condition of attributes and threats 2.5 Record biophysical components of the site in base plan and site report 2.6 Assess ecosystem recovery prospects and record limiting factors 2.7 Determine options for ecological restoration interventions 2.8 Assess and record the impact of surrounding ecosystem, land and hydrology on site 2.9 Assess physical and cultural constraints on restoration work
3. Develop a concept design for the ecological restoration project	3.1 Discuss options and approaches to achieve ecological aims and goals with client 3.2 Prepare concept design and site maps illustrating location of project work zones 3.3 Specify restoration approaches and treatments for each work zone 3.4 Obtain agreement from stakeholders/supervisor on options and approaches for works 3.5 Present concept design with supporting documentation for the proposed actions
4. Design an adaptive management monitoring	4.1 Determine performance indicators for each project goal and objective

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
and reporting program for the project	4.2 Determine methods to measure attainment of project indicators 4.3 Determine monitoring intervals for project 4.4 Determine communication procedures for conveying progress to stakeholders 4.5 Determine the milestones and timelines for project reporting to stakeholders
5. Produce a final design for the ecological restoration project	5.1 Draft a detailed plan according to design brief and concept design 5.2 Develop specifications for materials identified in design brief 5.3 Specify standard and responsibilities of labour contracted for works 5.4 Apply construction and engineering principles to design work identified in design brief 5.5 Complete design documentation according to design brief and workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, assess and critique data and information, including legislation and regulations, for incorporation in design
Writing	<ul style="list-style-type: none"> Select conventions and stylistic devices to express precise meaning in design briefs and supporting design documents
Oral communication	<ul style="list-style-type: none"> Establish and maintain complex and effective communications when negotiating and agreeing on design brief and options for design
Numeracy	<ul style="list-style-type: none"> Interpret financial information and costs, and perform calculations to translate estimates of operational costs and budget development for inclusion in ecological restoration designs and plans

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR503 Design an ecological restoration project	AHCNAR503 Design a natural area restoration project	<p>Changed unit code to reflect unit sector</p> <p>Title change</p> <p>Changes to Application, Added Elements and Performance Criteria for clarity and current industry practice</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR503 Design an ecological restoration project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, designed an ecological restoration project according to client brief and workplace and legislative requirements.

There must also be evidence that the individual has:

- established project scope, including:
 - purpose
 - scope
 - extent/scale
 - costs
 - benefits
 - timelines
- conducted an onsite analysis and assessment to determine ecosystem functions and processes, degradation and potential for regeneration
- determined constraints and threatening processes
- identified targets and goals for the ecosystem attributes and indicators that the targets and goals are being attained
- prepared a base plan incorporating the following:
 - landforms
 - hydrology
 - substrates
 - fauna
 - flora
 - habitat
 - presence of threats

- determined options for ecological restoration treatments and incorporated into a concept design
- negotiated the design brief and agreement on options and final design with client
- produced a final design with supporting documentation, including:
 - schedule of works
 - costings
 - planning
 - monitoring
 - annotated plans, maps, drawings or other images
 - specifications
 - quality and standards of materials and work
 - labour and contractor requirements and their responsibilities and qualifications
- used remote sensing, electronic mapping tools and professional graphic formats to present concept design.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- design process
- ecosystem biota, abiotic elements, functions and processes
- ecological restoration theory, principles and standards
- adaptive management principles and practices
- natural regeneration potential and limits
- effective assisted regeneration and reconstruction principles and practices
- landscape level ecosystem processes and connectivity requirements of species
- remote sensing, electronic mapping, graphical presentation and basic drafting techniques
- recognition of species and a range of ecological communities
- biophysical components of site, including:
 - atmosphere – climatic conditions
 - hydrosphere conditions – water, rain
 - lithosphere – geology, soils
 - biosphere – flora, fauna, fungi
- costing projects and developing and managing budgets
- calculations of materials, labour, machinery and equipment
- environmental implications of restoration works
- legislative requirements for ecological restoration works
- industry and workplace standards.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on an ecological site requiring restoration or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computers for research and development of plans and documents
- specifications:
 - workplace policies and procedures for design development and documentation
 - legislation, regulations and codes of practice for revegetation works
- relationships:
 - client
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR504 Manage implementation of ecological restoration programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to inspect and assess degraded sites for ecological restoration works, assess an existing design or plan for ecological restoration activities, and manage and monitor implementation.

The unit applies to individuals who are ecological restoration managers who analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge in specific technical areas within ecosystem management. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Inspect and assess site subject to an ecological restoration program	1.1 Interpret ecological restoration project design or plan for purpose of implementation 1.2 Confirm site conditions, level of degradation and restoration

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>potential for site outlined in ecological restoration design or plan</p> <p>1.3 Assess threats to biotic and abiotic factors of area from ecological restoration works proposed in design or plan</p> <p>1.4 Assess range of operating conditions, hazards and environmental conditions that will impact on the implementation of restoration works outlined in design or plan</p>
2. Plan implementation of ecological restoration from project plan or design	<p>2.1 Confirm ecological restoration approaches and techniques to achieve project design objectives</p> <p>2.2 Develop a proposed program budget in accordance with client expectations and resources</p> <p>2.3 Prepare an implementation program and schedule according to the ecological restoration design or plan aims and objectives</p> <p>2.4 Confirm program monitoring strategy and measurable key performance indicators for program outputs</p> <p>2.5 Conduct a site-specific risk analysis and develop controls and procedures</p> <p>2.6 Determine personnel and skill requirements for implementing program</p> <p>2.7 Identify permits, licenses and authorisations required to complete work</p> <p>2.8 Identify equipment and materials for restoration work</p> <p>2.9 Identify transport requirements for equipment and personnel for ecological restoration work</p>
3. Manage implementation of ecological restoration program plan	<p>3.1 Liaise with program stakeholders, client and implementation team</p> <p>3.2 Oversee implementation of restoration works according to program</p> <p>3.3 Record works according to the design and program</p> <p>3.4 Manage workers to ensure program is carried out in accordance with workplace health and safety procedures</p>
4. Monitor implementation of ecological restoration program	<p>4.1 Check site preparation activities have been completed according to specifications</p> <p>4.2 Check materials, machinery and equipment comply with ecological restoration design or plan and implementation program</p> <p>4.3 Monitor implementation of ecological restoration program for</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>quality and progression against outputs of ecological restoration design or plan</p> <p>4.4 Monitor budget expenditure against the program budget</p> <p>4.5 Carry out adaptive management according to ecological monitoring</p> <p>4.6 Manage workers to ensure work is carried out in accordance with workplace health and safety procedures</p>
5. Review and report on implementation of ecological restoration program	<p>5.1 Review outputs to determine program implementation is consistent with ecological restoration design or plan</p> <p>5.2 Report outputs and key performance indicators achieved during program implementation according to workplace procedures</p> <p>5.3 Report changes to restoration techniques for adoption in future works</p> <p>5.4 Monitor site to identify recommendations and specifications for ongoing maintenance program</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and extract relevant information from ecological restoration designs and plans to formulate programs and monitor their implementation
Writing	<ul style="list-style-type: none"> Demonstrate advanced writing skills by selecting appropriate conventions and stylistic devices to express precise requirements, processes and procedures in management programs
Oral communication	<ul style="list-style-type: none"> Establish and maintain complex and effective communication for a broad range of stakeholders using appropriate strategies for different contexts
Numeracy	<ul style="list-style-type: none"> Interpret financial and operational information from designs and plans to perform calculations of costing and scheduling for inclusion in budget and implementation program

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR504 Manage implementation of ecological restoration programs	AHCNAR504 Manage natural area restoration programs	Redesigned unit to focus on implementation of designs or plans Changed unit code to reflect new unit sector Changed title Change to Application Changed Performance Criteria Changed Performance Evidence, Knowledge Evidence and Assessment Conditions to reflect implementation focus	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR504 Manage implementation of ecological restoration programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, inspected an ecological site and managed the implementation of an ecological restoration program for an ecological restoration design or plan.

There must also be evidence that the individual has:

- identified essential elements of ecological restoration program
- conducted a site assessment for implementing ecological restoration works
- confirmed restoration techniques for the program according to planned objectives
- ensured program complies with relevant legislative and program requirements
- calculated labour and other resources required for program
- recorded, monitored and reported on labour and other resource requirements
- monitored progress and quality of restoration program delivery
- reviewed ecological restoration implementation program against intended outcomes in management plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- biotic and abiotic factors affecting ecological sites, and restoration interventions that can be applied
- principles and methods of prevention and control of weeds and pests
- project management skills, including:
 - work health and safety, environmental and quality hazards associated with restoration works, and controls necessary to remove or ameliorate associated risks
 - calculations for resource requirements, costs and charges
 - preparation of plans, budgets and works reporting

- financial recording, tracking and reporting
- use of project management software
- leading a team
- ecological restoration and management principles, including:
 - planning process, particularly interpreting goals and indicators of success
 - site assessment and evaluation techniques
 - methods of analysing soils, waterways and their condition and threats
 - natural regeneration potential and limits
 - factors affecting the timing and method of plant establishment
- sustainable land and aquatic management strategies, including:
 - reducing degradation of specific ecosystems
 - use of available resources
 - environmental sustainability as a 'whole-system' approach
- environmental issues, including:
 - water use and water catchments
 - pollution sources and damage potential
 - waste minimisation and sustainable disposal
 - natural and human threats to ecological sites
 - soil type and geology for revegetation and site access
 - interactions between production systems and ecological sites
- ecological principles related to management of ecological sites, including:
 - maintaining ecosystem structures and habitat
 - maintaining and reinstating connectivity
 - interactions between flora and fauna and their roles in ecosystems
 - vegetation and other ecosystem types and their general characteristics for management
 - identification of plant and animal threats to treated areas, and appropriate control methods
 - identification of plant and animal assets and their ecological requirements
- importance of biodiversity in managing ecological sites, including:
 - terrestrial plants and basic plant community structures
 - water plant communities and interaction in saline environments
 - methods for conserving biodiversity
- state/territory legislative requirements related to revegetation works, environmental protection and biosecurity standards
- communication skills for various stakeholders, including special interest groups, government agencies, professional bodies and community.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on an ecological restoration site
- resources, equipment and materials:
 - equipment, machinery, plants and consumables specified in restoration plan
- specifications:
 - workplace policies and procedures for preparing plans
 - restoration scope and budgetary constraints
 - legislation and regulations relevant to ecological restoration works and biosecurity
- relationships:
 - client
 - stakeholders/groups
 - work team and/or contractors.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR505 Plan river restoration works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare a detailed plan for river restoration works, in consultation with the client and relevant consent authorities.

This unit applies to individuals who work as restoration and rehabilitation project managers and who analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge in specific technical areas within land management. They have accountability for the work of others, and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish client need	1.1 Confirm client expectations 1.2 Determine current legislation and policies impacting site 1.3 Discuss possible strategies and confirm best option for site with

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	client
2. Develop strategy to facilitate river restoration works	2.1 Check maps and titles to determine property ownership and boundaries 2.2 Conduct a detailed site assessment 2.3 Determine profiles of river sections from pictorial images 2.4 Develop erosion and sediment control measures consistent with industry principles and selection criteria 2.5 Develop fauna habitats following industry recommendations 2.6 Ensure plants used in project comply with industry guidelines 2.7 Establish and document restoration strategies with the client and relevant consent authority
3. Prepare a detailed river restoration works plan	3.1 Check selection criteria for earthwork structures or measures against industry guidelines and legislative requirements 3.2 Check habitat enhancement strategies against industry guidelines 3.3 Prepare plan according to industry best practice and requirements for submission to consenting authorities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, assess and critique data and information from maps, images, legislation and regulations for incorporation into planning process
Writing	<ul style="list-style-type: none"> Prepare, proofread and edit programs, schedules and plans for river restoration works, ensuring clarity of meaning, accuracy and consistency of information
Oral communication	<ul style="list-style-type: none"> Establish and maintain dialogue with clients using precise and effective communications in a broad range of contexts to establish requirements for restoration works and confirm proposed strategies with client

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR505 Plan river restoration works	AHCNAR505 Plan river restoration works	<p>Changed unit code to reflect new unit sector</p> <p>Changes to Application</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR505 Plan river restoration works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, prepared a plan for restoration works of a declining river, and has:

- discussed client expectations for restoration strategies and included in plan
- planned river restoration works according to client, environmental and legislative requirements
- developed erosion and sediment control measures
- followed industry guidelines to establish fauna habitat and vegetation species
- documented strategy for submission to authorising authority
- prepare a detailed works plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislation and regulations governing river system restoration, including:
 - permits
 - soil and water degradation
 - cultural and heritage sites
 - flora and fauna conservation
- river restoration, principles, techniques and processes
- potential and limits of natural regeneration of vegetation
- assisted regeneration and reconstruction approaches for revegetation
- establishment and maintenance of native vegetation to ensure establishment
- erosion and sediment control techniques and selection criteria
- planning procedure for erosion and sediment control
- erosion control and design principles and factors, including:

- soils and soil formation
- levels and levelling
- earthmoving principles
- total catchment issues
- managing peak water flows
- subsurface and surface drainage principles and systems
- river restoration works and impact on the natural environmental.
-

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field at a river system requiring restoration works
- resources, equipment and materials:
 - digital technology for research and development of plans and documents
- specifications:
 - workplace policies and procedures for design development and documentation
 - legislation, regulations and codes of practice for revegetation works
- relationships:
 - client.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCECR506 Develop and implement sustainable land use strategies

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop and implement sustainable land use strategies that lead to improved ecological sustainability of land under production.

The unit applies to individuals who manage agricultural and production horticulture enterprises and who analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge in land management practices. They have accountability for the work of others, and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess requirements for improved land use	1.1 Audit site natural resources and identify threats to sustainability 1.2 Review production and management plans for sustainable land use

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	principles 1.3 Assess water resources, quality and impact on erosion 1.4 Assess soil health and fertility against production plan requirements 1.5 Assess vegetation types and coverage, and identify required changes 1.6 Plan and prioritise land and water protection measures and structures
2. Carry out structural improvements to address threats to sustainability	2.1 Follow workplace health and safety policies and procedures in field work 2.2 Inspect site, record key features and indicate on the site where improvements are required 2.3 Determine materials for construction from plans and specifications 2.4 Obtain and organise materials, personnel and equipment 2.5 Select and check equipment for safe and environmentally sustainable operation 2.6 Construct structural works, revegetate area and secure area from livestock
3. Treat areas of land degradation	3.1 Assess land classes and align fences and soil conservation works consistent with class 3.2 Protect and maintain contour banks to avoid degradation 3.3 Construct and maintain water carrying structures 3.4 Establish shelter belts for crop and stock protection 3.5 Review and amend soil cultivation and planting practices to prevent erosion 3.6 Plan grazing strategies to avoid localised soil degradation 3.7 Confirm works and plans comply with environmental protection legislation, regulations and codes of practice

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, assess and critique data and information from production plans, management plans, maps, images, legislation and regulations for incorporation into designing land use strategies

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR506 Develop and implement sustainable land use strategies	AHCNAR506 Develop and implement sustainable land use strategies	<p>Changed unit code to reflect new unit sector</p> <p>Changes made to Application and Performance Criteria for clarity</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR506 Develop and implement sustainable land use strategies

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed at least five sustainable land use strategies for a specified land use and has implemented at least one of the strategies over a period of six months.

There must also be evidence that the individual has:

- identified the threats to sustainable practices for the specified land use area
- managed water resources and impact on riparian zones
- managed vegetation and plant succession
- managed the health and sustainability of soils
- embedded the principles and practices of health, safety and biosecurity legislative requirements into land use strategies.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the role of biodiversity in farming systems, including:
 - importance of biodiversity farming systems
 - terrestrial plants and basic plant community structures
 - subsurface water and plant communities and impact on saline environments
 - methods for preserving biodiversity
- sustainable land and water use principles and practices, including:
 - advantages and limitations
 - environmental sustainability as a 'whole-system' approach
- recognition and management of land classes
- sustainable soil management, including:

- causes of land degradation
- soil type and geology and impact for land use and access
- grazing strategies to reduce surface cover on pastures and embankments
- soil appraisal and remediation strategies
- causes of erosion and erosion control strategies
- production practices and soil management
- environmental controls and codes of practice applicable to the business and to the improvement works, including:
 - water use and water catchments
 - sources and damage of pollutants
 - waste minimisation and sustainable disposal
 - natural and human threats to sustainable land use
 - interactions between production systems and natural areas
- legislation and regulations for soil and water degradation, chemical use and structural works
- workplace health and safety and environmental protection legislation, regulations and codes of practice including biosecurity.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field resources, equipment and materials:
 - equipment, machinery, plants and consumables required to implement the specified land use strategies
- specifications:
 - workplace policies and procedures for preparing strategies
 - legislation and regulations relevant to land use and biosecurity.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCEXP301 Handle and store explosives

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to safely handle, store, load and transport explosives according to industry standards.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources.

State or territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Explosives (EXP)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for the	1.1 Identify health and safety hazards, assess risks and implement

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
handling of explosives	<p>controls for handling, storage and transport of explosives</p> <p>1.2 Check for damaged or defective explosives and take action according to workplace procedures</p> <p>1.3 Prepare and display signage and placarding on vehicles or storage facilities for explosives according to legislative and regulatory requirements</p> <p>1.4 Identify and implement emergency procedures for the transportation, handling and storage of explosives</p> <p>1.5 Establish monitoring and recording systems for authorisation to handle, store and transport explosives according to codes of practice and legislative and regulatory requirements</p>
2. Transport explosives	<p>2.1 Establish arrangements to maintain integrity and security of transported explosives according to workplace procedures</p> <p>2.2 Institute security procedures to ensure explosives arrive at the destination intact and within specified times</p> <p>2.3 Implement workplace strategies to carry out emergency procedures according to legislative and regulatory requirements</p> <p>2.4 Load and transport explosives safely according to workplace procedures and legislative and regulatory requirements</p>
3. Store explosives	<p>3.1 Define and action the requirements for the safe and secure storage of explosives according to legislative and regulatory requirements</p> <p>3.2 Define requirements for personnel authorised to gain access to explosives</p> <p>3.3 Assess storage conditions to ensure they meet requirements for safe storage of explosives</p> <p>3.4 Monitor and maintain security according to legislative and regulatory requirements</p> <p>3.5 Accurately implement and maintain recording systems for the handling and storage of explosives according to legislative and regulatory requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately complete workplace documents, statutory records, authorisation documents and hazard warning signs using clear, correct language and terminology
Oral communication	<ul style="list-style-type: none"> Select and use appropriate conventions and protocols when communicating with co-workers

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCEXP301 Handle and store explosives Release 3	AHCEXP301 Handle and store explosives Release 2	Minor changes to Performance Criteria Removed mapping to Core Skills for Work Updated Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCEXP301 Handle and store explosives

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has demonstrated that they have handled and stored explosives, including:

- checked explosives for damage or defects, and implemented corrective action
- conducted risk assessment and implemented safe work procedures
- prepared and displayed placards on vehicles transporting explosives
- loaded and transported components of explosives safely in accordance with legislative and regulatory requirements and workplace procedures
- established and implemented monitoring and recording systems for handling, storing and transporting explosives according to legislative and regulatory requirements
- defined requirements and authorisations for the safe handling and storage of explosives
- implemented security procedures for explosives
- identified and implemented emergency procedures for transporting and storing explosives.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- local conditions and factors in the handling, transporting and storage of explosives
- care and preventive measures required to eliminate risk of fire and deterioration of stored explosive materials
- procedures for buying commercial explosives and blasting agents

- explosive materials and their identification
- defective or damaged explosives
- emergency procedures required when handling explosives
- explosives code of practice, regulations and legislation
- environmental conditions required for safe storage of explosive materials
- loading and storing practices for explosives
- security procedures and best practice
- materials handling procedures
- mandatory and workplace records when handling, storing and transporting explosives.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - explosives or realistic representations of explosives
 - tools and equipment required to handle and transport explosives
 - personal protective equipment
- specifications:
 - workplace instructions, procedures and processes for handling explosives
 - explosive safety data sheets
 - explosives related legislation and codes of practice
- relationships:
 - team member(s) or supervisor to gain approvals.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCEXP303 Prepare and use explosives

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare a blasting site and notify stakeholders of blasting work, mix explosives, detonate explosives using fuses, and render the blast site safe following legislative, regulatory and workplace procedures.

The unit applies to individuals who work under broad direction and take responsibility for their own work. This includes using discretion and judgement in the selection and use of available resources for blasting.

State or territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Explosives (EXP)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for blasting	1.1 Obtain permits/licences and approved warning signs installed and prominently displayed according to legislative requirements 1.2 Notify property manager, neighbours and controlling authority and other stakeholders of blasting plan and timing according to legislation 1.3 Clear blast site of stones and other potential missiles and ensure

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>the site is made safe</p> <p>1.4 Place explosive products at required safety distance from identified hazards</p> <p>1.5 Prepare holes for charge(s) according to blasting plan</p> <p>1.6 Remove equipment used for preparing holes to prescribed safe distance according to Australian Standards, legislation and regulations</p>
2. Prepare explosives	<p>2.1 Calculate quantities of explosive components required to achieve the desired blast for prevailing conditions</p> <p>2.2 Transport explosives or explosive mix to site according to workplace health and safety procedures and legislative requirements</p> <p>2.3 Calculate the precise explosive components to ensure minimum residual mix to be destroyed</p> <p>2.4 Prepare explosives according to defined recipe and requirements according to workplace procedures</p> <p>2.5 Assemble fusing and detonating components for explosive requirements in preparation for blasting</p>
3. Place charges	<p>3.1 Place or pack explosives elements in prepared holes according to safe working procedures, Australian Standards, legislation and regulations</p> <p>3.2 Stem and tamp holes prior to the attachment of the firing system according to blasting requirement and safety procedures</p> <p>3.3 Check electrical firing circuits or fire fuses for continuity and/or earthing</p> <p>3.4 Clear extraneous materials from blast site to safe distances in accordance with workplace standards</p> <p>3.5 Re-check blast site and surrounds to ensure that non-essential personnel are not endangered</p> <p>3.6 Place blasting mats or other control devices according to blasting plan</p> <p>3.7 Guard blast area according to legislative requirements and workplace procedures</p>
4. Fire charges	<p>4.1 Implement prescribed warning notification procedures according to workplace procedures and industry standards</p> <p>4.2 Re-check blasting site to ensure correct placement of explosives</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>and all safety procedures have been implemented according to supervisor or shot firer instructions</p> <p>4.3 Implement audible and visual warning signals according to workplace safety procedures</p> <p>4.4 Initiate firing procedures using manual or electric firing system according to blasting plan</p>
5. Conduct post-firing procedures	<p>5.1 Ensure misfires are identified prior to all-clear signals being given by count charges during firing procedure or inspection of blast site</p> <p>5.2 Implement misfire procedures according to workplace and regulatory requirements</p> <p>5.3 Ensure site is safe and all-clear signal is given according to industry practice and legislative requirements</p> <p>5.4 Discard, destroy or store surplus, unserviceable and defective explosives and detonators according to workplace and environmental procedures</p> <p>5.5 Maintain records according to workplace and legislative requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret permits, regulations and explosive documentation and consolidate information to determine requirements for the safe use of explosives
Writing	<ul style="list-style-type: none"> Legibly and accurately complete permit applications, signage and notifications for explosive use
Oral communication	<ul style="list-style-type: none"> Communicate with neighbours and stakeholders about blasting works including active listening and responding to questions or concerns
Numeracy	<ul style="list-style-type: none"> Calculate quantities for explosive materials

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCEXP303 Prepare and use explosives	AHCEXP303A Prepare and use explosives	Reinstated previously deleted unit Updated to meet Standards Minor changes to Performance Criteria Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCEXP303 Prepare and use explosives

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has:

- obtained permits and licenses for blasting
- informed neighbours and posted notices for blasting
- prepared blast site to place the explosive
- prepared explosives and initiator device according to best safety practice and regulations
- placed and fired charges according to best safety practice and regulations
- conducted post-firing procedures for misfires, site checks, the disposal of surplus, unserviceable and defective explosives, and recording procedures
- used explosives safely and effectively according to workplace requirements
- disposed of surplus, defective or unwanted detonators or explosives safely
- mixed explosives components correctly and uniformly
- applied regulations relating to explosives used according to workplace requirements
- maintained records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- fire precautions and prevention procedures
- explosives mixing procedures and safe handling
- calculations required for mixing explosives for size of blast
- explosives preparation, placement, firing and post-firing procedures
- prescribed timing and/or practice drills for misfire, including the use of water jets and additional charges
- regulations relating to explosives use in the workplace and applications and permits required

- use, storage and detonation of explosives
- environmental issues and risks to livestock, natural landscape and contamination
- the Australian Standard relating to preparing and using explosives, which includes:
 - operations prior to charging
 - charging
 - preparation for firing
 - firing
 - misfires
 - preparation of primers.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions and that exposes individuals to live detonation conditions
 - safe transport and storage facilities suitable for explosives
- resources, equipment and materials:
 - explosives, detonators and fuses
 - safety equipment
- specifications:
 - policies, procedures, processes for the safe use of explosives
 - explosives safety data sheets
 - workplace instructions/job specifications for a blasting operation
 - legislation and Australian Standards for the use of explosives
- relationships:
 - neighbours and stakeholders
 - supervisor, shot firer.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCEXP304 Identify and select explosive products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify and select explosive products and suitable mixtures that can be used for blasting for agricultural or land management purposes.

The unit applies to individuals who work under broad direction and take responsibility for their own work. This includes using discretion and judgement in the selection and use of available resources.

State or territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Explosives (EXP)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify explosives applications	1.1 Identify job application and planned blasting operations in consultation with field manager or supervisor 1.2 Identify site for blasting and check surrounding area to confirm safety considerations and actions 1.3 Consider site characteristics and identify risks and potential

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>hazards for blast site</p> <p>1.4 Consider environmental implications of intended explosives usage</p> <p>1.5 Consider available options for explosives for planned blasting operation</p> <p>1.6 Follow workplace health and safety policies and procedures when handling or using explosives</p>
2. Select explosives components	<p>2.1 Select explosives to meet planned blasting outcomes, site conditions and identified hazards of blasting site</p> <p>2.2 Ensure explosives and components are safe and not defective before use</p> <p>2.3 Calculate the explosive energy required for site characteristics to achieve planned blasting outcomes</p> <p>2.4 Prepare the quantity of explosive required to achieve the explosive energy</p> <p>2.5 Select the appropriate explosive initiator device according to industry best practice</p> <p>2.6 Select and use safety fuses to suit the application</p> <p>2.7 Ensure use of explosives complies with relevant legislative requirements and Australian Standards</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Calculate and weigh out the amount of explosive required to achieve the required explosive blast energy

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCEXP304 Identify and select explosive products	AHCEXP302 Identify and select explosive products	Minor changes to Application and minor changes and addition of Performance Criteria for clarity Foundation Skills added Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCEXP304 Identify and select explosive products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has:

- established with supervisor need to use explosives
- identified components of explosive products
- identified the risks and environmental implications of using explosives, including the effect on:
 - structures
 - personnel
 - livestock and fauna
 - environment
- selected explosives and initiator devices consistent with:
 - blasting operation
 - blast site conditions
 - identified hazards
- used safety fuses appropriate for the explosive charge
- applied workplace health and safety policies and procedures when working with explosives
- applied policies and procedures, legislative requirements and Australian Standards.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- explosive products, their use and function
- risk assessment and workplace health and safety procedures
- performance of explosive products, including:

- calculating explosive energy
- determining amount of explosive charge required for a given situation
- powder factor
- behaviour of the substrate material when subjected to blasting:
 - sand
 - rock
 - clay
- applications of explosives in the context of own conservation and land management work:
 - stump and tree removal
 - dams
 - soil de-compaction
 - rock removal
 - trenching
- properties of explosives/blasting agents and their suitability for different applications:
 - detonating
 - initiation
 - primary
 - secondary
- features that identify defective or damaged explosives:
 - age
 - physical condition
 - degradation
- key concepts of the Australian Standards relating to:
 - storage
 - transportation
 - use of explosives
- state and territory legislation for the use of explosives.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions and that exposes individuals to live detonation conditions
 - safe transport and storage facilities suitable for explosives
- resources, equipment and materials:
 - explosives, detonators and fuses
 - safety equipment
- specifications:

- policies, procedures, processes for the safe use of explosives
- safety data sheets for explosives
- instructions/job specifications for a blasting operation
- legislation and Australian Standards for the use of explosives.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCFAU201 Recognise fauna

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to recognise and record fauna that are commonly encountered when undertaking agricultural, horticultural and land management activities.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well-known parameters, providing solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Fauna (FAU)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for fauna recognition	1.1 Identify and select processes for fauna recognition 1.2 Identify fauna according to workplace requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify and select resources and equipment required for identification activity 1.4 Determine location for observations of fauna 1.5 Organise and arrange resources for fauna recognition process 1.6 Use surveillance techniques suitable for approaching fauna and reduce environmental impact 1.7 Follow workplace health and safety procedures for fieldwork
2. Recognise specified fauna	2.1 Recognise and name fauna according to their characteristics 2.2 Record descriptions of fauna habits, characteristics and significant features according to workplace procedures 2.3 Seek advice in the identification process according to workplace procedures 2.4 Ensure observation activities comply with animal welfare codes of practice
3. Complete identification of fauna	3.1 Record fauna sightings in reference collection 3.2 Update field notes for new fauna sightings 3.3 Report notifiable fauna to supervisor according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interprets textual information from sources to identify relevant and key information for fauna recognition
Writing	<ul style="list-style-type: none"> Documents outcomes of observations using correct and industry specific terminology
Navigate the world of work	<ul style="list-style-type: none"> Complies with explicit workplace procedures and animal welfare codes of practice

Skill	Description
Get the work done	<ul style="list-style-type: none"> Plans and implements routine tasks and workload making limited decisions on sequencing, timing and collaboration, seeking assistance in setting priorities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCFAU201 Recognise fauna Release 2	AHCFAU201 Recognise fauna Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCFAU201 Recognise fauna

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have recognised fauna in the field, including:

- accessed a natural area in a manner suitable to observe fauna causing minimal disruption and damage to the environment
- identified and selected processes, situations, equipment and resources for observation of fauna
- observed and record the details of observations according to enterprise requirements
- recognise fauna according to characteristics
- followed workplace procedures and supervisor instructions for identifying, recognising and recording fauna
- applied work health and safety policies and procedures to fauna observation activities
- applied animal welfare practices when observing fauna
- prepared documentation relevant to fauna observations and identification.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for identifying fauna, including:
 - identification techniques and resources
 - fauna behaviour
 - fauna habitats
 - tracks, scats and traces
 - typical characteristics of fauna
- nomenclature and naming conventions
- techniques for observing, identifying and reporting fauna

- purposes for observing and monitoring fauna
- workplace health and safety procedures when conducting observations
- procedures for reporting rare, uncommon or notifiable fauna
- animal welfare and environmental codes of practice relevant to the observation of fauna.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated where target fauna species inhabit or an environment that accurately represents these conditions
- resources, equipment and materials:
 - target fauna
 - tools and equipment required for fauna observations
 - personal protective equipment required while conducting observations
- specifications:
 - workplace policies, procedures, processes and instructions
 - specifications for fauna recognition activity
 - legislation/codes of practice relevant to fauna and environment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCFAU202 Recognise fauna

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to observe, recognise and record fauna that are encountered when undertaking agricultural, horticultural and land management activities.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well-known parameters, providing solutions to a limited range of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Fauna (FAU)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for fauna recognition	1.1 Identify and select processes for fauna recognition 1.2 Identify and select resources and equipment required for identification activity 1.3 Record the location for observations of fauna

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Organise and arrange resources for fauna recognition process 1.5 Use surveillance techniques suitable for approaching fauna and reducing environmental impact 1.6 Identify hazards, notify supervisor and follow workplace health and safety procedures
2. Recognise specified fauna	2.1 Recognise and name fauna according to their characteristics 2.2 Record descriptions of fauna habits, characteristics and significant features according to workplace procedures 2.3 Seek advice in the identification process according to workplace procedures 2.4 Ensure observation activities comply with animal welfare codes of practice
3. Complete identification of fauna	3.1 Record fauna sightings in reference collection 3.2 Update field notes for new fauna sightings 3.3 Report notifiable fauna to supervisor according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from sources to identify relevant and key information for fauna recognition
Writing	<ul style="list-style-type: none"> Document outcomes of observations using correct and industry specific terminology

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCFAU202 Recognise fauna	AHCFAU201 Recognise fauna	Minor changes to Application and Performance Criteria, including removed Performance Criteria in Element 1 to reduce confusion Deleted mapping to Core Skills for Work Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCFAU202 Recognise fauna

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has recognised at least 20 fauna species in the field, which must include at least five species from three of the following groups:

- mammals
- birds
- reptiles/amphibians
- fish
- invertebrates.

There must also be evidence that the individual has:

- accessed a natural area in a manner suitable to observe fauna causing minimal disruption and damage to the environment
- identified processes, situations, equipment and resources for observation of fauna
- observed and recorded the details of observations according to enterprise requirements
- recognised fauna according to their characteristics
- followed workplace procedures and supervisor instructions for identifying, recognising and recording fauna
- applied work health and safety policies and procedures to fauna observation activities
- applied animal welfare practices when observing fauna
- prepared documentation relevant to fauna observations and identification.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for identifying fauna, including:
 - identification techniques and resources
 - fauna behaviour
 - fauna habitats

- tracks, scats and traces
- typical characteristics of fauna
- basic nomenclature and naming conventions
- techniques for observing, identifying and reporting fauna
- purposes for observing and monitoring fauna
- workplace health and safety procedures when conducting observations
- procedures for reporting rare, uncommon or notifiable fauna
- animal welfare and environmental codes of practice relevant to the observation of fauna.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated where target fauna species inhabit, or in an environment that accurately represents these conditions
- resources, equipment and materials:
 - target fauna
 - tools and equipment required for fauna observations
 - personal protective equipment required while conducting observations
- specifications:
 - workplace policies, procedures, processes and instructions
 - specifications for fauna recognition activity
 - legislation/codes of practice relevant to fauna and environment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCFAU301 Respond to wildlife emergencies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to evaluate and coordinate a response to natural resource emergencies involving fauna.

This unit applies to working within own area of responsibility in a response to a wildlife emergency. These individuals are required to take responsibility for their own work and take limited responsibility for other workers and possibly volunteers.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

Pre-requisite Unit

Nil.

Unit Sector

Fauna (FAU)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Evaluate wildlife	1.1 Investigate nature of emergency from eyewitness reports or own

Element	Performance criteria
emergency	inspection 1.2 Make assessment of key factors that may impact on an appropriate response, including public and personal health and safety, animal care, biosecurity and environmental factors 1.3 Notify authorities of incident according to enterprise procedures 1.4 Implement interim care of animals pending instructions from authorities 1.5 Delegate appropriate staff to provide interim care for animals 1.6 Ensure personnel assisting in interim care are equipped and briefed 1.7 Implement care instructions provided by authorities or veterinarians 1.8 Collect information to determine further action 1.9 Interview informants to obtain details of the situation
2. Implement response to emergency	2.1 Establish communications necessary to manage situation 2.2 Transport resources and personnel to site 2.3 Establish site procedures and implement emergency plans according to legislative requirements and enterprise procedures 2.4 Move live fauna 2.5 Remove dead fauna from site and dispose of biological matter in accordance with enterprise procedures and health and safety requirements 2.6 Clean site in accordance with enterprise procedures to maintain public and environmental health and safety 2.7 Implement measures that minimise risk to significant places, area, habitats, species and communities
3. Coordinate response	3.1 Inform general public and media of the nature of the incident and agency decisions 3.2 Brief volunteers and staff on workplace health and safety hazards, preventive measures and reporting requirements 3.3 Coordinate and deploy volunteers according to their skills and available personal protective equipment 3.4 Establish physical barriers to keep public away from animals to minimise their distress and to protect the public 3.5 Manage media until authorities provide instructions 3.6 Use media according to enterprise procedures
4. Care for affected animals	4.1 Assign teams to animals according to incident assessment, care instructions and skills within teams 4.2 Apply animal first aid 4.3 Perform role in wildlife operations team according to the

Element	Performance criteria
	command structure and procedures of the management plan 4.4 Care for animals using a range of skills and according to veterinary instructions and enterprise procedures
5. Determine management options	5.1 Seek veterinary advice where appropriate 5.2 Collect biological and incident data on animals 5.3 Evaluate management options according to advice, condition of animal and risk assessment 5.4 Band or tag released animals where required for scientific purposes 5.5 Source equipment and staff for returning animal to wild or temporary captive management
6. Remove carcass	6.1 Develop inter-agency agreement with local authority for removal of carcasses 6.2 Dispose of carcasses according to authority instructions 6.3 Source equipment and staff for disposal
7. Complete debrief and report	7.1 Follow incident management processes for debrief and wash-up 7.2 Provide report to management to determine what procedures should be implemented

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCFAU301A Respond to wildlife emergencies.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCFAU301 Respond to wildlife emergencies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- evaluate natural resource emergency
- implement and coordinate response to emergency in accordance with enterprise procedures and health and safety requirements
- follow enterprise procedures to ensure the safety of self, other personnel, the general public and the wildlife
- determine management options including returning animal to wild or temporary captive management, according to authority and enterprise policies and procedures
- follow instructions from veterinarians or authorities to care for animal
- remove and dispose of animal carcasses in accordance with authority instructions
- complete debrief and prepare reports to enterprise standards
- apply workplace health and safety policies and procedures when implementing emergency plans
- apply appropriate animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- health risks associated with animals
- public relations and media management
- incident management systems
- State/Territory and local wildlife emergency authorities and organisations
- local authorities for wildlife emergencies
- potential biosecurity risks associated with wildlife rescue operations

- basic requirements for ensuring the welfare of animals described in the relevant Codes of Practice

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCFAU302 Identify fauna in the field

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to observe fauna characteristics for identification in the field using reference material. This is not an animal surveying unit; it focuses on observation skills and the identification of fauna from these observations.

The unit applies to individuals who work in the conservation and ecosystem management industry under broad supervision and who take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Fauna (FAU)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for fauna identification	1.1 Identify and select processes for observing fauna for identification 1.2 Identify and select resources and equipment required for identification activity 1.3 Determine relationship between ecology and fauna for location of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	observation 1.4 Select surveillance techniques suitable for observing fauna, and reduce environmental impact 1.5 Site equipment at location to maximise observations 1.6 Identify hazards, assess risks and implement controls according to workplace health and safety and biosecurity procedures
2. Identify fauna	2.1 Observe and record fauna characteristics 2.2 Ensure observation activities comply with animal welfare codes of practice and standard operating procedures 2.3 Investigate and record supplementary evidence for fauna identification 2.4 Source and use reference material to assist identification 2.5 Compare fauna characteristics and supplementary evidence with reference materials to classify fauna to nearest genus and species
3. Complete identification of fauna	3.1 Record fauna identification and sightings in reference collection according to workplace procedures 3.2 Update field notes with fauna identification 3.3 Report identification of fauna according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Analyse and compare observations and data against defined criteria in guides, keys and reference materials to assist in the identification of fauna
Writing	<ul style="list-style-type: none"> Accurately record observations and identity of fauna in records and reference collections using clear language, organisational formatting and accurate spelling of zoological names

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCFAU302 Identify fauna in the field	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCFAU302 Identify fauna in the field

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has identified at least 20 fauna species in the field, which must include at least five species from three of the following groups:

- mammals
- birds
- reptiles/amphibians
- fish
- invertebrates.

There must also be evidence that the individual has:

- accessed a natural area in a manner suitable to observe fauna causing minimal disruption and damage to the environment
- identified and selected processes, ecology, equipment and resources for observation of specific fauna
- applied animal welfare practices when observing fauna
- recorded characteristics of fauna and investigated and recorded supplementary evidence
- used reference material to identify fauna according to their characteristics
- applied workplace health and safety policies and procedures for fauna observation activities
- recorded fauna observations and identification according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for identifying fauna, including:
 - identification techniques and resources
 - fauna behaviour

- fauna habitats
- tracks, scats and traces
- typical characteristics of fauna
- nomenclature and naming conventions for fauna, including:
 - vertebrates
 - invertebrates
- techniques for observing, identifying and recording fauna
- functions and operations of site equipment and tools
- reference materials used in identification process, including:
 - field guides
 - web sites and apps
 - fauna keys
 - digital images, pictures, graphics and other referenced collection to aid identification
- purposes for observing and monitoring fauna
- fauna and their ecological relationships with the location, including:
 - home range
 - breeding/nesting/shelter
 - access to food and water resources
 - movements – nomadic/migratory behaviours
- workplace health and safety procedures when conducting observations and collecting supplementary evidence
- procedures for reporting rare, uncommon or notifiable fauna
- animal welfare and environmental codes of practice relevant to the observation of fauna.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated where target fauna species inhabit or in an environment that accurately represents these conditions
- resources, equipment and materials:
 - fauna
 - tools and equipment required for fauna observations
 - reference materials
 - personal protective equipment required while conducting observations
- specifications:
 - workplace policies, procedures, processes and instructions
 - specifications for fauna recognition activity
 - legislation/codes of practice relevant to fauna and environment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCFAU303 Respond to wildlife emergencies

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to evaluate and coordinate a response to natural resource emergencies involving fauna.

The unit applies to individuals working within own area of responsibility in a response to a wildlife emergency. These individuals are required to take responsibility for their own work and take limited responsibility for other workers and possibly volunteers.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Fauna (FAU)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Evaluate wildlife emergency and implement interim care	1.1 Investigate nature of emergency from witness reports or inspections 1.2 Assess factors that impact on an appropriate response 1.3 Notify authorities of incident according to workplace procedures 1.4 Implement interim care of animals pending instructions from authorities

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Delegate appropriate staff to provide interim care for animals 1.6 Ensure personnel assisting in interim care are equipped and briefed 1.7 Implement care instructions provided by authorities or veterinarians 1.8 Collect information to determine further action 1.9 Interview informants to obtain details of the situation
2. Implement response to emergency	2.1 Establish communications necessary to manage emergency situation 2.2 Transport resources and personnel to site 2.3 Establish site procedures and implement emergency plans according to legislative requirements and workplace procedures 2.4 Move live fauna to safe location 2.5 Remove dead fauna from site and dispose of biological matter according to workplace health and safety and biosecurity procedures 2.6 Clean site according to workplace procedures to maintain public and environmental health and safety 2.7 Implement measures that minimise risk to significant places, area, habitats, species and communities
3. Coordinate response	3.1 Inform general public and media of the nature of the incident and agency decisions according to workplace communications procedures 3.2 Brief volunteers and staff on workplace health and safety hazards, preventive measures and reporting requirements 3.3 Coordinate and deploy volunteers according to their skills and available personal protective equipment 3.4 Establish physical barriers to keep public away from animals to minimise their distress and to protect the public 3.5 Manage media until authorities provide instructions 3.6 Use media according to workplace procedures
4. Care for affected animals	4.1 Assign teams to animals according to incident assessment, care instructions and skills within teams 4.2 Apply animal first aid 4.3 Perform role in wildlife operations team according to the command structure and procedures of the management plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.4 Care for animals using a range of skills and according to veterinary instructions and workplace procedures
5. Determine management options	5.1 Seek veterinary advice where appropriate 5.2 Collect biological and incident data on animals 5.3 Evaluate management options according to veterinary advice, condition of animal and risk assessment 5.4 Band or tag released animals where required for scientific purposes 5.5 Source equipment and staff for returning animal to wild or temporary captive management
6. Remove carcass	6.1 Develop inter-agency agreement with local authority for removal of carcasses 6.2 Source equipment and staff for disposal 6.3 Dispose of carcasses according to authority instructions and workplace biosecurity procedures
7. Complete debrief and report	7.1 Follow incident management processes for debrief and wash-up 7.2 Record recommendations for changes to procedures from debrief 7.3 Report recommended changes to procedures to supervisor according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret witness reports to extract information relevant to the wildlife emergency to assist in formulating a response
Writing	<ul style="list-style-type: none"> Accurately record and complete documentation using clear language and terminology when communicating with media and completing inter-agency and maintaining animal trapping records
Oral communication	<ul style="list-style-type: none"> Conduct interviews with informants and communicate with

Skill	Description
	volunteers using collaborative and inclusive techniques, including active listening and questioning and reading of verbal and non-verbal signals

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCFAU303 Respond to wildlife emergencies	AHCFAU301 Respond to wildlife emergencies	Minor change to Application, Elements 1 and 7, and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCFAU303 Respond to wildlife emergencies

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has:

- evaluated natural resource wildlife emergency
- implemented and coordinated response to emergency in accordance with workplace procedures and health and safety requirements
- followed workplace procedures to ensure the safety of the wildlife, personnel and the general public
- determined management options, including returning animal to wild or temporary captive management, according to authority and workplace policies and procedures
- followed instructions from veterinarians or authorities to care for animal
- removed and disposed of animal carcasses in accordance with authority instructions
- completed debrief and prepared reports to workplace standards
- applied workplace health and safety policies and procedures when implementing emergency plans
- applied appropriate animal welfare practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health risks associated with working near animals, including:
 - personal and public safety
 - handling animals
 - animal care
- public relations and media management for disseminating information on wildlife emergencies
- investigating wildlife emergencies, including:

- assessing and responding to eyewitness accounts
- conducting personal investigations and interviews
- options for managing wildlife emergencies, including:
 - interim captive care
 - permanent captive care
 - return to wild
- incident management systems and their application to wildlife emergencies, including:
 - communication strategies
 - resources and personnel required for effective response
 - methods for relocating living wildlife
 - collection, documentation and disposal of dead animals
 - briefing and coordination with personnel and volunteers
- animal care and first aid
- state/territory and local wildlife emergency authorities and organisations
- roles and responsibilities of veterinary support in wildlife rescue
- methods for banding and tagging of fauna
- potential environmental and biosecurity risks associated with wildlife rescue operations
- basic requirements for ensuring the welfare of animals described in the relevant codes of practice
- legislative and regulatory requirements governing wildlife emergencies and care.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - wildlife in an emergency situation
 - personal protective equipment
- specifications:
 - policies, procedures and processes for managing wildlife emergencies
 - access to legislation and codes of practice related to wildlife.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCFIR202 Assist with planned burning

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to assist with planned burning for agricultural or natural resource management purposes.

The unit applies to individuals who participate in lighting and undertaking planned burns under direct supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

Legislation and regulations apply to planned burns in many jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Fire (FIR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist with preparations for the burn	1.1 Prepare machinery and equipment required for burn 1.2 Check and prepare safety equipment and personal protective equipment 1.3 Interpret instructions for planned burn and contingencies 1.4 Identify assets and values requiring protection during burn

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Clarify personal role and activities during burn with supervisor 1.6 Discuss and clarify location and extent of burn
2. Support conduct of burn	2.1 Provide assistance with pre-burn checks 2.2 Use personal protective equipment throughout burn 2.3 Follow workplace health and safety policies and procedures and workplace operating procedures throughout burn 2.4 Identify and maintain safe escape routes according to instructions 2.5 Raise problems or concerns during the burn with supervisor 2.6 Maintain communication at all times 2.7 Observe changes in conditions at fire, and report effect on fire behaviour and development to burn supervisor 2.8 Observe and record weather 2.9 Use fire suppression techniques to extinguish fires according to workplace requirements
3. Participate in clean-up activities	3.1 Carry out cleaning-up activities according to instructions and workplace procedures 3.2 Clean and store personal protective equipment, machinery and equipment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret, consolidate and check completeness and accuracy of instructions for planned burns
Oral communication	<ul style="list-style-type: none"> Use concepts and terminology appropriate to the fire ground when communicating and reporting to supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCFIR202 Assist with planned burning	AHCFIR201 Assist with prescribed burning	Change to unit title and Application Minor changes to Performance Criteria for clarity Updated Foundation Skills	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC FIR202 Assist with planned burning

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least two occasions, the individual has assisted with a planned burn, and has:

- interpreted and complied with planned burn instructions
- prepared machinery and equipment to workplace requirements before burning
- monitored weather conditions throughout the burn
- used personal protective equipment during the planned burn, and checked, cleaned and stored on completion
- identified and maintained at least two safe escape routes throughout the burn
- maintained communication with supervisor and other staff at all times
- assisted with clean-up operations according to supervisor instructions to workplace standards
- applied workplace health and safety procedures throughout the burn.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the components of fire and its behaviour
- methods for extinguishing fires, including:
 - media
 - equipment
- methods of communication on the fire ground, including:
 - communication equipment
 - procedures
- controlled burning tactics and techniques
- identification of assets requiring protection during a burn, including:

- life and property
- critical infrastructure and community assets
- assets supporting livelihoods and economic production
- environmental and conservation assets
- community values
- hazards and risk management techniques during planned burns, including:
 - effect of topography
 - vegetation types
 - site-specific hazards
 - control lines
- operating procedures for planned burns, including contingency arrangements and emergency procedures
- purpose and use of personal protective equipment
- workplace health and safety policies and procedures relevant to planned burning
- key concepts of workplace health and safety and environmental legislative and workplace requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on an actual fire ground requiring a planned burn
- resources, equipment and materials:
 - fire suppression equipment suited to planned burns
 - use of personal protective measures relevant to working with fire
- specifications:
 - instructions, policies and procedures for conducting planned burns
- relationships:
 - team members
 - supervisor
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCFIR301 Undertake burning for fuel, ecological and cultural resource management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to undertake planned burning and lead on-ground burn operations for agriculture, conservation and land management purposes.

Planned burning is characterised by low risk, low intensity fire, with low potential impact on assets and values, within a defined objective and area with minimal variation in fuel and terrain.

The unit applies to individuals engaged in community and enterprise based organisations who work under broad direction and take responsibility for their own work, including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

Legislation and regulations apply to planned burns in many jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

AHCFIR202 Assist with planned burning

Unit Sector

Fire (FIR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Coordinate on-ground	1.1 Confirm conditions required to burn with supervisor/burn

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
preparations for planned burning	coordinator 1.2 Confirm contingency arrangements and communicate to all personnel 1.3 Confirm permits available and valid according to legislative requirements and workplace procedures 1.4 Issue planned burn advice and day-of-burn notifications to stakeholders 1.5 Identify, assemble and check resources required with burn team 1.6 Establish and check fire control measures are in place according to burn plan 1.7 Identify and implement controls to protect assets and values 1.8 Monitor weather conditions and notify supervisor when conditions are unfavourable for burn 1.9 Identify on-site health and safety hazards, assess risk and implement controls according to workplace procedures 1.10 Deliver burn day operational briefing to burn team
2. Undertake burn day operations	2.1 Coordinate the deployment of resources for burn 2.2 Select, check and provide equipment for personal protection and safety according to workplace standards 2.3 Undertake pre-burn checks in accordance with usual burn day operations 2.4 Utilise ignition techniques according to burn requirements and workplace procedures 2.5 Maintain communications with supervisor/burn coordinator and burn team throughout burn according to workplace procedures 2.6 Monitor burn progress and implement operational changes to ensure burn objectives are met 2.7 Conclude ignition according to burn requirements 2.8 Coordinate mopping-up activities 2.9 Implement patrol schedule to ensure post-burn security according to planned burn requirements 2.10 Keep records according to workplace and legislative requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
3. Conduct post-burn activities	3.1 Conduct a debrief of planned burn operations with burn team 3.2 Assess outcomes of planned burn 3.3 Report burn operations, outcomes and variations from planned burn conditions according to workplace procedures 3.4 Check cleaning-up activities are carried out according to workplace procedures 3.5 Confirm faulty equipment, tools and machinery are reported according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret maps, specifications and other instructions from supervisor and burn plan, and consolidate information to determine burn requirements
Writing	<ul style="list-style-type: none"> Accurately record information for planned burn activities using clear language, organisational formats and industry terminology
Oral communication	<ul style="list-style-type: none"> Communicate effectively to convey and clarify information from supervisor to work crew for planned burn activities Interact with team using radio or digital communication equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCFIR301 Undertake burning for fuel, ecological and cultural resource	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Code and title current version	Code and title previous version	Comments	Equivalence status
management			

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC FIR301 Undertake burning for fuel, ecological and cultural resource management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least two occasions, coordinated a burn team and implemented a burn according to conditions specified in burn plan.

There must also be evidence that the individual has:

- maintained communication with burn team, stakeholders and burn supervisor throughout the burn
- interpreted burn requirements, including identified conditions and ensured compliance with workplace, legislative and regulatory requirements
- identified and assembled resources with burn team
- coordinated burn-day logistics
- monitored weather conditions and notified supervisor of changed conditions for decision
- recorded weather conditions and burn activities according to workplace requirements
- coordinated on-ground burning activities
- coordinated mop-up and patrol activities
- cleaned, maintained, stored and reported faulty equipment and resources according to workplace procedures
- assessed and reported burn outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- burn planning and burn supervision processes
- planned burning legislation, regulation and process for applying for permits
- methods of weather forecasting, monitoring and recording
- fuel hazard assessments
- fuel conditions prior to ignition

- weather conditions prior to ignition
- topographical considerations
- go/no go decision making
- fire behaviour
- map types and use
- extinguishing media and equipment
- range of firefighting equipment and resources
- communication equipment and operating procedures
- tactics and techniques used for safe planned burning
- techniques for identification and protection of assets and values
- methods for monitoring planned burn operations
- principles and practice for mop-up and patrol
- fire ground hazards and standard techniques for managing risk
- operating procedures for planned burning relevant to the workplace
- contingency planning and emergency procedures
- workplace procedures for reporting on planned burns.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a fire ground during planned burning
- resources, equipment and materials:
 - fire control and mop-up tools and equipment
 - ignition devices
 - communications equipment
 - personal protective clothing and equipment
- specifications:
 - workplace policies, procedures and processes for planned burning
 - workplace instructions and planned burn requirements
 - maps and site plans
 - burn permit for site
- relationships:
 - burn team
 - supervisor/burn coordinator
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCFIR503 Plan and evaluate burning for fuel, ecological and cultural resource management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan burning in areas associated with fuel management. It requires the planner to identify the advantages and risks from burning and assess the implications on ecological and cultural assets. It includes developing monitoring programs, conducting post-burn assessments for a burn site, evaluation and reporting on burn outcomes and the implementation of monitoring programs to identify response of flora and fauna at a burn site.

The unit applies to individuals whose job roles include wildfire management for ecological and cultural assets at risk in target areas. Work is undertaken without supervision. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

Legislation and regulations apply to planned burns in many jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Fire (FIR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess a designated	1.1 Locate, assess and record accumulated fuel, cultural heritage and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
site/area for planned burning	environmental assets 1.2 Locate, assess and record reference areas, experimental plots, populations of flora and fauna that may be affected by fire 1.3 Assess and record potential impacts on natural and cultural heritage assets from planned burn preparation and burning activities 1.4 Assess potential risks and hazards 1.5 Identify the history of previous burns on site 1.6 Identify legislation, regulations and codes of practice relevant to planned burn preparation and activities 1.7 Assess the suitability of target site for fuel reduction burns 1.8 Identify alternative strategies where fuel reduction burns are not favourable 1.9 Determine resources and equipment required to implement the planned burn
2. Plan burn	2.1 Conduct site assessments to confirm selection of target sites for planned burning 2.2 Establish objectives for fuel reduction, ecological and cultural heritage protection 2.3 Select strategies and tactics suitable for the area and consistent with the planned burn objectives 2.4 Assess wildfire hazards and risks of selected strategies and tactics 2.5 Conduct consultation and ongoing liaison with stakeholders 2.6 Confirm planning addresses workplace health and safety, protection of life, property, assets and environment and complies with legislative requirements 2.7 Develop objectives and procedures for monitoring ecological response to burn 2.8 Confirm required resources and the optimum timing to reduce risk are included in burn planning process
3. Develop monitoring and evaluation program	3.1 Collate and record pre-burn site assessment of fire history and frequency for post-burn benchmarking 3.2 Assess, evaluate and record habitat conditions pre-burn for monitoring program 3.3 Assess, evaluate and record fuel hazard data and pre-burn

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	conditions for monitoring program 3.4 Establish and record baseline site conditions for ongoing monitoring 3.5 Document a program for post-burn site monitoring and evaluation
4. Conduct post-burn monitoring and evaluation	4.1 Conduct post-burn monitoring and evaluation of burn site 4.2 Assess outcomes of planned burn against established objectives for fuel management and protection of ecological and cultural heritage assets 4.3 Record post-burn monitoring and evaluation activities 4.4 Document and report monitoring and evaluation findings 4.5 Develop recommendations based on information from monitoring and evaluation activities according to legislation, regulations, codes of practice and workplace obligations

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Build and maintain an understanding of complex texts, including legislation, regulations and workplace policies and procedures for consideration during plan development
Writing	<ul style="list-style-type: none"> Prepare plans expressing ideas, exploring complex issues and constructing them in a logical, succinct and accurate way for fuel reduction burns Develop detailed reports on burn outcomes and their effectiveness or otherwise in meeting planned burn objectives
Oral communication	<ul style="list-style-type: none"> Establish and maintain complex and effective communication when liaising with a broad range of stakeholders and during consultations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCFIR503 Plan and evaluate burning for fuel, ecological and cultural resource management	AHCFIR502 Plan prescribed burning for fuel, ecological and cultural resource management	<p>Title change to reflect current industry practice</p> <p>Changes to Application and Performance Criteria to emphasise 'planned' burning</p> <p>Added new Element 3</p> <p>Edited Performance Criteria for clarity</p> <p>Added Foundation Skills</p> <p>Edited Performance Evidence and Knowledge Evidence</p> <p>Added to Assessment Conditions</p>	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC FIR503 Plan and evaluate burning for fuel, ecological and cultural resource management

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion:

- planned burning activities of a site according to organisational procedures and legislative requirements
- developed and implemented a program to facilitate post-burn monitoring and evaluation activities for the site
- conducted post-burn assessment of a given site to evaluate and report on burn outcomes, including recommendations for implementing monitoring programs to identify recovery of flora and fauna.

There must also be evidence the individual has:

- identified the history of previous burns on the site, including:
 - frequency
 - season
 - intensity
 - extent
- assessed the overall fuel hazard for a site and determined the risk, likelihood and consequences
- identified likely impact on flora and fauna
- identified ecological and cultural assets that could be affected by preparation and burning activities
- developed planned burn objectives, strategies and tactics, including:
 - maximising asset protection
 - minimising environmental impact
 - minimising impact on cultural and heritage assets
- consulted and liaised with key stakeholders in burn planning process
- researched, considered and applied outcomes of historical fires in target area

- applied workplace health and safety legislative requirements to planned burning
- reported burn outcomes according to workplace requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- wildfire hazard and risk management strategies
- basic wildfire behaviour:
 - fuel types and fuel hazard levels
 - sources of ignition
 - effects of climate change and impact of weather
 - fire movement and reaction to aspect and terrain
- planned burning strategies:
 - fuel reduction
 - ecological
 - cultural
- legislation relevant to wildfire hazard reduction, cultural heritage and protection of flora and fauna
- effects of fire intensity and behaviour on ecology, including:
 - vegetation and vegetation types
 - frequency and vegetation response
 - fauna and habitat
 - biodiversity
 - fuel accumulation
 - impact on soils and erosion
 - impact on streams and waterways
 - impact on natural vegetation and pest plants
- effects of fire on areas and places of cultural significance:
 - Indigenous culture
 - heritage sites
- resource requirements used to conduct planned burning activities
- risks in burning for fuel management
- pre-fire and post-fire monitoring, evaluation and recording techniques.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- skills must be demonstrated on a site requiring planned burning as part of a fire management plan
- access to a post-burn site to demonstrate monitoring and evaluation activities
- resources, equipment and materials:
 - computer and web-based resources
 - planning guides
 - digital tools and instruments
 - fire intensity and soil temperature information
- specifications:
 - wildfire hazard rating systems
 - vegetation classification systems
 - maps, aerial images and planning overlays
 - workplace policies and procedures for wildfire management
 - legislation, regulations and codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCFIR504 Manage wildfire hazard reduction programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to manage wildfire hazard reduction programs.

The unit applies to those whose job role includes managing wildfire hazard reduction programs through planning, advising and monitoring the performance of operational personnel undertaking fire prevention activities. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

Legislation and regulations apply to planned burns in many jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Fire (FIR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop wildfire prevention strategies	1.1 Conduct a potential wildfire hazard rating for a target site according to accepted industry rating systems 1.2 Conduct a potential risk assessment from wildfires for buildings, structures and cultural sites 1.3 Confirm wildfire hazard reduction strategies incorporates social,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>environmental and economic impacts</p> <p>1.4 Consult and gain support from stakeholders for proposed wildfire hazard reduction strategy</p> <p>1.5 Develop strategies for proposed wildfire hazard reduction according to workplace priorities, local fire agencies and legislative requirements</p> <p>1.6 Confirm strategies comply with workplace health and safety, public health and safety and animal welfare regulatory requirements and workplace guidelines</p>
2. Implement and monitor wildfire hazard reduction	<p>2.1 Determine equipment, chemicals and bio-agents required for hazard reduction activities</p> <p>2.2 Implement hazard reduction strategies as developed according to workplace plans, policies and procedures, local fire agency and legislative requirements</p> <p>2.3 Incorporate biosecurity and environmentally sustainable practices in hazard reduction plans</p> <p>2.4 Coordinate hazard reduction activities with relevant agencies and other land users</p> <p>2.5 Monitor progress of hazard reduction activities</p> <p>2.6 Review hazard reduction plans, strategies and operational procedures and process recommendations for change</p>
3. Process records	<p>3.1 Report recommended changes to plans and strategies</p> <p>3.2 Ensure records are maintained for quantities and type of chemicals or biological agents used for hazard reduction</p> <p>3.3 Ensure records are maintained for hazard reduction actions</p> <p>3.4 Process incident report</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Draw on a broad range of strategies to build and maintain for rating systems, legislations, regulations and workplace policies and procedures
Writing	<ul style="list-style-type: none"> Prepare documentation expressing ideas, exploring complex issues and construct logical, succinct and accurate strategies
Oral communication	<ul style="list-style-type: none"> Establish and maintain complex and effective communication for a broad range of stakeholders including agencies, private landholders and local community

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCFIR504 Manage wildfire hazard reduction programs	AHCFIR501 Manage wildfire hazard reduction programs	<p>Minor edits to Application and Performance Criteria for clarity</p> <p>Consolidated detail from Performance Criteria into Performance Evidence</p> <p>Consolidated Performance criteria 2.2 and 2.3 into one</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC FIR504 Manage wildfire hazard reduction programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that on at least one occasion the individual has developed and managed a wildfire hazard reduction program in accordance with workplace procedures, local fire agencies, workplace health and safety policies and legislative requirements.

There must also be evidence that the individual has:

- rated the site for wildfire hazards and risks for the following conditions:
 - environment
 - buildings and structures
 - cultural sites
 - fuel loads
 - climate and local weather
 - location
 - accessibility
 - ecology
- developed effective strategies for wildfire hazard reduction that comply with local fire agency and regulatory requirements
- planned wildfire hazard reduction programs that take into account:
 - location and local fire history
 - climate
 - fuel loads
 - accessibility to the site
- reviewed hazard reduction plans, strategies and operational procedures with other agencies
- maintained records for the following:
 - chemical agents used in hazard reduction
 - fire incidents

- activities employed
- date of activity
- location or site where activity occurred
- managed consultation with local community to ensure their support for program
- applied workplace health and safety policies and procedures in the planning and implementation of wildfire hazard reduction strategies
- applied biosecurity measures to wildfire hazard reduction planning
- incorporated sustainability practices in wildfire hazard reduction planning.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- wildfire prevention strategies and their effect on society, economy and the environment
 - mechanical clearing and removal
 - chemical control
 - fire and prescribed burns
- methods for assessing and rating wildfire hazards and risks
- factors affecting the rating of potential hazards and risks of wildfire, including:
 - local fire history
 - fuel loads
 - climate
 - location
 - accessibility
 - geophysical systems
 - ecology
 - environmentally sustainable practices
 - biosecurity
 - workplace and community priorities
 - workplace health and safety
 - local fire agency and legislative requirements
- contacting local emergency services and agencies for emergencies
- land tenure and responsibilities, including:
 - local authorities
 - other government agencies
 - private land
 - other land users
- hazards associated with wildfire prevention strategies
- fire behaviour in a rural/bush environment in known climatic conditions
- equipment applicable to wildfire hazard reduction, including:
 - safe use

- performance
- accessibility and approvals
- safety issues for the environment and public health
- records and recording systems required for hazard reduction activities, including:
- the types and use of chemicals and biological agents, their hazards and how they should be handled
- procedures and priorities for wildfire hazard reduction programs
- workplace health and safety, local fire agencies and legislative requirements that apply to prescribed burns.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - at a site requiring a wildfire hazard reduction program
- resources, equipment and materials:
 - digital technology and web based resources to assist with rating wildfire hazard and prepare management program
- specifications:
 - wildfire hazard rating systems
 - workplace policies and procedures for wildfire management
 - legislation, regulations and codes of practice for wildfire management
- relationships:
 - team to implement fire hazard reduction program.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCGRB01 Maintain roof gardens, vertical gardens and green facades

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to carry out maintenance work on green infrastructure.

The unit applies to individuals who carry out maintenance on roof gardens, vertical gardens and green facades.

This unit of competency is suitable for individuals using their own judgment to deal with predictable and unpredictable problems and to decide on solutions to a range of complex problems during the maintenance process.

Licensing, legislative or certification requirements may apply to this unit in some jurisdictions, depending on the location of work and/or plant and equipment used. Users are advised to check with the relevant regulatory authorities.

Pre-requisite Unit

Nil

Unit Sector

Green Infrastructure (GRI)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan maintenance of green infrastructure	1.1 Read maintenance plan and records, determine maintenance objectives and schedule appropriate work

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Identify workplace processes, practices and procedures applicable to maintenance work</p> <p>1.3 Check sensors and review data for anomalies, if applicable</p> <p>1.4 Identify hazards and implement controls following workplace safety and environmental requirements, including planning safe access to maintenance areas for persons, materials and equipment</p> <p>1.5 Determine job priorities and sequence job tasks in consultation with others on site</p> <p>1.6 Identify, calculate and order materials and products for the task</p>
2. Carry out maintenance of green infrastructure	<p>2.1 Select, fit and use personal protective equipment (PPE) appropriate for the task</p> <p>2.2 Select and check plant, equipment and tools for serviceability, and rectify and report faults</p> <p>2.3 Clear drainage areas and outlets, and inspect and report on roof or building surface penetrations or pooling water</p> <p>2.4 Prune or remove unwanted vegetation to encourage growth and minimise the risk of fire and other hazards</p> <p>2.5 Identify pests and diseases, and apply appropriate method of eliminating or controlling according to workplace and environmental requirements</p> <p>2.6 Evaluate condition of soil or growing media, top up and add ameliorants or additives, if required</p> <p>2.7 Test and adjust irrigation system, if required</p>
3. Record maintenance activities	<p>3.1 Record plant health, burrows and nests, pest infestation and droppings if applicable</p> <p>3.2 Record condition and volume of soil or growing media</p> <p>3.3 Record maintenance activity undertaken, schedule next required maintenance activity, and update maintenance plan</p>
4. Clean up	<p>4.1 Clear work area and dispose of, reuse or recycle materials according to workplace and environmental requirements</p> <p>4.2 Clean tools and equipment, check for serviceability, and report damage or faults</p> <p>4.3 Store and secure tools and equipment according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Interact and collaborate effectively with others, including using communication tools and devices
Reading	<ul style="list-style-type: none"> Interpret product information and manufacturer specifications Research and climate and weather conditions
Writing	<ul style="list-style-type: none"> Complete maintenance documentation accurately and legibly Record information using digital technologies

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCGRB01 Maintain roof gardens, vertical gardens and green facades	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCGR1301 Maintain roof gardens, vertical gardens and green facades

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has maintained, on at least three separate occasions for each, and over a period of time consistent with the maintenance schedule:

- one roof garden
- one vertical garden, and
- one green facade.

In completing the above, there must also be evidence that the individual has:

- conducted scheduled interval visual inspection of the infrastructure, systems and plants
- evaluated soil or growing media condition and adjusted as required
- disposed of vegetation and waste according to workplace and environmental requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- maintenance requirements of green infrastructure
- site analysis:
- climatic factors of wind, temperature, sunlight and rainfall
- irrigation
- drainage
- infrastructure decay or damage
- terminology of green infrastructure maintenance
- plant maintenance and cultural requirements of plants used for green infrastructure:
- feeding and watering
- weeding and trimming
- pest and diseases

- soil or growing media maintenance including ameliorants and additives
- features, benefits and characteristics of green infrastructure
- current and relevant work health and safety and environmental requirements relevant to green infrastructure maintenance work
- organisational policies and procedures relevant to green infrastructure maintenance work
- sensor devices and equipment, data collection and analysis
- functional and operational features of plant, equipment, hand and power tools, including certification requirements for operation, used for green infrastructure maintenance
- causes and controls of fire hazards in green infrastructure.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a green infrastructure workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools, equipment and materials appropriate for carrying out green infrastructure maintenance work
 - personal protective equipment
- specifications:
 - specific organisational policies, procedures and processes including work health and safety and environmental procedures relevant to maintenance work
 - green infrastructure maintenance schedule for a minimum of two months
- relationships:
 - clients or team members to discuss green infrastructure maintenance requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCGR1401 Construct roof gardens

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to construct designed roof gardens to comply with regulatory authorities' building regulations, standards and codes, and meet design plans and specifications.

The unit applies to individuals who build or install roof gardens on new or existing residential or commercial buildings in consultation with architects, engineers and other building and/or landscape and horticultural professionals.

This unit of competency is suitable for individuals dealing with predictable and unpredictable problems and deciding on solutions to a range of complex problems during the building or installation process through research, analysis and consultation.

Roof garden installation or construction must meet all regulatory requirements of national, state, territory and local government authorities and building regulations, standards and codes.

Licensing, legislative or certification requirements may apply to this unit in some jurisdictions depending on the location of the work and/or plant and equipment used. Users are advised to check with the relevant regulatory authorities.

Pre-requisite Unit

Nil

Unit Sector

Green Infrastructure (GRI)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare	<p>1.1 Interpret roof garden design plans and specifications, check permits and identify and resolve any discrepancies with designer and/or associated specialists if applicable</p> <p>1.2 Complete job safety and environmental analysis (JSEA) or Safe Work Method Statement (SWMS), identify potential hazards and apply control measures</p> <p>1.3 Determine job priorities, and sequence job tasks in consultation with others on site</p> <p>1.4 Calculate material and component quantities and check material availability with suppliers</p> <p>1.5 Schedule delivery and discuss site access and method of locating material onsite with appropriate persons</p> <p>1.6 Select plant, equipment and tools, check for serviceability and rectify and report any faults, and confirm required operator certifications, if applicable</p> <p>1.7 Select, correctly fit and use personal protective equipment (PPE)</p> <p>1.8 Check delivered materials and components for conformity, and report any discrepancies or damage to appropriate person</p>
2. Construct roof garden	<p>2.1 Establish finished heights, levels and falls from datum</p> <p>2.2 Confirm waterproofing installation to the specified area by specialist waterproofer using approved materials and methods has been inspected and certified</p> <p>2.3 Set out and install drainage system, and check for leaks</p> <p>2.4 Install soil profile, ensuring interface between profile layers is uniform and unbroken</p> <p>2.5 Consolidate each soil profile layer to reflect the final contour</p> <p>2.6 Set out and install irrigation system according to specifications</p> <p>2.7 Plant vegetation according to designer and/or supplier establishment information</p> <p>2.8 Anchor plants and/or roof garden components as required according to anchoring system design</p>
3. Complete roof garden construction	<p>3.1 Clear the work area by disposing of, reusing or recycling materials</p> <p>3.2 Clean tools and equipment and check for serviceability and report damage or defects to appropriate person</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.3 Store tools and equipment according to workplace and environmental requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access and extract information from plans, specifications and regulatory information
Oral communication	<ul style="list-style-type: none"> Use clear language and industry terminology to determine and confirm construction requirements with suppliers and designers Give and receive instructions to work effectively with others and ensure safe work practices Use correct industry terminology to report damaged or defective tools and equipment
Numeracy	<ul style="list-style-type: none"> Use measurements and formulas to calculate material quantities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCGR401 Construct roof gardens	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCGR1401 Construct roof gardens

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely constructed one roof garden with a minimum area of 4 square metres.

In completing the above, there must be evidence that the individual has:

- sequenced the building and installation process to efficiently and effectively complete the project with minimum disruption to residents and/or the community
- complied with design plans and specifications, relevant building codes and standards, and regulatory requirements
- installed systems and components to manufacturers' specifications and without damage.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- green infrastructure construction requirements for:
- maintaining integrity of waterproofing materials
- drainage systems
- irrigation systems
- storing and recycling water systems
- lighting and/or air flow systems
- anchoring plants and components
- site management and materials handling and storage
- components of roof garden construction
- risks associated with roof garden construction
- professional practice requirements in roof garden construction, including:
 - limitations and boundaries
 - roles and responsibilities of building professionals and authorities

- planting methods that comply with the growing requirements of individual plant species and cultivars
- initial establishment needs of plants used in roof gardens
- national, state, territory and local authority regulations, policies and procedures and permits relevant to roof garden construction
- national building regulations, standards and codes relevant to roof garden construction
- current and relevant work health and safety and environmental requirements relevant to roof garden construction
- plant, equipment, hand and power tools, and operator certification requirements for operation, for construction of roof garden.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a green infrastructure workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plant, equipment and power tools relevant for roof garden construction
 - personal protective equipment
- specifications:
 - specific organisational policies, procedures and processes including work health and safety and environmental documentation relevant to roof garden construction
 - building regulations, standards and codes
- relationships:
 - client or team members, designer or associated specialists to confirm construction requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, framework and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCGR1402 Construct vertical gardens and green facades

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to construct designed vertical gardens and green facades, to comply with regulatory authorities' building regulations, standards and codes, and meet design plans and specifications.

The unit applies to individuals who build or install vertical gardens and green facades on new or existing residential or commercial buildings in consultation with architects, engineers and other building and/or landscape and horticultural professionals.

This unit of competency is suitable for individuals dealing with predictable and unpredictable problems and deciding on solutions to a range of complex problems during the building or installation process through research, analysis and consultation.

Vertical garden and green facade installation or construction must meet all regulatory requirements of national, state, territory and local government authorities and building regulations, standards and codes.

Licensing, legislative or certification requirements may apply to this unit in some jurisdictions depending on the location of the work and/or plant and equipment used. Users are advised to check with the relevant regulatory authorities.

Pre-requisite Unit

Nil

Unit Sector

Green Infrastructure (GRI)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare	<p>1.1 Interpret vertical garden and green facade design plans and specifications, check permits and identify and resolve any discrepancies with designer and/or associated specialists if applicable</p> <p>1.2 Complete job safety and environmental analysis (JSEA) or Safe Work Method Statement (SWMS), identify potential hazards and apply control measures</p> <p>1.3 Determine job priorities, and sequence job tasks in consultation with others on site</p> <p>1.4 Calculate material and component quantities and check material availability with suppliers</p> <p>1.5 Schedule delivery and discuss site access and method of locating material onsite with appropriate persons</p> <p>1.6 Select plant, equipment and tools, check for serviceability and rectify and report any faults, and confirm required operator certifications, if applicable</p> <p>1.7 Select, correctly fit and use personal protective equipment (PPE)</p> <p>1.8 Check delivered materials and components for conformity, and report any discrepancies or damage to appropriate person</p>
2. Construct vertical garden	<p>2.1 Set out and mark position, levels and fixing points appropriate for the selected vertical garden configuration</p> <p>2.2 Confirm waterproofing installation to the specified area by specialist waterproofer using approved materials and methods has been inspected and certified</p> <p>2.3 Install irrigation and drip tray system, and check for leaks</p> <p>2.4 Install lighting and/or air flow equipment according to specifications</p> <p>2.5 Fix vertical garden panels according to manufacturers' specifications</p> <p>2.6 Install and finish growing media to specified levels</p> <p>2.7 Plant specified vegetation to meet design patterns according to designer and/or supplier establishment information</p>
3. Construct green facade	<p>3.1 Assemble and fix facade framework in compliance with building codes and standards, and without damage to existing structure</p> <p>3.2 Install garden bed or containers to design specifications</p> <p>3.3 Install, fix and test irrigation and drainage systems</p> <p>3.4 Select and install growing media to specified depth, consolidate</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	and finish height 3.5 Plant or install specified plants following designer and/or supplier establishment information
4. Complete vertical garden and green facade construction	4.1 Clear the work area by disposing of, reusing or recycling materials 4.2 Clean tools and equipment and check for serviceability and report damage or defects to appropriate person 4.3 Store tools and equipment according to workplace and environmental requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access and extract information from plans, specifications and regulatory information
Oral communication	<ul style="list-style-type: none"> Use clear language and industry terminology to determine and confirm construction requirements with suppliers and designers Give and receive instructions to work effectively with others and ensure safe work practices Use correct industry terminology to report damaged or defective tools and equipment
Numeracy	<ul style="list-style-type: none"> Use measurements and formulas to calculate material quantities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCGR402 Construct vertical gardens and green	Not applicable	The unit has been created to address an emerging skill or task required by	Newly created

facades		industry	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCGR1402 Construct vertical gardens and green facades

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely constructed:

- one vertical garden with a minimum of 4 square metres, and
- one green facade with a minimum of 4 square metres.

In completing the above, there must also be evidence that the individual has:

- sequenced the building and installation process to efficiently and effectively complete the project with minimum disruption to residents and/or the community
- complied with design plans and specifications, relevant building codes and standards, and regulatory requirements
- installed systems and components to manufacturers' specifications and without damage.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- green infrastructure construction requirements for:
- maintaining integrity of waterproofing materials
- drainage systems
- irrigation systems
- storing and recycling water systems
- lighting and/or air flow systems
- site management and materials handling and storage
- types of vertical garden construction:
 - hydroponic system
 - substrate based system
- techniques for fixing facade and vertical garden components

- components of vertical garden and green facade construction
- risks associated with construction of vertical gardens and green facades
- planting methods that comply with the growing requirements of individual plant species and cultivars
- initial establishment needs of plants used in vertical gardens and green facades
- professional practice requirements in construction of vertical gardens and green facades, including:
 - limitations and boundaries
 - roles and responsibilities of building professionals and authorities
- national, state, territory and local authority regulations, policies and procedures and permits relevant to vertical garden and green facade construction
- national building regulations, standards and codes relevant to vertical garden and green facade construction
- current and relevant work health and safety and environmental requirements relevant to vertical garden and green facade construction
- plant, equipment, hand and power tools, and operator certification requirements for operation, for construction of vertical garden and green facade.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a green infrastructure workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plant, equipment and power tools relevant for vertical garden and green facade construction
 - proprietary or custom vertical garden and green facade systems
 - personal protective equipment
- specifications:
 - specific organisational policies, procedures and processes including work health and safety and environmental documentation relevant to vertical garden and green facade construction
 - building regulations, standards and codes
- relationships:
 - client or team members, designer or associated specialists to confirm construction requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, framework and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCGR1501 Design roof gardens

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to design roof gardens in consultation with system/component suppliers, building and landscape design professionals and other landscape and horticultural specialists. It includes the selection of roof garden components based on structural limitations and opportunities, and the application of knowledge of the benefits and risks associated with roof gardens into designs that meet client requirements and comply with applicable building and relevant authorities' regulations and guidelines.

The unit applies to individuals with existing horticultural, landscaping, landscape design and/or construction experience, who research information about roof garden principles and guidelines and consult with green infrastructure and/or building and landscape design specialists to design roof gardens for existing and/or new buildings.

This unit of competency is suitable for individuals dealing with predictable and unpredictable problems and deciding on solutions to a range of complex problems during the design process through research, analysis and consultation.

Roof garden design must meet all requirements of national, state, territory and local government authorities and building regulations, standards and codes.

Licensing, legislative or certification requirements may apply to the work undertaken in this unit in some jurisdictions. Users are advised to check with the relevant regulatory authorities.

Pre-requisite Unit

Nil

Unit Sector

Green Infrastructure (GRI)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research roof garden design information	1.1 Establish purpose, functions, benefits and risks associated with roof gardens 1.2 Access and interpret building regulations, standards and codes, and relevant national, state, territory and local authority policies, procedures and permits to determine applicable restrictions or limitations relating to roof gardens 1.3 Identify environmental and energy efficiency impacts of green infrastructure design 1.4 Identify factors that will impact roof garden designs
2. Scope project requirements	2.1 Consult with client to clarify type, purpose, features and requirements of roof garden to inform design parameters 2.2 Identify project location and complete site analysis 2.3 Confirm structural requirements relating to roof gardens with architect, engineer and/or other relevant specialists 2.4 Establish constraints and/or opportunities for meeting client expectations and requirements, and clarify design scope with client
3. Design roof gardens	3.1 Acquire engineering plans to determine drainage outlets and weight limits 3.2 Design roof garden to utilise spatial availability, enable access and egress, and comply with building regulations, standards and codes 3.3 Consult growing media and/or horticulture specialist on selection of media and plants based on the location conditions and maintenance requirements 3.4 Document specifications for waterproofing, irrigation and drainage systems and/or lighting, including recommended suppliers 3.5 Calculate total weight of materials, components and water in consultation with suppliers, green infrastructure specialists and/or building professionals to ensure the total weight complies with parameters set by an engineer 3.6 Design plant and component anchoring system appropriate to project location and weather conditions in consultation with engineers and other building and/or landscape professionals 3.7 Prepare a design concept of proposed roof garden, confirm with specialists and/or building professionals, and present to client

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.8 Prepare design plans, specifications, maintenance program and estimated costs for roof garden, in consultation with qualified specialist if required

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Research and analyse researched information to select materials and components for roof gardens
Writing	<ul style="list-style-type: none"> Develop relevant documentation using digital technology
Oral communication	<ul style="list-style-type: none"> Determine stakeholder requirements through open-ended questioning, active listening and summarising
Numeracy	<ul style="list-style-type: none"> Apply decimals and percentages to estimate and calculate project costs Use measurements and formulas to calculate length, area, volume and weight Interpret data and numerical data displayed in graphs, charts and/or tables

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCGR1501 Design roof gardens	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCGR1501 Design roof gardens

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has designed one compliant roof garden project with a minimum of 4 square metres and has:

- met design brief and project parameters
- consulted with green infrastructure specialists, building and/or landscape professionals
- complied with relevant regulatory authorities' policies and procedures, building regulations, standards and codes
- complied with the project design parameters set by an engineer or specialist
- used measurements and formulas to calculate material quantities, weights and estimated project costs
- incorporated provision of access and egress for construction and maintenance
- developed and documented a maintenance program to ensure sustainability of the green infrastructure.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- professional practice requirements in roof garden design, including:
 - limitations and boundaries
 - roles and responsibilities of building professionals and authorities
- factors influencing roof garden design for existing and new buildings
- relevant legislation, standards and codes, including the National Construction Code (NCC)
- roof garden recirculating and non-recirculating/flood-drain systems
- site analysis, including:
 - climatic factors of wind, temperature, sunlight, rainfall and irrigation
 - drainage

- site access for construction and installation and ongoing maintenance
- reasons for creating roof gardens, including:
 - environmental
 - economic
 - social
- features, benefits and risks of roof gardens
- characteristics, properties and limitations of materials used for roof gardens, including:
 - water-proofing material
 - substrate
 - root barrier
 - drainage and irrigation systems
 - storing and recycling water systems
 - lighting systems
- characteristics, properties and limitations of plants used for roof gardens
- properties of types of green roofs, including:
 - extensive
 - intensive
- project cost estimating, including:
 - materials and labour
 - build costs, including transporting and storing materials and equipment, and provision of safety and equipment
 - ongoing maintenance.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a design workplace or an environment that accurately represents workplace conditions
- specifications:
 - building regulations, standards and codes relevant to roof garden design
- relationships:
 - clients to discuss roof garden design requirements
 - building and/or landscape/horticultural professionals to consult with on building roof garden and regulatory requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCGR1502 Design vertical gardens and green facades

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to design vertical gardens and green facades, in consultation with system/component suppliers, building and green infrastructure design professionals and other horticultural specialists. It includes incorporating the principles, benefits and risks associated with vertical gardens and green facades into designs that meet client requirements and comply with applicable building and relevant authorities' regulations and guidelines.

The unit applies to individuals with existing horticultural, landscaping, landscape design and/or construction experience, who consult with green infrastructure and/or building and design specialists to apply knowledge and researched information to designing vertical gardens and green facades for existing and/or new buildings.

This unit of competency is suitable for individuals dealing with predictable and unpredictable problems and deciding on solutions to a range of complex problems during the design process through research, analysis and consultation.

Vertical garden and green facade design must meet all requirements of national, state, territory and local government authorities and construction regulations, standards and codes.

Licensing, legislative or certification requirements may apply to the work undertaken in this unit in some jurisdictions. Users are advised to check with the relevant regulatory authorities.

Pre-requisite Unit

Nil

Unit Sector

Green Infrastructure (GRI)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research green infrastructure design information	<p>1.1 Establish purpose, functions, benefits and risks associated with vertical gardens and green facades</p> <p>1.2 Access and interpret building regulations, standards and codes, and relevant national, state, territory and local authority policies, procedures and permits to determine applicable restrictions or limitations relating to vertical gardens and green facades</p> <p>1.3 Identify environmental and energy efficiency impacts of green infrastructure design</p> <p>1.4 Identify factors that will impact vertical garden and green facade designs</p>
2. Scope project requirements	<p>2.1 Consult with client to clarify type, purpose and preference of vertical garden and/or green facade design features and requirements</p> <p>2.2 Identify project location and complete site analysis</p> <p>2.3 Confirm structural principles relating to vertical garden and green facade with architect, engineer and/or other relevant specialists</p>
3. Design vertical garden	<p>3.1 Acquire construction plans to identify type of vertical garden best suited for building type and required outcomes</p> <p>3.2 Determine location, aspect and dimensions of vertical garden</p> <p>3.3 Consult growing media and/or horticulture specialist to determine media characteristics and functionality, and select plants based on location conditions and maintenance requirements</p> <p>3.4 Document specifications for waterproofing, irrigation and drainage systems and/or lighting, including recommended suppliers</p> <p>3.5 Calculate total weight of vertical garden materials and fixing fastening system in consultation with suppliers, green infrastructure and/or building professionals to ensure total weight complies with parameters set by engineer</p> <p>3.6 Prepare design concept of proposed vertical garden, confirm with specialists and/or building professionals, and present to client</p> <p>3.7 Prepare design plans, specifications, maintenance plan and estimated costs for vertical garden, in consultation with a qualified specialist, if required</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Design green facade	<p>4.1 Identify and select suitable types of plants, and determine dimensions of growing media for installed container or garden bed planting</p> <p>4.2 Confirm integrity and suitability of support structure with engineer or specialist</p> <p>4.3 Specify fixing requirements that comply with building codes and standards</p> <p>4.4 Design facade, considering wind and climate conditions, irrigation and drainage requirements and factors relating to ongoing maintenance</p> <p>4.5 Prepare design concept of proposed green facade, confirm with specialists and/or building professionals, and present to client</p> <p>4.6 Prepare design plans, specifications, maintenance program and estimated costs for green facade, in consultation with a qualified specialist if required</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Research and analyse researched information to select materials and components for green infrastructure
Writing	<ul style="list-style-type: none"> Develop relevant documentation using digital technology
Oral communication	<ul style="list-style-type: none"> Determine stakeholder requirements through open-ended questioning, active listening and summarising
Numeracy	<ul style="list-style-type: none"> Apply decimals and percentages to estimate and calculate project costs Use measurements and formulas to calculate length, area, volume and weight Interpret data and numerical data displayed in graphs, charts and/or tables

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCGR1502 Design vertical gardens and green facades	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCGR1502 Design vertical gardens and green facades

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has designed one vertical garden with a minimum of 4 square metres, and one green facade with a minimum of 4 square metres, and has:

- met design brief and project parameters
- consulted with green infrastructure specialists, building and/or landscape professionals
- complied with relevant regulatory authorities' policies and procedures, building regulations, standards and codes
- complied with the project design parameters set by an engineer or specialist
- used measurements and formulas to calculate material quantities, weights and estimated project costs
- incorporated provision of access and egress for construction and maintenance
- developed and documented a maintenance program to ensure sustainability of the green infrastructure.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- professional practice requirements in green infrastructure design, including:
 - limitations and boundaries
 - roles and responsibilities of building professionals and authorities
- factors influencing vertical gardens and green facade design for existing and new buildings
- relevant legislation, standards and codes, including the National Construction Code (NCC)
- recirculating and non-recirculating/flood-drain vertical garden systems
- site analysis, including:

- climatic factors of wind, temperature, sunlight, rainfall and irrigation
- drainage
- site access for construction and installation and ongoing maintenance
- reasons for creating vertical gardens and green facades, including:
 - environmental
 - economic
 - social
- features, benefits and risks of vertical gardens and green facades
- characteristics, properties and limitations of materials used for vertical gardens and green facades, including:
 - water-proofing material
 - substrate
 - green facade root barrier
 - drainage and irrigation systems
 - storing and recycling water systems
 - lighting systems
- characteristics, properties and limitations of plants used for vertical gardens and green facades
- types of vertical garden and green facade construction, including:
 - panel system
 - modular system
- properties of vertical gardens and green facades
- project cost estimating, including:
 - materials and labour
 - build costs, including transporting and storing materials and equipment, and provision of safety equipment
 - ongoing maintenance.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a design workplace or an environment that accurately represents workplace conditions
- specifications:
 - manufacturer's fixing and fastening specifications for vertical garden and green facade systems
 - building regulations, standards and codes relevant to green infrastructure design
- relationships:
 - clients to discuss vertical garden and green facade design requirements

- building and/or landscape/horticultural professionals to consult with on construction/installation of vertical gardens and green facades and regulatory requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCHYD401 Establish and monitor hydroponic crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to establish hydroponic crop nutrient requirements, supervise crop planting activities and monitor nutrient concentrations of hydroponic crops.

The unit applies to individuals who apply specialised skills and knowledge in the establishment and monitoring of hydroponic crops and have the responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Hydroponics (HYD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish hydroponic crop nutrient requirements	1.1 Determine nutrient solution technique according to crop type and workplace procedures 1.2 Determine growing substrate according to crop type and workplace procedures 1.3 Identify nutrient solution according to crop type and workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	procedures 1.4 Document nutrient solution technique, growing substrate and nutrient solution according to workplace procedures
2. Supervise crop planting activities	2.1 Brief planting staff on crop planting requirements 2.2 Monitor staff activities against planting requirements 2.3 Conduct plant health and quality inspection according to industry standards 2.4 Identify a suitable irrigation strategy according to industry standards 2.5 Check adherence to health and safety in the workplace, environmental and biosecurity practices according to workplace procedures 2.6 Document and record planting activities
3. Monitor nutrient concentrations	3.1 Test nutrient solutions using standard industry testing methods 3.2 Analyse nutrient solution test results for plant health purposes 3.3 Adjust nutrient solution to achieve required concentration 3.4 Document solution adjustments according to industry specifications

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations and products
Oral Communication	<ul style="list-style-type: none"> Initiate discussions with staff, using clear language to communicate planting requirements, health and safety, and environmental practices
Numeracy	<ul style="list-style-type: none"> Measure and calculate nutrient solution

Skill	Description
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility Check self and others adherence to workplace requirements including safety requirements
Get the work done	<ul style="list-style-type: none"> Take responsibility for routine decisions about establishing and monitoring hydroponic crops and reflect on outcomes to identify effectiveness of decisions
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information within work team

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCHYD401 Establish and monitor hydroponic crops	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCHYD401 Establish and monitor hydroponic crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has established and monitored hydroponic crops on at least one occasion and has:

- documented hydroponic crop establishment and monitoring activities
- conducted plant health and quality inspection
- identified suitable irrigation strategy
- minimised environmental impacts associated with establishing and monitoring hydroponic crops
- followed industry and workplace biosecurity procedures
- applied workplace health and safety requirements
- tested and analysed nutrient solution
- measured and calculated nutrient solution.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hydroponic crop nutrient solution techniques, including:
 - aeroponics
 - continuous-flow solution culture or nutrient film technique
 - deep water culture
 - drop irrigation
 - ebb and flow
 - fogponics
 - passive sub-irrigation
 - rotary

- run to waste
- static solution culture
- top-fed deep water culture
- types of hydroponic growing substrates, including:
 - clay aggregate
 - coconut coir
 - perlite
 - rockwool
 - vermiculite
- types of hydroponic nutrient solutions, including:
 - inorganic
 - organic
- plant health and quality inspection techniques
- irrigation strategies applicable to hydroponic crops
- workplace requirements applicable to health and safety in the workplace for establishing and monitoring hydroponic crops
- environmental impacts associated with establishing and monitoring hydroponic crops
- industry and workplace biosecurity procedures
- nutrient solution testing and analysis procedures and equipment, including:
 - colorimeters
 - electrical conductivity meters
 - litmus paper
 - ph indicator strips
 - ph meters
- nutrient solution measuring and calculation procedures, tools and equipment, including:
 - graduated cylinders
 - measuring spoons.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - hydroponic crop establishment and monitoring tools, equipment and materials
 - nutrient solution measuring, calculation, testing and analysing tools, equipment and procedures
 - personal protective equipment applicable to establishing and monitoring hydroponic crops
- specifications:

- workplace requirements applicable to health and safety in the workplace and establishing and monitoring hydroponic crops
- industry and workplace biosecurity procedures applicable to establishing and monitoring hydroponic crops
- relationships:
 - team members
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG102 Support irrigation work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge to undertake routine irrigation work under direct supervision and to support the irrigation work of others.

The unit applies to individuals who support routine irrigation work while working alongside a supervisor, exercising limited autonomy within established and well-known parameters. They identify and seek help with simple problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare materials, tools and equipment for irrigation work	1.1 Identify the required materials, tools and equipment according to lists provided and supervisor instructions 1.2 Select and check materials, tools and equipment required to carry out routine irrigation work 1.3 Select, fit and use personal protective equipment (PPE) applicable to job requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Demonstrate correct manual handling techniques when loading and unloading materials</p> <p>1.5 Report faulty or unsafe tools, equipment or PPE to supervisor</p> <p>1.6 Provide irrigation support according to work health and safety requirements and supervisor instruction</p> <p>1.7 Identify and report workplace hazards to supervisor</p>
2. Undertake irrigation work as directed	<p>2.1 Follow instructions and directions provided by supervisor, and seek clarification when necessary</p> <p>2.2 Undertake irrigation work in a safe and environmentally appropriate manner</p> <p>2.3 Interact with other staff and customers in a positive manner</p> <p>2.4 Follow enterprise policy and procedures in relation to workplace practices, handling and disposal of materials</p> <p>2.5 Report problems or difficulties in completing work to required standards or timelines to supervisor</p>
3. Handle materials and equipment	<p>3.1 Store waste material and debris produced during irrigation work in a designated area according to supervisor instructions</p> <p>3.2 Handle and transport materials, equipment and machinery according to supervisor instructions</p> <p>3.3 Maintain a clean and safe work site while undertaking irrigation activities</p>
4. Clean up on completion of irrigation work	<p>4.1 Clean, maintain and store tools according to supervisor instructions</p> <p>4.2 Return materials to store or dispose of according to supervisor instructions</p> <p>4.3 Make good the site according to supervisor instructions</p> <p>4.4 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, wear or damage to tools Participate in verbal exchanges to respond to questions and clarify information
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG102 Support irrigation work	AHCIRG101 Support irrigation work	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG102 Support irrigation work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has supported irrigation work on at least two occasions, and has:

- prepared materials, tools and equipment for irrigation work
- applied safe work practices
- undertaken irrigation work as directed
- cleaned up on completion of work.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for supporting irrigation work
- preparing for irrigation work and cleaning up on project completion
- irrigation tools and equipment
- safe work practices used in irrigation work
- basic construction techniques used in irrigation work
- repair and maintenance of irrigation fittings.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to assisting supporting irrigation work
 - irrigation maintenance tools and equipment

- personal protective equipment applicable to supporting irrigation work
- relationships:
 - supervisor, staff and customers
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG215 Assist with low volume irrigation operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency covers the skills and knowledge required to assist with installing, operating and maintaining low volume irrigation systems. These systems use emitters such as drippers and generally use poly pipe.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for work	1.1 Confirm work instructions with supervisor 1.2 Select appropriate materials, tools, equipment and machinery 1.3 Select personal protective equipment and clothing and ensure correct fit

Element	Performance criteria
	1.4 Identify manual handling and other workplace health and safety hazards 1.5 Identify the site for installation of the irrigation system
2. Install irrigation components	2.1 Prepare the site for installation works 2.2 Assemble and connect system components and test joints 2.3 Connect system to water supply 2.4 Flush and commission system 2.5 Identify and report operating and take corrective actions as directed 2.6 Maintain a clean and safe work area
3. Complete installation work	3.1 Remove waste material from the site and dispose of 3.2 Clean, maintain and store tools, equipment and machinery 3.3 Flush and commission system
4. Carry out start up and shutdown procedures as directed	4.1 Follow start-up sequence 4.2 Shut down system components in sequence 4.3 Drain system 4.4 Record irrigation activity
5. Assist with system maintenance	5.1 Check emitters for serviceability and output 5.2 Maintain delivery components 5.3 Check water supply and pumping system periodically, where required 5.4 Keep maintenance records up to date

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - no equivalent.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG215 Assist with low volume irrigation operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assemble and join irrigation system components
- carry out basic maintenance tasks
- carry out low volume irrigation operating tasks
- complete installation work
- fix identified faults
- follow directions to operate pumps, filters and valves
- install irrigation components
- look for leaks and faulty emitters
- prepare materials, tools and equipment
- recognise and report faults
- undertake site preparation tasks as directed

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practice of low volume irrigation operation
- characteristics and operation of joints, valves and emitter components
- components in low volume irrigation systems
- emitter spacing, coverage and pressure
- indicators of over and under watering
- installation techniques and procedures
- irrigation controllers
- irrigation pipes, types and sizes

- irrigation times to deliver sufficient volume without over watering
- methods and techniques of low volume irrigation installation
- operation of low volume irrigation system
- set out procedures
- system malfunctions and their likely causes
- use of recycled water and colour coding of pipes
- water requirements of relevant plants

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG217 Assist with pressurised irrigation operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency covers the skills and knowledge required to assist installing, operating and maintaining pressurised irrigation systems. These systems use sprinklers and generally use glued PVC pipe.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for work	1.1 Confirm work instructions with supervisor 1.2 Select appropriate materials, tools, equipment and machinery 1.3 Select personal protective equipment and clothing and ensure correct fit

Element	Performance criteria
	1.4 Identify manual handling and other work health and safety hazards 1.5 Identify the site for installation of the irrigation system
2. Install irrigation components	2.1 Prepare the site for installation works 2.2 Lay irrigation components out 2.3 Dig or tidy trenches where required 2.4 Add or insert system components 2.5 Position and secure lines 2.6 Assist with fitting pumps and valves
3. Complete installation activities	3.1 Check the irrigation system for leaks or blockages 3.2 Identify and report problems and anomalies 3.3 Clean and store equipment, tools and materials 3.4 Collect waste and dispose of or recycle 3.5 Record workplace information in the appropriate format
4. Carry out start up and shutdown procedures as directed	4.1 Follow start-up sequence 4.2 Shut down system components in sequence 4.3 Drain system 4.4 Record irrigation activity
5. Assist with system maintenance	5.1 Check sprinklers for serviceability and output 5.2 Maintain delivery components 5.3 Check water supply and pumping system periodically, where required 5.4 Keep maintenance records up to date

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - no equivalent.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG217 Assist with pressurised irrigation operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assemble and join irrigation system components
- carry out basic maintenance tasks
- carry out irrigation operating tasks
- complete installation work
- fix identified faults
- follow directions to operate pumps, filters and valves
- look for leaks and faulty sprinklers
- prepare materials, tools and equipment
- recognise and report faults
- undertake site preparation tasks as directed

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of pressurised irrigation systems
- characteristics and operation of replaceable components of sprinkler irrigation systems
- environmental impacts of irrigation from ground or underground source
- installation techniques and procedures
- irrigation controllers
- irrigation pipes, types and sizes
- irrigation times to deliver sufficient volume without over watering
- operation of pressurised irrigation system
- set out procedures

- signs of stress in plants as well as the signs of over and under watering
- sprinkler irrigation components and their function
- sprinkler spacing, coverage and pressure
- system malfunctions and their likely causes
- types of sprinklers

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG219 Assist with low volume irrigation operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to assist with installing, operating and maintaining low volume irrigation systems. These systems use emitters such as drippers and generally use poly pipe.

The unit applies to individuals who assist with low volume irrigation operations under general supervision with limited autonomy and accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to minimise risks to self and others 1.2 Select appropriate materials, tools, equipment and machinery 1.3 Select, fit and use personal protective equipment and clothing applicable to the task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify the site for installation of the irrigation system
2. Assist with installing irrigation components	2.1 Prepare the site for installation works 2.2 Assemble and connect system components and test joints as directed 2.3 Assist with connecting system to water supply 2.4 Identify and report incorrect operation and take corrective actions as directed 2.5 Maintain a clean and safe work area during installation
3. Complete installation work	3.1 Remove and dispose of waste material according to workplace procedures 3.2 Clean, maintain and store tools, equipment and machinery 3.3 Assist with flushing system according to workplace procedures
4. Carry out start up and shutdown procedures as directed	4.1 Follow start-up sequence according to workplace procedures 4.2 Shut down system components in sequence as directed 4.3 Drain system as directed 4.4 Record irrigation activity according to workplace procedures
5. Assist with system maintenance	5.1 Check emitters for serviceability and output 5.2 Maintain delivery components according to workplace procedures 5.3 Check water supply and pumping system periodically, where required 5.4 Keep maintenance records up to date

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm work activity and report irrigation system incorrect operation
Numeracy skills	<ul style="list-style-type: none"> Identify irrigation system component part numbers
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG219 Assist with low volume irrigation operations	AHCIRG215 Assist with low volume irrigation operations	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG219 Assist with low volume irrigation operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has assisted with at least one low volume irrigation operation on at least one occasion and has:

- applied workplace health and safety requirements
- selected, cleaned and maintained materials, tools, equipment and machinery appropriate to the scope of works
- prepared materials, tools and equipment
- undertaken site preparation tasks as directed
- assembled and joined irrigation system components
- installed irrigation components
- fixed identified faults
- recognised and reported irrigation component incorrect operation
- completed installation work
- carried out low volume irrigation operating tasks
- followed directions to operate pumps, filters and valves
- carried out basic maintenance tasks
- looked for leaks and faulty emitters.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for assisting with low volume irrigation operations
- characteristics and operation of joints, valves and emitter components
- components in low volume irrigation systems
- irrigation controllers
- irrigation pipes, types and sizes

- system malfunctions and their likely causes
- installation techniques and procedures
- methods and techniques of low volume irrigation installation
- operation of low volume irrigation system
- principles and practice of low volume irrigation operation
- emitter spacing, coverage and pressure
- indicators of over and under watering.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - low volume irrigation system maintenance tools and equipment
 - personal protective equipment applicable to assisting with low volume irrigation operations
- specifications:
 - workplace requirements applicable to health and safety in the workplace and assisting with low volume irrigation operations
 - work instructions and workplace procedures applicable to assisting with low volume irrigation operations
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG220 Assist with surface irrigation operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to assist with installing, operating and maintaining surface irrigation systems.

The unit applies to individuals who assist with surface irrigation operations under general supervision with limited autonomy and accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for work	<p>1.1 Read work instructions and confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to minimise risks to self and others</p> <p>1.2 Select appropriate tools and equipment for the task</p> <p>1.3 Select, fit and use personal protective equipment and clothing applicable to the task</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify site for installation of the irrigation system
2. Set up field for surface irrigation systems as directed	2.1 Check irrigation gates, channels and ditch-ends 2.2 Check pumps, bores and other water delivery mechanisms for correct irrigation set up 2.3 Position and secure tarpaulins or other water control devices as directed
3. Carry out routine maintenance activities on irrigation delivery systems as directed	3.1 Assist with mechanical equipment servicing according to supervisor instructions 3.2 Flush and clean supply and distribution system as directed 3.3 Maintain system inlets, outlets, structures and fittings 3.4 Check system is running smoothly and is free of damage, leaks and blockages in channels, drains and outlets 3.5 Clean irrigation system and ensure there is no disruption to the system
4. Undertake surface irrigation work as directed	4.1 Open and shut gates and valves 4.2 Ensure required head and water levels in head ditch are achieved and maintained to ensure sufficient water flow and availability to crops 4.3 Start or open the required number of siphons 4.4 Monitor progress of water flow in furrows 4.5 Lift siphons where irrigation is complete 4.6 Carry out irrigation change and mark 4.7 Use mechanical equipment to build and repair banks and for weed removal 4.8 Move irrigation equipment according to supervisor instructions
5. Record and report maintenance activities	5.1 Record damage and blockage caused by weeds by damage type, location and the section of the system affected 5.2 Record and report damaged or faulty pumps, valves, electrical components and computer systems 5.3 Record and report routine maintenance activities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm work activity and report irrigation system damage, faulty equipment, blockages and routine maintenance activity
Numeracy skills	<ul style="list-style-type: none"> Identify irrigation system component part numbers
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG220 Assist with surface irrigation operations	AHCIRG216 Assist with surface irrigation operations	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG220 Assist with surface irrigation operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has assisted with surface irrigation operations on at least one occasion and has:

- applied workplace health and safety requirements
- selected tools and equipment appropriate to the scope of works
- carried out surface irrigation operating tasks as directed
- checked siphons for even water flow
- looked for uneven water distribution or drainage
- opened and closed check valves
- monitored required head and water levels in head ditch
- started and lifted siphons
- used mechanical equipment to build and repair banks and for weed removal
- recorded and reported maintenance activities and faults.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for assisting with surface irrigation operations
- principles and practices of surface irrigation
- channels, furrows, borders, fittings and outlets
- system cleaning procedures
- identification, characteristics and operation of surface irrigation structures and components
- damage and problems that occur with gravity-fed irrigation systems
- weed types encountered in gravity fed irrigation systems and their removal
- system malfunctions and their likely causes.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - surface irrigation system maintenance tools and equipment
 - personal protective equipment applicable to assisting with surface irrigation operations
- specifications:
 - workplace requirements applicable to health and safety in the workplace and assisting with surface irrigation operations
 - work instructions and workplace procedures applicable to assisting with surface irrigation operations
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG221 Assist with pressurised irrigation operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to assist with installing, operating and maintaining pressurised irrigation systems. These systems use sprinklers and generally use glued PVC pipe.

The unit applies to individuals who assist with pressurised irrigation operations under general supervision with limited autonomy and accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	<p>1.1 Read work instructions and confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to minimise risks to self and others</p> <p>1.2 Select appropriate materials, tools, equipment and machinery for the task</p> <p>1.3 Select, fit and use personal protective equipment and clothing</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	applicable to the task 1.4 Identify the site for installation of the irrigation system
2. Assist with installing irrigation components	2.1 Prepare the site for installation works 2.2 Lay out irrigation components as directed 2.3 Dig or tidy trenches where required 2.4 Add or insert system components as directed 2.5 Position and secure lines as directed 2.6 Assist with fitting pumps and valves
3. Complete installation activities	3.1 Check the irrigation system for leaks or blockages 3.2 Identify and report problems and anomalies 3.3 Clean, maintain and store tools, equipment and machinery 3.4 Collect waste and dispose of or recycle 3.5 Record workplace information in the appropriate format
4. Assist with start up and shutdown procedures	4.1 Follow start-up sequence as directed 4.2 Shut down system components in sequence as directed 4.3 Drain system as directed 4.4 Record irrigation activity in the appropriate format
5. Assist with system maintenance	5.1 Check sprinklers for serviceability and output 5.2 Maintain delivery components as directed 5.3 Check water supply and pumping system periodically, where required 5.4 Keep maintenance records up to date

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Use correct terminology to record irrigation system installation, activity and maintenance
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm work activity and report irrigation system incorrect operation
Numeracy skills	<ul style="list-style-type: none"> Identify irrigation system component part numbers
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG221 Assist with pressurised irrigation operations	AHCIRG217 Assist with pressurised irrigation operations	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG221 Assist with pressurised irrigation operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has assisted with pressurised irrigation operations on at least one occasion and has:

- applied workplace health and safety requirements
- selected and prepared materials, tools, equipment and machinery appropriate to the scope of works
- undertaken site preparation tasks as directed
- assembled and joined irrigation system components
- completed installation work
- looked for leaks and faulty sprinklers
- recognised, recorded and reported maintenance activities and faults
- followed directions to operate pumps, filters and valves
- carried out basic maintenance tasks
- fixed identified faults.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for assisting with pressurised irrigation operations
- principles and practices of pressurised irrigation systems
- irrigation controllers
- irrigation pipes, types and sizes
- sprinkler irrigation components and their function
- set out procedures
- installation techniques and procedures
- operation of pressurised irrigation system

- sprinkler spacing, coverage and pressure
- system malfunctions and their likely causes
- types of sprinklers.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - pressurised irrigation system maintenance tools and equipment
 - personal protective equipment applicable to assisting with pressurised irrigation operations
- specifications:
 - workplace requirements applicable to health and safety in the workplace and assisting with pressurised irrigation operations
 - work instructions and workplace procedures applicable to assisting with pressurised irrigation operations
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG222 Assist with pump and flow control device operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to assist with the installation and maintenance of pumps and flow control devices for irrigation.

The unit applies to individuals who assist with pump and flow control device operations under general supervision with limited autonomy and accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for work on pumping and flow control systems	1.1 Read work instructions and confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to minimise risks to self and others 1.2 Select appropriate tools and equipment for the task 1.3 Select, fit and use personal protective equipment and clothing applicable to the task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Assist with installation and maintenance tasks for pumps and flow control devices	2.1 Carry out installation tasks as directed for pumps and flow control devices 2.2 Carry out routine inspections of flow control and metering facilities in irrigation systems as directed 2.3 Carry out preventative maintenance and service of equipment and facilities as directed
3. Review, record and report activities	3.1 Clean, maintain and store tools, equipment and materials 3.2 Restore work site to meet environmental and workplace requirements 3.3 Record and report installation and maintenance activities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Use correct terminology to record pump and flow control device installation and maintenance
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm work activity and report pump and flow control device installation and maintenance
Numeracy skills	<ul style="list-style-type: none"> Identify pump and flow control device component part numbers
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG222 Assist with pump and flow control device operations	AHCIRG218 Assist with pump and flow control device operations	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG222 Assist with pump and flow control device operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has assisted with pump and flow control device operations on at least one occasion and has:

- applied workplace health and safety requirements
- interpreted plans, charts and instructions
- selected and organised required tools, equipment and materials for installation and maintenance work, handle materials and use power and hand tools safely
- identified and responded to predictable operational problems
- recorded and reported installation and maintenance activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for assisting with pump and flow device operations
- capacity and limitations of equipment used on the site
- lock-out procedures for mechanical and electrical installations
- types of flow control devices and their purpose
- types of pumps and their function and use
- principles and practices of pump and control flow devices
- basic principles of hydraulics and the operation of flows
- layout and performance of pipes and fittings
- flow measurement principles and procedures
- function of control systems.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - pump and control flow device maintenance tools and equipment
 - personal protective equipment applicable to assisting with pump and control flow device operations
- specifications:
 - work instructions and workplace procedures applicable to assisting with pump and control flow device operations
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG301 Install gravity fed irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to install gravity fed irrigation systems.

The unit applies to individuals who install gravity fed irrigation systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Organise resources for installation work	1.1 Interpret plan, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Select and use required materials, tools equipment and machinery and check for safe operations 1.3 Select, fit, use and maintain safety and personal protective equipment applicable to the task 1.4 Check water supply is compatible with system specifications

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Set out and prepare site	2.1 Measure and mark out structures and peg earthworks 2.2 Prepare and maintain beds, diversion and conveyancing structures 2.3 Install diversion and conveyancing structures, channels and beds 2.4 Prepare bed surface using roto-buck 2.5 Test structures for configuration, flow rates and capacity
3. Complete water measurement and tail-water works	3.1 Install water measurement structures 3.2 Install channels and tail water storages 3.3 Install pumping equipment, lines and filters 3.4 Confirm that the system configuration and capacity matches the installation plan 3.5 Complete earthworks and structures according to plan
4. Operate pumps and siphons	4.1 Prime pumps and open or close valves and controls 4.2 Position and set up pipes, system equipment and outlets 4.3 Prime and start siphons and other delivery mechanisms 4.4 Implement start up sequence and slowly build up water levels and pressure 4.5 Check pressure at the head-works and control valves 4.6 Distribute water evenly to the targeted areas with minimal wastage and run-off 4.7 Irrigate area and observe time lag between shut down and end of watering to minimise run-off and deep percolation
5. Measure and interpret water levels, flow rates and volume of water used	5.1 Monitor and maintain head water levels 5.2 Confirm that all water outlets are operating correctly 5.3 Replace or clear blocked inlets and outlets 5.4 Measure and record flow rates and water usage 5.5 Implement irrigation changes as required

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to report installation activities and communicate blockages
Numeracy skills	<ul style="list-style-type: none"> Calculate measurements for structures against specifications Calculate ratios and percentages for water levels, flow rates and usage
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information about system damage and blockages

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG301 Install gravity fed irrigation systems	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG301 Install gravity fed irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has installed a gravity fed irrigation system on at least one occasion and has:

- applied workplace health and safety requirements
- selected materials, tools, equipment and machinery appropriate to the scope of works
- built and maintained irrigation structures, channels and beds
- prepared irrigation beds
- used roto-buck for bed preparation
- measured water usage
- installed pumps and pipelines
- performed system commissioning tasks
- adjusted and monitored check valves
- start and moved siphons and spiles and checked flow
- start up the system
- checked pressure at the head works and control valves
- identified variations in water flow and distribution.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for installing gravity fed irrigation systems
- machinery operation and maintenance manual
- calculations for installing surface irrigation systems
- behaviour of water on varying terrain and soil types
- soil characteristics applicable to water retention and infiltration

- soil water retention testing techniques
- water quality and water filtration techniques
- gravity fed irrigation system components and operation.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - gravity fed irrigation system materials, tools equipment and machinery
 - gravity fed irrigation pump system tools and equipment and manual
 - personal protective equipment applicable to installing gravity fed irrigation systems
- specifications:
 - work instructions and workplace procedures applicable to installing gravity fed irrigation systems
 - workplace requirements applicable to health and safety in the workplace and installing gravity fed irrigation systems
 - machinery operation and maintenance manual
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training, legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG303 Measure irrigation delivery system performance

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to measure pressure, flow and distribution uniformity of an irrigation system.

It applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Measure irrigation system performance	1.1 Measure and record system pressures, water flow rates and pump performance parameters 1.2 Measure variations in system pressures, water flow rates and pump performance parameters where relevant and record 1.3 Inspect distribution and delivery systems and identify and fix

Element	Performance criteria
	malfunctions in system and record actions 1.4 Identify and record factors external to the system that may cause interference
2. Monitor supply of equipment and spare parts	2.1 Record supply and part usage 2.2 Monitor spare parts to ensure the supply meets demands 2.3 Make purchases within budget constraints 2.4 Report parts requirements outside of budget constraints 2.5 Record purchases and orders
3. Record and report system performance status	3.1 Record system pressures and variations 3.2 Record system flow rates and variations 3.3 Calculate and record distribution uniformity and mean application rates 3.4 Determine and record watering depth

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCIRG303A Measure irrigation delivery system performance.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG303 Measure irrigation delivery system performance

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- access and prepare data records for both print-based and computer-based data
- apply measuring and testing techniques
- calculate pressure differentials, flow rates, crop yields, estimated water usage and actual water usage
- identify adverse environmental impacts of irrigation activities and take appropriate remedial action
- use computers to record and report data

Knowledge Evidence

The candidate must demonstrate knowledge of:

- environmental impacts of irrigation, using water from any ground or underground source
- measuring and monitoring procedures for factors contributing to irrigation system delivery
- soil water retention testing techniques
- water authority standards and procedures

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG306 Troubleshoot irrigation systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to troubleshoot faults and blockages in irrigation systems.

It applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Locate and identify faulty components and blockages	1.1 Determine irrigation system and component function 1.2 Check and review monitoring and maintenance records 1.3 Carry out operational tests 1.4 Identify and document faulty components and blockages

Element	Performance criteria
2. Shut down and isolate component	2.1 Apply shut down sequence and isolation procedures 2.2 Verify safe shutdown or isolation 2.3 Install safety or security lock off devices and signage
3. Replace faulty components and clear blockages	3.1 Organise access to faulty components and blockages 3.2 Remove faulty components and repair or dispose of 3.3 Select and install replacement components 3.4 Replace faulty components and clear blockages 3.5 Clear blockages or replace blocked sections
4. Return system to normal operating status	4.1 Return isolated or shutdown components to service 4.2 Carry out operational tests 4.3 Return system to normal operational set-up 4.4 Report and record repair activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCIRG306A Troubleshoot irrigation systems.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG306 Troubleshoot irrigation systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- carry out operational tests
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- operate, maintain and repair irrigation systems
- shut down and isolate components

Knowledge Evidence

The candidate must demonstrate knowledge of:

- characteristics and operation of replaceable components of irrigation systems
- environmental impacts of irrigation using water from any ground or underground source
- isolation procedures
- purchasing procedures
- system malfunctions and their likely causes

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG328 Operate irrigation controller and sensor technology

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to operate irrigation controller and sensor technology as part of irrigation installation, construction and operation.

The unit applies to individuals who operate irrigation controller and sensor technology under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	<p>1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks</p> <p>1.2 Select required tools and equipment, and check for safe operation and accuracy</p> <p>1.3 Select, fit and use personal protective equipment applicable to the task</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Operate irrigation controllers	2.1 Link valves to controllers by wiring or radio signals 2.2 Program controllers according to operating procedures 2.3 Operate controller according to site requirements 2.4 Troubleshoot controller and rectify cause of faults
3. Operate irrigation sensors	3.1 Link sensors to controllers by wiring or radio signals 3.2 Program controllers to monitor sensor 3.3 Operate and monitor accuracy and reliability of sensor control equipment, and adjust where necessary 3.4 Collect samples according to sampling techniques 3.5 Record and interpret readings and observations 3.6 Troubleshoot sensors and rectify cause of faults 3.7 Report discrepancies or malfunctions to management

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Complete records of readings and observations legibly and accurately using correct technical terminology
Oral communication	<ul style="list-style-type: none"> Use clear language to report discrepancies or malfunctions
Numeracy	<ul style="list-style-type: none"> Interpret the measurements of sample results Make calculations to check the accuracy of program irrigation controllers and adjust electronic flow equipment
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Controllers must include at least 3 of the following:	<ul style="list-style-type: none"> • stand-alone • Bluetooth • wifi • remote radio controllers • multi-site central controllers.
Sensors must include at least 4 of the following:	<ul style="list-style-type: none"> • water meters • soil moisture and temperature sensors • air temperature sensors • weather stations • pump pressure sensors • rainfall sensors.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG328 Operate irrigation controller and sensor technology	AHCIRG325 Operate irrigation technology	Title updated Performance criteria clarified Foundation skills added Range of conditions added Assessment requirements updated	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG328 Operate irrigation controller and sensor technology

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has operated irrigation controller and sensor technology on at least two occasions, and has:

- applied workplace health and safety requirements
- selected tools and equipment appropriate to the scope of works
- maintained and checked irrigation controller and sensor equipment for accuracy
- operated irrigation controllers and sensors
- checked the accuracy of controller and sensor equipment, and adjusted
- recorded the results of sampling and testing
- recorded observations and data.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for operating irrigation controller and sensor technology, including working with extra low voltage wiring according to Australian Standards
- basic electrical testing procedures and safety practices
- irrigation controller and sensor operating and testing procedures
- environmental procedures for use, storage and recycling of electronic equipment and batteries
- data recording procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation controller and sensor installation and operating equipment
 - irrigation controllers and sensors
 - personal protective equipment applicable to installing and operating irrigation controller and sensor technology
- specifications:
 - work instructions and workplace procedures applicable to operating irrigation controller and sensor technology
 - workplace requirements applicable to health and safety in the workplace for operating irrigation controller and sensor technology
 - Australian Standards applicable to working with extra low voltage wiring
 - irrigation controller and sensor operating and testing procedures
 - data recording procedures
 - environmental procedures for use, storage and recycling of electronic equipment and batteries
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG331 Install pressurised irrigation systems

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency covers the skills and knowledge required to install low and sprinkler volume irrigation systems.

It applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Organise resources for	1.1 Select and use materials, tools, equipment and machinery

Elements	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
installation work	<p>1.2 Check that parts and equipment match system drawings and specifications</p> <p>1.3 Carry out pre-operational and safety checks on tools, equipment and machinery</p> <p>1.4 Identify work health and safety hazards, assess risks and implement suitable controls</p> <p>1.5 Select, use and maintain suitable safety and personal protective equipment</p> <p>1.6 Identify environmental considerations of irrigation installation activities</p> <p>1.7 Check water supply to ensure that it is compatible with system specifications</p>
2. Set out and prepare site	<p>2.1 Measure and mark out irrigation lines</p> <p>2.2 Confirm trenches are at the specified depth without damage to services, facilities, features and established plants</p> <p>2.3 Observe regulations relevant to the situation</p> <p>2.4 Use work practices that reflect sustainable horticulture principles and respond to local community requirements</p>
3. Install irrigation components	<p>3.1 Interpret the irrigation system plan and, where applicable, supervise contractors and monitor work to ensure it conforms to the plan</p> <p>3.2 Assemble and connect components and complete and test joints</p> <p>3.3 Fit and adjust fittings and valves and secure all joints</p> <p>3.4 Maintain a clean and safe work area while installation work is carried out</p>
4. Commission irrigation system	<p>4.1 Calibrate testing and monitoring equipment</p> <p>4.2 Confirm the start-up sequence is in accordance with the operations manual</p> <p>4.3 Flush system as required</p> <p>4.4 Identify operating faults and take corrective where required</p> <p>4.5 Record work outcomes and report to supervisor</p>
5. Complete installation work	<p>5.1 Finish off earthworks</p> <p>5.2 Confirm the system configuration and capacity matches the</p>

Elements	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	installation plan 5.3 Restore site and clear materials and equipment from the site on completion of maintenance works 5.4 Clean and store tools and equipment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG331 Install pressurised irrigation systems Release 2	AHCIRG331 Install pressurised irrigation systems Release 1	Minor typographical error corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG331 Install pressurised irrigation systems

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- calibrate testing and monitoring equipment
- commission irrigation system
- complete installation work
- organise resources for installation work
- set out and prepare the site.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the behaviour of water on varying terrain and soil types
- calculations for installing irrigation systems
- characteristics and operation of joints, valves and sprinkler components
- components of an irrigation system
- methods and techniques of installing irrigation
- operation of pumps and water flow rates
- soil characteristics
- soil water retention testing techniques
- water quality and water filtration techniques.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG332 Operate pressurised irrigation systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency covers the skills and knowledge required to operate low volume and sprinkler irrigation systems.

It applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Carry out pre-start checks	1.1 Determine work requirements and identify hazards, assess risks and implement control measures 1.2 Select required tools and equipment and check for safe operation 1.3 Select and use suitable personal protective equipment 1.4 Check water, power, fuel and lubricants to confirm all are

Element	Performance criteria
	available and the control system is operational 1.5 Prime pumps, if necessary, and open or close valves and controls as directed 1.6 Calibrate pressure and flow testing equipment 1.7 Carry out other pre-start system checks
2. Inspect and operate the system	2.1 Implement start up sequence 2.2 Check emitter spacing against the irrigation plan 2.3 Adjust water pressure as required 2.4 Keep filters clear and replace as required 2.5 Correct or repair all malfunctions, leaks and blockages and report
3. Monitor irrigation system performance	3.1 Check emitters for output 3.2 Calculate application rate of water 3.3 Check the water distribution pattern in the irrigated area 3.4 Monitor moisture levels in the root zone 3.5 Minimise environmental impacts of the operation
4. Shut down irrigation system	4.1 Apply water for sufficient time to achieve required soil moisture levels and allowing for weather conditions 4.2 Shut down system components and drain 4.3 Record and report irrigation activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - no equivalent.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG332 Operate pressurised irrigation systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess soil moisture levels
- carry out measurements for output and distribution
- measure and interpret flow rates and pressures
- monitor system effectiveness including:
 - application rates
 - depth of irrigation
 - emitter output
 - irrigation times
- pressure variations and blockages
- salinity levels and water quality
- perform shut down procedures
- read and follow operations manual and procedures
- record data
- start up the system and carrying out operational checks

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of pressurised irrigation system operation
- critical measures for moisture availability including:
 - evapotranspiration
 - field capacity
 - infiltration rates

- readily available water
- water holding capacity
- wilting point
- electrical hazards including:
 - contact with pumps, motors, other live components
 - short circuits
 - standing laterals to remove blockages
 - water spray onto power lines
- energy efficiency indicators and benchmarks for low volume irrigation
- environmental impacts of irrigation using water from any ground or underground source
- general irrigation methods for low volume systems
- main components of low volume and sprinkler irrigation systems
- principles of irrigation and the water cycle
- pump types used in irrigation systems and their operation
- shutdown sequence and flushing procedures
- soil characteristics
- soil, plant and water relationships
- water requirements of plants and crops consistent with sound environmental management

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG333 Maintain pressurised irrigation systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency covers the skills and knowledge required to implement a low volume or sprinkler irrigation maintenance program.

It applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Interpret a low volume irrigation maintenance program	1.1 Determine the scope of maintenance 1.2 Determine the frequency of maintenance works 1.3 Establish irrigation maintenance standards 1.4 Plan and prepare maintenance works 1.5 Identify work health and safety hazards, assess risks and implement suitable controls 1.6 Identify environmental considerations of irrigation maintenance activities 1.7 Select and use suitable personal protective equipment
2. Inspect an irrigation system	2.1 Create an inspection checklist and inspect the system regularly 2.2 Identify remedial action required and undertake repairs to restore system to full effectiveness 2.3 Undertake servicing of mechanical equipment 2.4 Assess the results of maintenance works and record to ensure repairs or maintenance standards have been achieved
3. Carry out periodic system maintenance	3.1 Record damage and blockages with contaminants by damage type, location and the section of the system affected 3.2 Record and report damaged or faulty components and computer control systems and take action to effect repairs 3.3 Implement end of season maintenance procedures 3.4 Implement routine and preventative maintenance procedures
4. Record and report maintenance activities	4.1 Restore site and clear materials and equipment from the site on completion of maintenance works 4.2 Complete maintenance and servicing records 4.3 Record parts removed or replaced 4.4 Record or report faults and breakages

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - no equivalent.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG333 Maintain pressurised irrigation systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- check connections and controllers
- check sprinkler/emitter output and function
- confirm operational pressures
- ensure proper operation of automatic flush valves
- interpret and apply maintenance procedures
- remove, service and replace valves and filters
- test irrigation equipment

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of irrigation system maintenance
- characteristics and operation of pipes, joints, valves, emitters
- common operational and maintenance problems
- components of an irrigation system
- operation of pumps and water flow rates
- sprinkler/low volume irrigation system components

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG336 Operate and maintain gravity fed irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to operate and maintain gravity fed irrigation systems.

The unit applies to individuals who operate and maintain gravity fed irrigation systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for gravity fed irrigation system operation and maintenance	<p>1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks</p> <p>1.2 Select and use required materials, tools, equipment and machinery, and check for safe operation</p> <p>1.3 Select, fit, use and maintain safety and personal protective equipment applicable to the task</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Operate pumps and delivery mechanisms	<p>2.1 Prime pumps and open or close valves and controls</p> <p>2.2 Position and set up pipes, system equipment and outlets</p> <p>2.3 Set and operate delivery mechanisms</p> <p>2.4 Implement start-up sequence and slowly build up water levels and pressure</p> <p>2.5 Check pressure at the head-works and control valves</p> <p>2.6 Distribute water evenly to the targeted areas with minimal wastage and run-off</p> <p>2.7 Irrigate area and observe time lag between shutdown and end of watering to minimise run-off and deep percolation</p>
3. Monitor drainage and tail-water systems	<p>3.1 Monitor water intake, conveyance and distribution, drainage and tail-water</p> <p>3.2 Check water reuse systems for clearance and freedom from weeds</p> <p>3.3 Monitor pumps, if used, during operation, clear rubbish from outlets and backflush pump</p>
4. Inspect gravity fed irrigation system	<p>4.1 Record damage and blockages with contaminants by damage type, location and the section of the system affected</p> <p>4.2 Record and report damaged or faulty pumps, valves, electrical components and computer control systems, and take action to effect repairs</p>
5. Maintain gravity fed irrigation system	<p>5.1 Service water measuring, diversion and conveyancing, and distribution structures</p> <p>5.2 Carry out vegetation control to keep all system components clear</p> <p>5.3 Service and repair machinery according to operation and maintenance manual</p>
6. Record and report maintenance activities	<p>6.1 Record machinery service and repair according to operation and maintenance manual</p> <p>6.2 Collect, treat and dispose of or recycle waste according to industry procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Complete workplace records legibly and accurately using correct technical terminology
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to communicate damage and blockages
Numeracy skills	<ul style="list-style-type: none"> Measure water levels Calculate water flow rates and water usage
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information about system damage and blockages

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG336 Operate and maintain gravity fed irrigation systems	AHCIRG334 Operate and maintain gravity fed irrigation systems	Performance criteria clarified Foundation skills added Assessment requirements updated	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG336 Operate and maintain gravity fed irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has operated and maintained a gravity fed irrigation system on at least one occasion, and has:

- applied workplace health and safety requirements
- selected materials, tools, equipment and machinery appropriate to the scope of works
- adjusted and monitored check valves
- checked the serviceability of delivery mechanisms
- set up and started delivery systems
- checked pressure at the head-works and control valves
- identified variations in water flow and distribution
- measured water usage
- inspected irrigation systems
- carried out running repairs on irrigation delivery and drainage systems
- removed and replaced gates, slides and doors
- removed and replaced valves and filters
- undertaken minor repairs of equipment
- carried out shutdown procedures, cleaned equipment and disposed of waste
- recorded machinery service and repair.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for operating and maintaining gravity fed irrigation systems
- machinery operation and maintenance manual
- characteristics and operation of components of a gravity fed irrigation system

- common operational and maintenance problems
- routine and end of season maintenance requirements
- weed disposal methods.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - gravity fed irrigation system materials, tools, equipment and machinery
 - gravity fed irrigation pump system tools and equipment and procedures
 - personal protective equipment applicable to operating and maintaining gravity fed irrigation systems
- specifications:
 - work instructions and workplace procedures applicable to operating and maintaining gravity fed irrigation systems
 - workplace requirements applicable to health and safety in the workplace and operating and maintaining gravity fed irrigation systems
 - machinery operation and maintenance manual
 - recording procedures
 - environmental procedures for collection, treatment, disposal or recycling of waste
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training, legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG337 Measure irrigation delivery system performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to measure pressure, flow and distribution uniformity of an irrigation system, monitor supply of equipment and spare parts, and record system performance.

The unit applies to individuals who measure irrigation delivery system performance under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Measure irrigation system performance	1.1 Measure and record system pressures, water flow rates and pump performance parameters according to measuring and recording procedures 1.2 Record variations where relevant 1.3 Inspect distribution and delivery systems, identify and fix malfunctions in system and record actions

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify and record factors external to the system that may cause interference 1.5 Minimise environmental impacts of irrigation system performance measurement activities
2. Check supply of equipment and spare parts	2.1 Record supply and part usage according to recording procedures 2.2 Check spare parts to ensure supply meets demands 2.3 Report parts requirements according to workplace requirements
3. Record and report system performance status	3.1 Record system pressures and variations 3.2 Record system flow rates and variations 3.3 Calculate and record distribution uniformity and mean application rates 3.4 Determine and record watering depth 3.5 Report system performance according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document equipment purchases and orders, and irrigation delivery system performance clearly and accurately
Oral communication	<ul style="list-style-type: none"> Use clear language to report parts requirements, and irrigation delivery system performance
Numeracy skills	<ul style="list-style-type: none"> Measure pressures, flow rates, pump performance and variations Identify and record part numbers and part usage
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG337 Measure irrigation delivery system performance	AHCIRG303 Measure irrigation delivery system performance	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG337 Measure irrigation delivery system performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has measured irrigation delivery system performance on at least two occasions and has:

- applied measuring and testing techniques
- identified adverse environmental impacts of irrigation activities and taken appropriate remedial action
- accessed and prepared data records for both print-based and computer-based data
- used computers to record and report data
- calculated pressure differentials, flow rates, crop yields, estimated water usage and actual water usage
- used computers to record and report data.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- measuring and monitoring procedures for factors contributing to irrigation system delivery
- soil water retention testing techniques
- water authority standards and procedures
- environmental impacts of irrigation, using water from any ground or underground source.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation system equipment

- irrigation delivery system performance measuring tools and equipment
- computer and software for recording and reporting data
- specifications:
 - measuring and recording procedures
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG338 Troubleshoot irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to locate and identify irrigation system faulty components and blockages, shut down and isolate components, replace faulty components, clear blockages and return irrigation system to normal operating status.

The unit applies to individuals who troubleshoot irrigation systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Locate and identify faulty components and blockages	1.1 Determine irrigation system and component function 1.2 Check and review monitoring and maintenance records 1.3 Identify potential hazards and risks and implement safe working practices to manage risks 1.4 Minimise environmental impacts of irrigation maintenance

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	activities 1.5 Select, fit and use personal protective equipment applicable to the task 1.6 Carry out operational tests on components 1.7 Identify and document faulty components and blockages
2. Shut down and isolate component	2.1 Apply shut down sequence and isolation procedures according to irrigation equipment handbook 2.2 Verify safe shutdown or isolation 2.3 Install safety or security lock off devices and signage
3. Replace faulty components and clear blockages	3.1 Organise access to faulty components and blockages 3.2 Remove and repair or dispose of faulty components 3.3 Select and install replacement components 3.4 Clear blockages or replace blocked sections
4. Return system to normal operating status	4.1 Return isolated or shutdown components to service 4.2 Carry out operational tests 4.3 Return system to normal operational set-up 4.4 Report and record repair activities according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Use correct terminology to document irrigation repair activities
Oral communication	<ul style="list-style-type: none"> Use clear language to report irrigation repair activities

Skill	Description
Numeracy skills	<ul style="list-style-type: none"> Identify and record replacement component numbers
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG338 Troubleshoot irrigation systems	AHCIRG306 Troubleshoot irrigation systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG338 Troubleshoot irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has troubleshoot and repaired irrigation systems on at least two occasions and has:

- applied workplace health and safety requirements
- identified adverse environmental impacts of irrigation activities and appropriate remedial action
- carried out operational tests
- operated, maintained and repaired irrigation systems
- shut down and isolated components.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for troubleshooting and repairing irrigation systems
- environmental impacts of irrigation using water from any ground or underground source
- system malfunctions and their likely causes
- irrigation equipment handbooks
- characteristics and operation of replaceable components of irrigation systems
- isolation procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- irrigation equipment handbooks
- irrigation system equipment
- irrigation system repair tools and equipment
- personal protective equipment applicable to repairing irrigation systems
- specifications:
 - work instructions and workplace procedures applicable to troubleshooting and repairing irrigation systems
 - workplace requirements applicable to health and safety in the workplace and troubleshooting and repairing irrigation systems
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG339 Monitor soils under irrigation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to assess physical and moisture properties of soil, monitor soil chemical properties, assess soil health and plant growth under irrigation, and implement strategies to optimise irrigation on the soil plant growing environment.

The unit applies to individuals who monitor soils under irrigation under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess the physical properties of irrigated soil	1.1 Identify the profile of irrigated soil 1.2 Determine soil texture and structure within the soil layers 1.3 Interpret tests for organic matter level in soil 1.4 Test for slaking and dispersion in irrigated soil

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Assess the infiltration rate for irrigated soil 1.6 Measure soil moisture levels 1.7 Assess the environmental impacts of cultivation and watering practices on the physical properties of soil
2. Monitor soil moisture properties	2.1 Identify soil moisture tension and its role in determining water availability to plants 2.2 Assess the field capacity of irrigated soil 2.3 Observe the wilting point for a plant species in irrigated soil 2.4 Calculate the readily available water (RAW) in irrigated soil
3. Monitor soil chemical properties	3.1 Interpret soil test results for salinity and sodicity levels in irrigated soil 3.2 Interpret pH tests and the potential impact of pH on soil structure and nutrient availability
4. Implement strategies to optimise the irrigation growing environment for plants	4.1 Assess the risk of erosion in irrigated soil 4.2 Implement and monitor a watering schedule 4.3 Adjust the frequency of watering based on available moisture, soil properties and plant response 4.4 Record and report soil and plant moisture status and irrigation requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Use correct terminology to document soil and plant moisture status and irrigation requirements
Oral communication	<ul style="list-style-type: none"> Use clear language to describe irrigated soil profile, impacts of cultivation and watering practices, and soil moisture tension, and

Skill	Description
	to report soil and plant moisture status and irrigation requirements
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG339 Monitor soils under irrigation	AHCIRG308 Monitor soils under irrigation	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG339 Monitor soils under irrigation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has monitored soils under irrigation on at least one occasion and has:

- conducted soil structure and texture assessment
- used soil moisture monitoring equipment
- calculated moisture holding capacity of plants, including readily available water (RAW)
- applied the results of soil testing to assessing soil properties
- assessed the erosion potential of the irrigated soil
- adjusted watering practices to meet plant needs.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- soil structure and texture
- effect of dispersible soils under irrigation
- critical measures for moisture availability
- adverse environmental impacts of irrigated plant production
- field capacity
- signs of moisture stress & nutrient deficiency in plants
- wilting point
- soil moisture definitions and calculations
- RAW calculations
- interpreting salinity, sodicity and pH tests
- soil moisture monitoring procedures
- types of erosion.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigated soil and water test results
 - irrigation system equipment
 - irrigation system performance measuring tools and equipment
- specifications:
 - measuring and recording procedures
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG340 Install irrigation pumps

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to plan and sequence installation tasks, source, install and commission pump and flow control components, and complete irrigation pump installation.

The unit applies to individuals who install irrigation pumps under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and sequence installation tasks from instructions	1.1 Obtain drawings and specifications 1.2 Plan and sequence tasks 1.3 Select required tools and equipment and check for safe operation
2. Source irrigation system requirements	2.1 Select, fit and use appropriate PPE 2.2 Determine location of pump

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	2.3 Identify pump base requirements 2.4 Identify, order and collect materials and equipment 2.5 Check materials and equipment for acceptable condition and compliance
3. Install and commission pumping and flow control components	3.1 Set out and construct pump base 3.2 Install pump and pump controls 3.3 Connect suction and discharge lines and flow control devices 3.4 Connect delivery and distribution components to pump 3.5 Conduct pressure testing of pumping system 3.6 Adjust and set flow control devices 3.7 Test pump
4. Complete work	4.1 Clear work area and dispose of, reuse or recycle materials 4.2 Clean, check, maintain and store tools and equipment 4.3 Restore work site to meet environmental requirements 4.4 Complete documentation

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document pump installation and commissioning activities
Numeracy skills	<ul style="list-style-type: none"> Measure pump base area
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Flow control devices must include at least two of the following:	<ul style="list-style-type: none"> • pressure switches • constant flow switches • variable speed drives.
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG340 Install irrigation pumps	AHCIRG309 Install irrigation pumps	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG340 Install irrigation pumps

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has installed irrigation pumps on at least one occasion, and has:

- followed drawings and specifications
- performed work-related calculations
- handled materials safely
- organised equipment and materials for installation work
- matched pump output and flow rate to pipe diameter
- set out and prepared the site
- positioned pumps and control devices
- used power tools and hand tools
- primed and operated pumps
- fixing and joining techniques
- identified and responded to operational problems
- monitored the performance of pumps
- adjusted and set pressure switches and air tanks to suit pump performance and site conditions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic principles of hydraulics, flow versus pressure, energy loss due to friction
- discharge and flow rates
- installation procedures for irrigation pumps
- pump components and their principles of operation
- pump gauges and controls
- advantages and disadvantages of each pump type

- servicing requirements for pumps
- types of pumps and their application in irrigation, such as centrifugal, vertical turbine, submersible and propeller
- types of pumps suitable as booster and floating pumps
- characteristics and application of different valves, pipes and fittings, including fixing and joining techniques and methods
- impellers, rotors and stators
- types of valves
- properties of water, including pressure and flow rates
- pump performance and pressure testing
- automatic pump switches, including timers, pressure switches, constant flow switches and variable speed drives.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to installing irrigation pumps
 - irrigation pump operation and maintenance manual
 - irrigation pump installation equipment
 - personal protective equipment applicable to installing irrigation pumps
- specifications:
 - irrigation pump installation tools and equipment and procedures
 - recording procedures
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG341 Operate and maintain irrigation pumping systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare, start up, operate, monitor and shut down an irrigation pumping system and maintain pumps and pumping equipment.

The unit applies to individuals who operate and maintain irrigation pumping equipment under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to maintain pumps	1.1 Obtain and interpret work requirements for the satisfactory completion of operations 1.2 Select and use required materials, tools, equipment and machinery and check for safe operation 1.3 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>risks</p> <p>1.4 Select, fit, use and maintain safety and personal protective equipment applicable to the task</p> <p>1.5 Identify and arrange support required for the safe completion of the servicing and maintenance tasks</p> <p>1.6 Carry out isolation and lock-out of all equipment necessary for the safe execution of tasks</p>
2. Carry out pump maintenance	<p>2.1 Inspect pumps and report any faults</p> <p>2.2 Troubleshoot pump system and rectify cause of faults</p> <p>2.3 Adjust and set pressure switches and air tanks to suit pump performance and site conditions</p> <p>2.4 Service and maintain pumps according to operation and maintenance manual</p> <p>2.5 Dispose of waste according to environmental procedures</p> <p>2.6 Maintain servicing and maintenance records according to servicing and maintenance recording procedures</p>
3. Prepare the pumping system	<p>3.1 Check operation and function of pump and driver</p> <p>3.2 Conduct pumping system pre-start-up checks according to operation and maintenance manual</p> <p>3.3 Ensure pumping system valves are correctly sequenced and filters are clear before commencing pumping operations, and safety requirements are met</p>
4. Start up and shutdown pumping system	<p>4.1 Operate ancillary equipment using safe practices</p> <p>4.2 Start up and shut down pump according to operation and maintenance manual</p> <p>4.3 Implement emergency shutdown procedures when required</p>
5. Operate and monitor pumping and ancillary systems	<p>5.1 Check and maintain flanges, gaskets and seals within operational tolerances to avoid environmental damage</p> <p>5.2 Monitor pump pressures and flows for conformance</p> <p>5.3 Use amperage testing equipment to monitor and identify variations in pumping systems and equipment operating conditions</p> <p>5.4 Monitor pumping systems, equipment and component performance for signs of excessive wear or reduction of performance</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>5.5 Check operational valves and valve assemblies for leaks</p> <p>5.6 Check and clean filter systems periodically and remove any potential blockages or impurities entering the pumping system or equipment which may cause cavitation or malfunction during operation</p> <p>5.7 Inspect and sample lubrication oil to ensure operating levels are correct and to determine if any contamination has taken place which may affect the operational capacity of the pumping system and equipment</p> <p>5.8 Take appropriate action resulting from checks and monitoring</p>
6. Shut down the pumping system	<p>6.1 Shut down injection equipment and pump according to operation and maintenance manual</p> <p>6.2 Clean pumping equipment</p> <p>6.3 Collect, treat and dispose of or recycle waste generated by both the pumping process and cleaning procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Numeracy skills	<ul style="list-style-type: none"> Calculate oil, lubricant and coolant levels
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG341 Operate and maintain irrigation pumping systems	AHCIRG310 Operate and maintain irrigation pumping systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG341 Operate and maintain irrigation pumping systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has operated and maintained irrigation pumping equipment on at least two occasions and has:

- selected tools and equipment appropriate to the scope of works
- applied workplace health and safety requirements
- carried out the following operation and maintenance tasks:
 - inspected and cleaned pumps
 - adjusted pump settings
 - primed a pump
 - checked and cleared or replaced filters
 - replaced worn components, including pump seals, liners and impellers
 - tensioned fasteners and y-belts
 - monitored pressures and flows
 - used amperage testing equipment
 - replaced belts
 - set valves and checked for wear and leakages
 - cleared blockages
 - checked and topped-up fluids, including coolants, lubricants and hydraulic oils
 - checked oil quality and levels
 - lubricated pumps
- performed start up and shutdown procedures
- maintained clean work area and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for operating and maintaining irrigation pumping systems
- advantages and disadvantages of each pump type
- pump performance and fault finding
- pumps and their application in irrigation, such as centrifugal, vertical turbine, submersible and propeller
- pumps that are suitable as booster and floating pumps
- automatic pump switches, including:
 - timers,
 - pressure switches,
 - irrigation controllers, and
 - flow switches
- properties of water including pressure and flow rates
- irrigation pump system operation and maintenance manual
- reading pump gauges and controls
- amperage testing equipment
- service and maintenance requirements of pumps
- basic principles of hydraulics flow versus pressure
- discharge and flow rates
- impellers, rotors and stators
- pump components and their principles of operation
- valves and their uses.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation pump system operation and maintenance manual
 - irrigation pump system equipment
 - irrigation pump system oil, lubricant, coolant and cleaning agents
 - amperage testing equipment
 - personal protective equipment applicable to operating and maintaining irrigation pumping systems
- specifications:
 - work instructions and workplace procedures applicable to operating and maintaining irrigation pumping systems
 - workplace requirements applicable to health and safety in the workplace and operating and maintaining irrigation pumping systems
 - irrigation pump system tools and equipment and procedures
 - servicing and maintenance recording procedures

- environmental procedures for collection, treatment, disposal or recycling of waste
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training, legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG342 Interpret irrigation plans and drawings

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to read and interpret plans and drawings, mark out and peg a site from a plan and identify required components applicable to installing irrigation systems.

The unit applies to individuals who interpret irrigation plans and drawings under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Apply commonly used symbols and abbreviations	1.1 Identify, understand and apply commonly used symbols and abbreviations on plans 1.2 Identify, understand and apply common irrigation terms used on plans 1.3 Identify key features of irrigation plans, elevations and sections 1.4 Identify scale, elevations and sections from drawings

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Locate and identify key features on a site plan	2.1 Identify irrigation site from location drawings 2.2 Identify true north and system orientation from details provided on site plan 2.3 Identify key features of site plan
3. Mark out and peg the site from a plan	3.1 Mark boundaries of the site 3.2 Identify existing irrigation infrastructure on the site 3.3 Identify electricity and communications infrastructure on the site plan, mark out and implement safety procedures 3.4 Peg out pipelines and earthworks identified on the plan
4. Identify required components for installation	4.1 Annotate required pipeline components from plans and drawings 4.2 Annotate water supply, distribution and delivery components from plans and drawings 4.3 Make provision for receipt and storage of materials on site 4.4 Confirm installation requirements and details of plans and drawings with supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document pipeline components, and water supply, distribution and delivery components from plans and drawings
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm installation requirements and details of plans and drawings
Numeracy skills	<ul style="list-style-type: none"> Measure site to translate documented requirements to on-site activities calculate material requirements
Navigate the world of	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety

Skill	Description
work	requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG342 Interpret irrigation plans and drawings	AHCIRG315 Interpret irrigation plans and drawings	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG342 Interpret irrigation plans and drawings

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has interpreted irrigation plans and drawings on at least one occasion and has:

- interpreted symbols and abbreviations used on plans
- interpreted scale and specifications from plans and drawings
- recognised and marked out features on a site from a plan
- marked out boundaries and infrastructure position from a plan
- used basic industry calculations
- translated documented requirements into on-site activities and site and structural features from two-dimensional to three-dimensional formats.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- commonly used scales, symbols and abbreviations
- principles and practices of plan and drawing interpretation
- drawings and specifications relevant to the irrigation industry
- measurements, calculations and quantities
- tools, equipment and materials required from the drawings and specifications.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - compass

- on-site marking out and measuring tools and equipment
- specifications:
 - irrigation site plans and drawings
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG343 Operate irrigation injection equipment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare, start up, operate and shut down irrigation injection equipment, monitor impacts of injection process and record information of irrigation injection equipment operation.

The unit applies to individuals who operate irrigation injection equipment under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare equipment for injection operation	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Select required tools and equipment and check for safe operation 1.3 Select, fit and use suitable personal protective equipment applicable to the task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Select materials and services and confirm they are available and ready for operation 1.5 Prepare equipment and materials to meet injection requirements
2. Operate injection equipment process	2.1 Start up injection process according to operation and maintenance manual 2.2 Monitor control points to confirm performance is maintained within specification 2.3 Identify, rectify and report out-of-specification equipment performance 2.4 Deliver injection requirements 2.5 Put emergency procedures in place for spillage or chemical accidents
3. Shut down injection equipment	3.1 Carry out shut down on injection equipment according to operation and maintenance procedure 3.2 Clean injection equipment according to maintenance procedure 3.3 Collect, treat, dispose or recycle waste generated by both the process and cleaning procedures
4. Monitor plant response and environmental impacts of injection	4.1 Monitor plant response to injection 4.2 Record and report environmental hazards of injection process 4.3 Maintain withholding periods for chemical application on food crops 4.4 Restrict access to areas where chemicals have been applied through injection if required
5. Record information	5.1 Record workplace information in the appropriate format 5.2 Record chemical application and storage details according to recording procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document environmental hazards of injection process
Oral communication	<ul style="list-style-type: none"> Use clear language to report out-of-specification equipment performance
Numeracy skills	<ul style="list-style-type: none"> Calculate chemical dilution rates
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG343 Operate irrigation injection equipment	AHCIRG326 Operate irrigation injection equipment	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG343 Operate irrigation injection equipment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has operated irrigation injection equipment on at least two occasions and has:

- applied workplace health and safety requirements
- selected tools and equipment appropriate to the scope of works
- selected and prepared injection materials
- completed relevant calculations such as dilution rates
- identified injection requirements
- implemented routine maintenance and minor repairs of the system
- reported and recorded corrective action
- taken corrective action in response to out-of-specification results or non-compliance
- handled hazardous chemicals safely
- shut down equipment in response to an emergency situation
- shut down equipment in response to routine shutdown requirements
- implemented routine system cleaning requirements
- monitored usage and dilution rates.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for operating irrigation injection equipment, including backflow prevention
- purpose and operation of equipment and instrumentation components
- chemicals, cleaning agents and fertilisers used for injection and their purpose
- safety data sheet (SDS) information for substances to be injected
- services required
- irrigation injection equipment operation and maintenance manual

- basic irrigation injection equipment operating principles and process control systems where relevant
- procedures for prevention of backflow
- process specifications, procedures and operating parameters
- control points and significance and methods of monitoring
- common causes of variation and corrective action required
- correct chemical handling techniques
- environmental issues and controls
- shutdown sequence
- lock-out and tag-out procedures
- irrigation injection equipment cleaning requirements and procedures
- recording requirements and procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation injection equipment operation and maintenance manual
 - irrigation injection equipment
 - injection chemicals, cleaning agents and fertilisers
 - personal protective equipment applicable to operating irrigation injection equipment
- specifications:
 - work instructions and workplace procedures applicable to operating irrigation injection equipment workplace requirements applicable to health and safety in the workplace and operating irrigation injection equipment
 - irrigation injection tools and equipment and procedures
 - SDS for substances being injected
 - recording procedures
 - environmental procedures for collection, treatment, disposal or recycling of waste
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG344 Implement an irrigation schedule

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to interpret an irrigation schedule, determine irrigation shifts, implement and monitor an irrigation schedule, and record irrigation information and activities.

The unit applies to individuals who implement an irrigation schedule under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Interpret the irrigation schedule	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Select required tools and equipment and check for safe operation 1.3 Select, fit and use personal protective equipment applicable to the task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Access information on plant growing requirements 1.5 Interpret growing season moisture requirements 1.6 Read the predicted seasonal moisture deficit and watering requirements and check with management 1.7 Record parameters for the irrigation system
2. Determine irrigation shifts	2.1 Subdivide irrigated area into units capable of individual irrigation and note area and irrigation equipment characteristics for each 2.2 Define soil irrigation capability for each unit 2.3 Define crop and plant water requirement for each unit 2.4 Combine units requiring similar irrigation into irrigation shifts 2.5 Ensure irrigation shifts do not exceed water delivery capacity of the property irrigation infrastructure 2.6 Determine the water volume required to meet irrigation needs over specified period
3. Implement irrigation schedule	3.1 Coordinate resources and brief personnel to deliver requirements 3.2 Implement watering program
4. Monitor irrigation	4.1 Inspect plants and crops for growth rate and signs of stress 4.2 Record frequency of irrigation 4.3 Measure and record water usage and confirm water allocation is not exceeded for a given period 4.4 Calculate the difference between estimated and actual water use 4.5 Measure water quality 4.6 Assess plant and crop growth and water use efficiency 4.7 Measure soil for readily available water (RAW) 4.8 Record climate and weather conditions 4.9 Adjust watering program in response to rainfall events and changes to evapotranspiration rates
5. Record irrigation information and activities	5.1 Record plant or crop environment data according to workplace recording procedures 5.2 Record water usage 5.3 Record irrigation shifts

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.4 Record system process data

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	<ul style="list-style-type: none"> Initiate discussions with personnel using clear language to communicate irrigation schedule delivery requirements
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information about irrigation schedule delivery requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG344 Implement an irrigation schedule	AHCIRG327 Implement an irrigation schedule	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG344 Implement an irrigation schedule

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has implemented an irrigation schedule on at least one occasion and has:

- applied workplace health and safety requirements
- selected tools and equipment appropriate to the scope of works
- accessed and interpreted the information in an irrigation schedule
- compared plant health and growth to benchmark requirements
- consulted with appropriate senior personnel or consultants
- instructed irrigation system operators
- implemented the irrigation schedule including consideration of:
 - application rates
 - interaction between different irrigation employees or shifts
 - maintenance programs and supplies
 - materials, chemicals, services
 - resources, including operators with appropriate skills
 - timing and length
- liaised with other work areas
- identified irrigation requirements throughout the growing season by monitoring:
 - climatic conditions
 - crop stage and requirements if applicable
 - effective root depth
 - frost risk
 - plant varietal characteristics and requirements
 - signs of plant nutrient deficiencies
 - soil moisture levels
 - soil type and depth
 - symptoms of water stress

- water quality
- water table level
- monitored irrigation activities, including:
 - environmental impact of irrigation activities
 - identified emitter output consistency
 - identified soil moisture content and depth to which water will reach
 - reported and recorded problems and corrective action taken
 - taken corrective action in response to out-of-specification results or non-compliance
- applied sampling techniques
- conducted soil moisture tests
- identified, rectified and reported environmental non-compliance.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for implementing an irrigation schedule
- resource requirements and availability
- irrigation strategies
- principles of soil moisture monitoring, including:
 - volumetric soil moisture content
 - percentage compared to soil moisture tension
- consultation requirements and procedures
- effect of irrigation techniques on plant growth
- visual symptoms of plant nutrient deficiencies, water stress and frost
- recording requirements and procedures
- sampling techniques and procedures
- testing techniques and procedures
- interpretation of routine soil moisture tests
- environmental impacts, hazards and controls for irrigation
- water budgeting tools.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation equipment operation and maintenance manual
 - irrigation equipment

- soil and water sampling equipment
- personal protective equipment applicable to implementing an irrigation schedule
- specifications:
 - work instructions and workplace procedures applicable to implementing an irrigation schedule
 - irrigation technology tools and equipment and procedures
 - workplace requirements applicable to health and safety in the workplace and implementing and irrigation schedule
 - soil and water testing equipment and procedures
 - recording procedures
- relationships:
 - personnel
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG345 Install pressurised irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to organise resources, set out and prepare an irrigation installation site and install, commission and complete pressurised irrigation system installation.

The unit applies to individuals who install pressurised irrigation systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Organise resources for installation work	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Select required materials, tools, equipment and machinery and check for safe operation 1.3 Check that parts and equipment match system drawings and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	specifications 1.4 Select, fit, use and maintain safety and personal protective equipment applicable to the task 1.5 Carry out pre-operational checks on tools, equipment and machinery 1.6 Identify environmental considerations of irrigation installation activities 1.7 Check water supply to ensure that it is compatible with system specifications
2. Set out and prepare site	2.1 Measure and mark out irrigation lines 2.2 Confirm trenches are at the specified depth without damage to services, facilities, features and established plants 2.3 Observe regulations relevant to the situation 2.4 Use work practices that reflect sustainable horticulture principles and environmental requirements
3. Install irrigation components	3.1 Interpret the irrigation system plan and, where applicable, supervise contractors and monitor work to ensure it conforms to the plan 3.2 Assemble and connect components and complete and test joints 3.3 Fit and adjust fittings and valves and secure all joints 3.4 Maintain a clean and safe work area while installation work is carried out
4. Commission irrigation system	4.1 Calibrate testing and monitoring equipment 4.2 Confirm start-up sequence according to operations manual 4.3 Flush system as required 4.4 Identify operating faults and take corrective where required 4.5 Record work outcomes and report to supervisor
5. Complete installation work	5.1 Finish off earthworks to specifications 5.2 Confirm system configuration and capacity matches installation plan 5.3 Restore site and clear materials and equipment from the site on completion of maintenance works

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.4 Clean and store tools and equipment according workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Use the correct terminology to document irrigation installation activities
Oral communication	<ul style="list-style-type: none"> Use clear language to report irrigation installation activities
Numeracy skills	<ul style="list-style-type: none"> Confirm part numbers
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety and environmental requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG345 Install pressurised irrigation systems	AHCIRG331 Install pressurised irrigation systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG345 Install pressurised irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has installed pressurised irrigation systems on at least one occasion and has:

- applied workplace health and safety requirements
- selected materials, tools, equipment and machinery appropriate to the scope of works
- organised resources for installation work
- set out and prepared the site
- completed installation work
- calibrated testing and monitoring equipment
- commissioned irrigation system.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for installing pressurised irrigation systems
- water quality and water filtration techniques
- the behaviour of water on varying terrain and soil types
- soil characteristics
- soil water retention testing techniques
- calculations for installing pressurised irrigation systems
- characteristics and operation of joints, valves and sprinkler components
- components of a pressurised irrigation system
- methods and techniques of installing pressurised irrigation
- operation of pumps and water flow rates.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - pressurised irrigation system operation and maintenance manual
 - pressurised irrigation system installation equipment
 - personal protective equipment applicable to installing pressurised irrigation systems
- specifications:
 - work instructions and workplace procedures applicable to installing pressurised irrigation systems workplace requirements applicable to health and safety in the workplace and installing pressurised irrigation systems
 - pressurised irrigation system installation tools and equipment and procedures
 - recording procedures
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG346 Operate pressurised irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to pre-start check, inspect, start up, operate, monitor and shut down pressurised irrigation systems.

The unit applies to individuals who operate pressurised irrigation systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out pre-start checks	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Select required tools and equipment and check for safe operation 1.3 Select, fit and use personal protective equipment applicable to the task 1.4 Check water, power, fuel and lubricants to confirm all are

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>available and the control system is operational</p> <p>1.5 Prime pumps, if necessary, and open or close valves and controls as directed</p> <p>1.6 Calibrate pressure and flow testing equipment</p> <p>1.7 Carry out other pre-start system checks</p>
2. Inspect and operate the system	<p>2.1 Implement start up sequence according to operation and maintenance procedures</p> <p>2.2 Check emitter spacing against the irrigation plan</p> <p>2.3 Adjust water pressure as required</p> <p>2.4 Clear and replace filters as required</p> <p>2.5 Correct or repair all malfunctions, leaks and blockages and report</p>
3. Monitor irrigation system performance	<p>3.1 Check emitters for output</p> <p>3.2 Calculate application rate of water</p> <p>3.3 Check the water distribution pattern in the irrigated area</p> <p>3.4 Monitor moisture levels in the root zone</p> <p>3.5 Minimise environmental impacts of the operation</p>
4. Shut down irrigation system	<p>4.1 Apply water for sufficient time to achieve required soil moisture levels and allow for weather conditions</p> <p>4.2 Shut down system components and drain</p> <p>4.3 Record and report irrigation activities according to workplace recording procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations

Skill	Description
Writing	<ul style="list-style-type: none"> Use the correct terminology to document irrigation activities
Oral communication	<ul style="list-style-type: none"> Use clear language to report irrigation activities
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG346 Operate pressurised irrigation systems	AHCIRG332 Operate pressurised irrigation systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG346 Operate pressurised irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has operated a pressurised irrigation system on at least two occasions and has:

- applied workplace health and safety requirements
- selected tools and equipment appropriate to the scope of works
- read and followed operations manual and procedures
- started the system and carried out operational checks
- monitored system effectiveness, including:
 - application rates
 - depth of irrigation
 - emitter output
 - irrigation times
 - pressure variations and blockages
 - salinity levels and water quality
- carried out measurements for output and distribution
- measured and interpreted flow rates and pressures
- assessed soil moisture levels
- performed shut down procedures
- recorded data.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for operating pressurised irrigation systems
- electrical hazards, including:
 - contact with pumps, motors, other live components

- short circuits
- standing laterals to remove blockages
- water spray onto power lines
- energy efficiency indicators and benchmarks for pressurised irrigation
- pressurised irrigation equipment operation and maintenance manual
- main components of pressurised irrigation systems
- pump types used in irrigation systems and their operation
- general irrigation methods for low volume systems
- principles of irrigation and the water cycle
- critical measures for moisture availability, including:
 - evapotranspiration
 - field capacity
 - infiltration rates
 - readily available water
 - water holding capacity
 - wilting point
- soil characteristics
- soil, plant and water relationships
- water requirements of plants and crops consistent with sound environmental management
- environmental impacts of irrigation using water from any ground or underground source
- shutdown sequence and flushing procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - pressurised irrigation system operation and maintenance manual
 - pressurised irrigation system equipment
 - personal protective equipment applicable to operating pressurised irrigation systems
- specifications:
 - work instructions and workplace procedures applicable to operating pressurised irrigation systems
 - pressurised irrigation system tools and equipment and procedures
 - workplace requirements applicable to health and safety in the workplace and operating pressurised irrigation systems
 - recording procedures
- relationships:
 - supervisor
- timeframes:

- according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG347 Maintain pressurised irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to interpret a maintenance program, inspect and maintain pressurised irrigation systems, and record and report maintenance activities.

The unit applies to individuals who maintain pressurised irrigation systems under broad direction and take responsibility for their own.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Interpret a pressurised irrigation maintenance program	1.1 Determine the scope of maintenance 1.2 Determine the frequency of maintenance works 1.3 Establish irrigation maintenance standards 1.4 Plan and prepare maintenance works 1.5 Identify potential hazards and risks and implement safe working

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>practices to manage risks</p> <p>1.6 Minimise environmental impacts of irrigation maintenance activities</p> <p>1.7 Select, fit and use personal protective equipment applicable to the task</p>
2. Inspect an irrigation system	<p>2.1 Create an inspection checklist and inspect the system regularly</p> <p>2.2 Identify remedial action required and undertake repairs to restore system to full effectiveness</p> <p>2.3 Undertake servicing of irrigation mechanical equipment according to operation and maintenance manual</p> <p>2.4 Assess the results of maintenance works and record to ensure repairs or maintenance standards have been achieved</p>
3. Carry out periodic system maintenance	<p>3.1 Record damage and blockages with contaminants by damage type, location and the section of the system affected</p> <p>3.2 Record and report damaged or faulty components and computer control systems and take action to effect repairs</p> <p>3.3 Implement end of season maintenance procedures</p> <p>3.4 Implement routine and preventative maintenance procedures</p>
4. Complete and record maintenance activities	<p>4.1 Restore site and clear materials and equipment from the site on completion of maintenance works</p> <p>4.2 Complete maintenance and servicing records according to workplace recording procedures</p> <p>4.3 Record parts removed or replaced</p> <p>4.4 Record and report faults and breakages</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Use correct terminology to document irrigation service and maintenance activities
Oral communication	<ul style="list-style-type: none"> Use clear language to report irrigation service and maintenance activities
Numeracy skills	<ul style="list-style-type: none"> Identify and record part numbers
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG347 Maintain pressurised irrigation systems	AHCIRG333 Maintain pressurised irrigation systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG347 Maintain pressurised irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has maintained a pressurised irrigation system on at least two occasions and has:

- interpreted and applied maintenance procedures
- applied workplace health and safety requirements
- identified adverse environmental impacts of irrigation activities and taken appropriate remedial action
- checked connections and controllers
- checked sprinkler/emitter output and function
- ensured proper operation of automatic flush valves
- removed, serviced and replaced valves and filters
- confirmed operational pressures
- tested irrigation equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for maintaining pressurised irrigation systems
- pressurised irrigation equipment operation and maintenance manual
- characteristics, operation and common operation and maintenance problems of pressurised irrigation system components, including:
 - pipes,
 - joints,
 - valves,
 - emitters, and
 - pumps.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - pressurised irrigation system operation and maintenance manual
 - personal protective equipment applicable to maintaining pressurised irrigation systems
- specifications:
 - work instructions and workplace procedures applicable to maintaining pressurised irrigation systems
 - pressurised irrigation system tools, equipment and procedures
 - workplace requirements applicable to health and safety in the workplace and maintaining pressurised irrigation systems
 - recording procedures
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG348 Operate and maintain moving irrigation system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency covers the skills and knowledge required to install, operate and maintain moving irrigation systems.

The unit applies to individuals who operate and maintain moving irrigation systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Install a moving sprinkler irrigation system	<p>1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks</p> <p>1.2 Select and use required materials, tools and equipment and check for safe operations</p> <p>1.3 Select, fit, use and maintain safety and personal protective equipment applicable to the task</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Join span pipes with correctly tensioned bolts to specifications 1.5 Connect V-jack trusses in sequence to bow the span 1.6 Connect goose necks and hose connectors 1.7 Fit pre-cut drop hoses and connect sprinklers
2. Complete assembly of moving sprinkler components	2.1 Assemble sprinklers, pressure regulators and hose directors to specifications 2.2 Fit gear box and control panel 2.3 Fit and tension wheels
3. Commission a moving sprinkler irrigation system	3.1 Connect and start pumping system and flush as required 3.2 Calibrate testing and monitoring equipment according to operation and maintenance manual and manufacturer specifications
4. Operate the system	4.1 Prime pumps, open or close valves and controls and begin the start-up sequence 4.2 Check emitter spacing 4.3 Monitor and service transport mechanism 4.4 Check irrigation controller for programming and efficiency 4.5 Correct or repair all malfunctions, leaks and blockages
5. Monitor irrigation operation	5.1 Implement irrigation schedule and monitor soil profile for wetting 5.2 Measure sprinkler performance using catch cans 5.3 Measure flow rates using containers of known volume 5.4 Measure operating pressures using pressure gauges 5.5 Check irrigated area for wheel ruts and other signs of waterlogging
6. Carry out system maintenance	6.1 Record damage and blockages with contaminants by damage type, location and the section of the system affected 6.2 Record and report damaged or faulty pumps, valves, sprinklers, electrical components and computer control systems and take action to effect repairs 6.3 Measure outlet pressure, flow rate and energy use and record 6.4 Inspect and maintain drive mechanism, frames and trusses 6.5 Implement end of season maintenance procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	6.6 Implement routine and preventative maintenance procedures 6.7 Implement storage procedures for irrigation components
7. Shut down the system in response to irrigation indicators	7.1 Apply water for sufficient time to achieve required soil moisture levels and allowing for weather conditions 7.2 Shut down system components and drain 7.3 Check drainage and treatment systems 7.4 Record and report irrigation activities according to workplace recording procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Use correct terminology to document moving irrigation system damage and blockages, and irrigation activities
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to communicate damage and blockages and report irrigation activities
Numeracy skills	<ul style="list-style-type: none"> Interpret testing equipment estimate of sprinkler performance, water flow rates and pressures Interpret testing equipment estimate of outlet pressure, flow rate and energy use
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information about system damage and blockages

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG348 Operate and maintain moving irrigation system	AHCIRG335 Operate and maintain moving irrigation system	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG348 Operate and maintain moving irrigation system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has operated and maintained a moving irrigation system on at least one occasion and has:

- applied workplace health and safety requirements
- selected materials, tools and equipment appropriate to the scope of works
- checked all bolts for correct torques
- tensioned span pipes with V-jack trusses
- fitted control panel and wheels
- started-up system and carried out operational checks
- checked injection pump and safety equipment operation
- read and followed operations manuals and irrigation schedules
- used control systems
- monitored system effectiveness
- checked for malfunctioning sprinklers
- measured and interpreted flow rates and pressures
- operated pressure and flow testing equipment
- taken and recorded measurements of output and efficiency
- greased drive shafts on pump and motor
- inspected lift base and arms for any stress marks or cracks
- changed engine oil and filter
- completed regular and end of season maintenance tasks
- shut down, cleaned equipment and disposed of waste
- recorded and reported irrigation activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for operating and maintaining moving irrigation systems
- installation and maintenance requirements of moving sprinkler irrigation systems
- pumps used in moving sprinkler irrigation systems and their operation
- calibration and testing equipment operation and maintenance manual and manufacturer specifications
- behaviour of water on varying terrain and soil types
- monitoring soil compaction and drainage
- soil water retention testing techniques
- soil, plant and water relationships
- water quality and water filtration techniques
- water requirements of plants and crops consistent with sound environmental management
- shutdown sequence.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - moving irrigation system materials, tools and equipment
 - relevant moving irrigation systems equipment
 - personal protective equipment applicable to operating and maintaining moving irrigation systems
- specifications:
 - work instructions and workplace procedures applicable to operating and maintaining moving irrigation systems
 - workplace requirements applicable to health and safety in the workplace and operating and maintaining moving irrigation systems
 - calibration and testing equipment operation and maintenance manual and manufacturer specifications
 - recording procedures
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements of assessors in applicable vocational education and training, legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG349 Recommend irrigation products and services

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to recommend irrigation products and services, including researching product range, estimating product quantities, providing product warranty advice, negotiating price and payment options, and providing advice and arranging product service and repairs, to fulfil the needs of a client.

The unit applies to individuals who recommend irrigation products and services under broad direction, and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research and apply knowledge of store product range	1.1 Access relevant sources of information to develop irrigation product knowledge 1.2 Identify products according to relevant product information 1.3 Operate store products, machinery and equipment safely 1.4 Apply knowledge of irrigation product range when recommending

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	to clients
2. Recommend irrigation products	<p>2.1 Identify client irrigation needs</p> <p>2.2 Provide and explain details of product specifications to client to assist with buying decisions</p> <p>2.3 Explain features and benefits of products to client to create a buying environment</p>
3. Estimate quantities	<p>3.1 Estimate accurate quantities of irrigation products from measurements and information provided, according to product requirements</p> <p>3.2 Provide quotation based on estimated quantities to client</p>
4. Advise on irrigation product warranties	<p>4.1 Provide to client clear explanation of the comparisons between products and manufacturer warranties</p> <p>4.2 Confirm individual product warranty terms and conditions from relevant sources of information</p> <p>4.3 Provide to client written information regarding individual product warranty terms and conditions, including extended or promotional warranties</p>
5. Negotiate price and payment options	<p>5.1 Explain payment options, including store recommended retail pricing for various brand options</p> <p>5.2 Negotiate individual product prices where necessary to achieve sales</p> <p>5.3 Complete sales documentation according to workplace requirements</p>
6. Advise on and arrange product service and repairs	<p>6.1 Question client to determine nature of product service or repair requirements</p> <p>6.2 Identify requirements by accessing manufacturer information</p> <p>6.3 Offer solutions, taking into consideration the nature of the requirements and available product information</p> <p>6.4 Identify and discuss the service or repair process</p> <p>6.5 Quote price and timeline for basic service or repairs</p> <p>6.6 Obtain client details and record on repair form</p> <p>6.7 Label item for repair and store securely according to workplace</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	procedures 6.8 Notify client on completion of service or repair

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about product range, including product specifications and warranty terms and conditions
Writing	<ul style="list-style-type: none"> Document estimates and quotes
Oral communication	<ul style="list-style-type: none"> Use clear language with customers to explain product specifications, warranties, service and repair requirements, and to compare products
Numeracy	<ul style="list-style-type: none"> Estimate irrigation product costs Estimate service and repair costs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG349 Recommend irrigation products and services	AHCMER304 Recommend irrigation products and services	Unit code and sector changed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG349 Recommend irrigation products and services

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has recommended irrigation products and services on at least two occasions, and has:

- demonstrated and explained a range of irrigation products
- provided advice on irrigation product specifications and warranties
- negotiated individual product prices
- determined product service and repair requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- irrigation product components, controls, features and functions
- store irrigation products range, service and repair policy
- manufacturer specifications and workplace safety requirements for a range of irrigation products
- principles of customer service and sales techniques
- principles and practices for recommending irrigation products and services
- irrigation product characteristics, technical capabilities and limitations
- price negotiation techniques and payment options for the store.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - irrigation products
- specifications:
 - irrigation product warranties, terms, conditions, manufacturer specifications and workplace safety requirements
 - irrigation product recommended retail price
- relationships:
 - clients
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG435 Determine hydraulic parameters for an irrigation system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to determine hydraulic parameters for an irrigation system.

The unit applies to individuals who apply specialised skills and knowledge to determine hydraulic parameters for an irrigation system. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm water delivery specifications for irrigation system	1.1 Confirm soil characteristics and determine hydraulic properties 1.2 Determine plant and crop water requirements for various stages of growth 1.3 Calculate peak water requirements for each area to be irrigated

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Determine pressures required to deliver required amount of water over specified area	2.1 Determine static pressures between water source and delivery points 2.2 Calculate dynamic pressure necessary to achieve required water volume
3. Analyse technical drawings to determine pressure losses through system	3.1 Calculate losses resulting from fittings, laterals and elevation differences 3.2 Determine losses resulting from flow through canals, culverts and pipes of varying sizes and diameters within a system 3.3 Calculate total friction loss 3.4 Determine hydraulic parameters for system
4. Select system components to deliver water efficiently	4.1 Select water delivery components to achieve efficient delivery rate and pressure 4.2 Select compatible flow direction and control components with pipes to achieve minimal friction losses

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding irrigation system hydraulic parameters
Writing	<ul style="list-style-type: none"> Record scheduling system information for each irrigation, significant rainfall events and other appropriate parameters
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG435 Determine hydraulic parameters for an irrigation system	AHCIRG402 Determine hydraulic parameters for an irrigation system	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG435 Determine hydraulic parameters for an irrigation system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has determined hydraulic parameters for an irrigation system on at least one occasion and has:

- read contour maps and interpreted elevations and distances
- applied hydraulic principles to manual and computerised irrigation systems
- calculated pressures, flows, velocities and friction losses
- determined efficiency of the system with varying system components.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- contour maps
- hydraulic principles such as static and dynamic pressure, pressure loss, friction loss, flow rate and velocity, effect of gradient on flow rate, contact time and drainage
- calculate pumping requirements
- irrigation system components
- types and pressure ratings for pipes, fittings and outlets
- calculate pressure loss due to irrigation components.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - contour maps
- specifications:

- irrigation system water delivery specifications
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG436 Implement an irrigation-related environmental protection program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to implement an irrigation related environmental protection program.

The unit applies to individuals who apply specialised skills and knowledge to the implementation of an irrigation related environmental protection program and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Provide information to staff involved in irrigation and related work	1.1 Provide information on the irrigation and drainage environmental protection plan to staff and explain 1.2 Explain relevant environmental protection legislation, regulation, codes of practice and workplace procedures and their application to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>staff</p> <p>1.3 Explain and demonstrate information about known risks to the environment and work practices associated with irrigation practices and related activities</p> <p>1.4 Explain and demonstrate workplace environmental record system and procedures</p> <p>1.5 Identify environmental protection induction and training needs and arrange training as required</p>
2. Implement and monitor procedures for identifying risks to the environment and maintaining effective control measures	<p>2.1 Identify and report environmental risks so that adequate risk assessment and control measures can be implemented</p> <p>2.2 Implement and monitor irrigation related environmental protection plan and program</p> <p>2.3 Identify and record inadequacies in existing risk control measures or allocation of resources according to environmental issue reporting procedures and processes</p> <p>2.4 Report environmental or resource allocation issues and measures to the owner or manager</p>
3. Implement procedures for responding to potential and actual environmental pollution events	<p>3.1 Implement procedures for responding to potential and actual pollution events to ensure prompt and effective control action is taken</p> <p>3.2 Investigate and report pollution events</p> <p>3.3 Calculate stormwater control requirements</p> <p>3.4 Discuss suitable measures to prevent recurrence and minimise risk of pollution events with the owner or manager, and implement revised procedures where necessary</p>
4. Implement and monitor procedures for maintaining environmental protection record	<p>4.1 Identify and rectify gaps in record keeping systems</p> <p>4.2 Maintain environmental protection records</p> <p>4.3 Monitor record keeping systems to ensure compliance</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding irrigation related environmental protection program Identify and interpret relevant environmental protection legislation, regulation, codes of practice and workplace procedures
Numeracy	<ul style="list-style-type: none"> Calculate stormwater control requirements
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG436 Implement an irrigation-related environmental protection program	AHCIRG404 Implement an irrigation-related environmental protection program	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG436 Implement an irrigation-related environmental protection program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has implemented an irrigation related environmental protection program on at least one occasion and has:

- provided and explained information on the irrigation and drainage environmental protection plan
- identified adverse environmental impacts of irrigation activities and taken appropriate remedial action
- explained and demonstrated the workplace environmental record system and procedures
- applied and complied with relevant environmental protection legislation, regulation, codes of practice, and workplace procedures
- calculated stormwater control requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental impacts of irrigation, using water from any ground or underground source
- environmental protection legislation, regulation, codes of practice, and workplace procedures relevant to irrigation related environmental protection programs
- workplace health and safety procedures relating to investigation of irrigation related hazards and implementation of an environmental protection plan.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- stormwater measuring equipment and procedures
- specifications:
 - irrigation and drainage environmental protection plan
 - relevant environmental protection legislation, regulation, codes of practice, and workplace procedures
- relationships:
 - property owner, manager and staff
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG437 Schedule irrigations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to monitor water use, apply a measured amount of water, assess efficacy of irrigation and repeat cycles, record irrigation and scheduling parameters, and plan for extremes of weather to determine irrigation scheduling requirements.

The unit applies to individuals who apply specialised skills and knowledge to irrigation scheduling. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Monitor crop and plant water use	1.1 Estimate or measure water use from one or more systems 1.2 Accumulate water as a soil water deficit in the root zone
2. Apply a measured amount of water	2.1 Predict a pre-determined deficit using a scheduling system

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	2.2 Apply irrigation to partly or fully replace the deficit 2.3 Increase water quantities where appropriate to ensure dilution and transport of toxic solutes below the root zone
3. Assess efficacy of irrigation and repeat cycles of irrigation	3.1 Measure effectiveness of irrigation application with in-field equipment 3.2 Adjust estimated soil moisture level in scheduling system to match in-field measurements 3.3 Recalibrate scheduling system where necessary 3.4 Repeat cycles of irrigation until schedule is correctly established
4. Record irrigation and scheduling parameters	4.1 Record each irrigation and significant rainfall event, plus other appropriate parameters used in scheduling system 4.2 Estimate and record drainage amount below root zone at each irrigation 4.3 Record system performance data
5. Plan for extremes of weather	5.1 Modify estimated deficits to cater for prolonged saturation following heavy rainfall 5.2 Alter shift areas, and where applicable, application rates, to suit appropriate irrigation schedules to minimise frost damage where applicable 5.3 Implement strategies involving prioritising of plants and crops and intermittent irrigation at times of extreme heat

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding irrigation schedule
Writing	<ul style="list-style-type: none"> Record scheduling system information for each irrigation, significant rainfall events and other appropriate parameters

Skill	Description
Numeracy	<ul style="list-style-type: none"> Estimate or measure water use Record water usage, rainfall event and system performance data
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG437 Schedule irrigations	AHCIRG408 Schedule irrigations	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG437 Schedule irrigations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has scheduled irrigation on at least one occasion and has:

- monitored crop and plant water use
- applied a measured amount of water
- assessed the efficacy of irrigation and repeat cycles of irrigation
- used and maintained in-field equipment that monitors the plant environment
- incorporated data from in-field equipment and remote monitoring sources into scheduling systems that compute irrigation requirements
- recorded irrigation and scheduling parameters
- planned for extremes of weather.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- inter-relationship between plant, soil and the environment in the determination of water budgets
- plant and crop response to moisture stress at different stages of growth
- recognition of moisture stress effects on plants, including instances where stress may be required
- physical soil characteristics such as infiltration rate, water holding capacity and wetted volume in the root zone
- water quality monitoring methods and acceptable quality limits
- in-field irrigation reticulation performance and capacity limits
- possible adverse impacts on the crop and environment from inefficient scheduling or unpredictable weather effects
- weather forecasting of extreme weather events such as heat waves, frosts and storms, and appropriate contingency strategy to minimise impacts.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation scheduling equipment
 - irrigation in-field measuring equipment and data
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG438 Select and manage pumping systems for irrigation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to identify irrigation system requirements, select pump and supervise installation, commissioning and testing of pump system, develop maintenance procedures and troubleshoot irrigation pumping systems.

High voltage electrical work must be carried out by a qualified electrician.

The unit applies to individuals who apply specialised skills and knowledge to the selection and management of irrigation pumping systems and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify irrigation system requirements from the irrigation design	1.1 Identify the components of the irrigation pumping system 1.2 Determine the water source and height of pull for water into the system

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Determine the water output for irrigation 1.4 Calculate the total friction loss of irrigation components
2. Select pump according to type, installation, range of flow rates, operating head and delivery distance	2.1 Select pump type based on pumping task and placement and the power source 2.2 Calculate total operating head requirements 2.3 Calculate pump discharge requirements based on irrigation output requirements and friction losses in the system 2.4 Determine pump motor speed and power requirements 2.5 Determine pump limiting suction lift 2.6 Interpret pump performance curves when selecting an efficient irrigation pump 2.7 Determine the size of the impeller from the pump curve
3. Supervise installation of pumps	3.1 Ensure pump is level and sited as close as possible to water source 3.2 Verify pump is properly anchored and connections are airtight 3.3 Confirm pump and motor connection are correctly aligned and motor is ventilated 3.4 Verify filters and valves are correctly fitted and orientated 3.5 Check pump is connected to the irrigation controller if required
4. Oversee commissioning and testing of pumping system	4.1 Develop pre-start and start up procedures 4.2 Check delivery performance and verify power usage and water output against requirements and pump specifications 4.3 Ensure pumping system is checked for leakages and cavitation 4.4 Confirm pumping system is operating effectively
5. Develop maintenance procedures for the pumping system	5.1 Develop routine maintenance procedures to rectify the effects of normal wear 5.2 Develop periodic inspection checklists to assist in maintenance scheduling 5.3 Carry out pump overhaul or repairs 5.4 Keep pump maintenance records, including details of pump and pumping system components for ordering
6. Carry out	6.1 Investigate lack of discharge or pressure and change settings or

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
troubleshooting on pumping systems	components 6.2 Investigate loss of water suction and make alterations to placement or fix leakages 6.3 Investigate cavitation in pumps and change settings or components 6.4 Investigate excessive power consumption and review design and pump selection and check for mechanical defects

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding selecting and managing irrigation pumping systems
Numeracy	<ul style="list-style-type: none"> Calculate water output, friction loss and operating head requirements Identify and record pump system component numbers
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG438 Select and manage pumping systems for irrigation	AHCIRG410 Select and manage pumping systems for irrigation	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG438 Select and manage pumping systems for irrigation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has selected and managed an irrigation pumping system on at least one occasion and has:

- identified irrigation system requirements from the irrigation design
- selected pump according to type, installation, range of flow rates, operating head and delivery distance
- calculated pumping requirements and pressure loss due to irrigation components
- supervised installation of pumps
- monitored the performance of pumps, valves and filters
- developed maintenance procedures for the pumping system
- carried out troubleshooting on the pumping system.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- application of mechanical, hydraulic and electrical principles
- automatic pump switches, including:
 - flow switches
 - irrigation controllers
 - pressure switches
 - timers
- sources of information and the processes for the calculation of material requirements and flow rates
- advantages and disadvantages of each pump type
- selection factors for pumps, including:
 - source of water and lift
 - the required pumping flow rate and pressure

- the total dynamic head
- the total suction head
- types of pumps and application in irrigation, including:
 - centrifugal
 - propeller
 - submersible
 - vertical turbine
- types of pumps suitable as booster and floating pumps
- discharge and flow rates
- types of impellers and their use
- environmental procedures for installing and maintaining irrigation pumping systems
- pump installation factors, including:
 - adequate space, head room, ventilation and lighting
 - correct alignment procedures of pump and motor shafts with direct coupled units
 - provision for adjustment and ease of dismantling
 - levelling and alignment processes
 - overhaul or repair operations
 - properties of water including pressure and flow rates
 - pump components and their principles of operation
 - pump efficiency, performance and pressure testing
 - pump positioning (driver alignment and suction length)
 - access for routine preventative maintenance
- types of valves
- pump cavitation, cause and effect.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation pumping system equipment and tools
 - irrigation pumping system measuring, and recording equipment and procedures
- timeframes:
 - according to the job requirements.

Assessors of this must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG439 Interpret and apply irrigation designs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to identify irrigation design key features, define the placement and function of irrigation system, mark out structures and component locations, estimate earth moving requirements, select pumps and system components, and develop staff instructions for interpretation and application of an irrigation design for an installation site.

The unit applies to individuals who apply specialised skills and knowledge to the interpretation and application of irrigation designs and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify the key features on an irrigation design	1.1 Identify and apply commonly used symbols and abbreviations on plans 1.2 Identify and apply common irrigation terms used on plans

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify key features of irrigation plans, elevations and sections 1.4 Identify scale, elevations and sections from drawings
2. Define the placement and function of the irrigation system	2.1 Interpret the plans, drawings and specifications for the irrigation design 2.2 Identify the proposed purpose and capacity of the irrigation system 2.3 Position the designed system in relation to the landscape of the site 2.4 Identify environmental impacts of the irrigation system, and its installation 2.5 Prepare as constructed drawings
3. Mark out structures	3.1 Mark the boundaries of the site 3.2 Identify existing irrigation infrastructure on the site 3.3 Identify electricity and communications infrastructure on the site plan and develop safety procedures 3.4 Mark out on site electricity and communications infrastructure 3.5 Mark out on site remnant vegetation to be retained 3.6 Identify and peg out on site proposed pipelines 3.7 Identify and peg out on site proposed irrigation structures
4. Estimate earth moving requirements for construction	4.1 Interpret earthworks drawings and take site levels 4.2 Estimate the amount of earth to be relocated or removed from the site 4.3 Confirm the sequence of earthworks and communicate to relevant staff 4.4 List and quantify materials required for irrigation structures 4.5 Verify construction requirements with designer
5. Select pumps and system components	5.1 Interpret design specifications for water volume, pressure and delivery pattern required 5.2 Select pumping system based on design specifications 5.3 Select irrigation system components based on design specifications 5.4 Verify component selection with designer

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
6. Mark out locations of all components	6.1 Define the sequence of operations for installation 6.2 Identify the delivery and storage area for components 6.3 Identify the placement of all components
7. Develop instructions for staff	7.1 Identify potential environmental hazards and strategies to minimise risks in instructions 7.2 Document the sequence of activities and work duties 7.3 Discuss workplace health and safety hazards and risks and safe working practices to manage risks with staff 7.4 Provide a construction schedule to staff

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding design requirements for irrigation system
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff, using clear language to communicate production schedule, design requirements and safety procedures Use clear communications with designer to verify construction requirements and component selection
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG439 Interpret and apply irrigation designs	AHCIRG415 Interpret and apply irrigation designs	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG439 Interpret and apply irrigation designs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has interpreted and applied an irrigation design on at least one occasion and has:

- read contour maps and interpreted elevations and distances
- interpreted technical drawings and site plans
- documented and communicated as constructed drawings, safety procedures and material requirements
- marked out procedures
- interpreted pressures, flows, velocities and friction losses
- determined efficiency of the system with varying system components
- documented and communicated installation sequence of operations, activities, work duties and construction schedule.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- erosion control and design principles
- principles and practices of irrigation design interpretation
- how to interpret plans, and general and technical specifications
- hydraulic calculations
- principles of native topsoil conservation and protection
- relevant work health and safety and environmental requirements
- levels and levelling
- pumps and pumping system components
- selection of water pumping and distribution components delivery based on specifications and requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation system site
 - site measuring, mark out and pegging tools and equipment
- specifications:
 - irrigation design, drawings, plans and specifications
- relationships:
 - designer, staff
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG440 Manage a moving sprinkler irrigation system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare a moving sprinkler irrigation system for operation, develop and implement start-up, shutdown and isolation procedures, trouble shoot for faults and blockages, and measure and review moving sprinkler irrigation system performance.

The unit applies to individuals who apply specialised skills and knowledge to the management of moving sprinkler irrigation systems and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Ensure the moving sprinkler irrigation system is prepared for operation	1.1 Assess staff training needs for carrying out pre-start checks and routine servicing and arrange training for those that require it 1.2 Program or adjust the irrigation controller to meet the required schedule

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Develop pre-start procedures for adjusting valves and checking filters and emitters
2. Develop and implement start up and shut down procedures	2.1 Develop start up procedures 2.2 Develop shut down sequence and isolation procedures 2.3 Install safety or security lock off devices and signage 2.4 Provide instructions for flushing the system as required
3. Carry out trouble shooting for faults and blockages	3.1 Arrange access to faulty components and blockages 3.2 Remove faulty system components and repair or dispose of according to operation and maintenance manual and workplace environmental procedures 3.3 Select and install replacement components according to operation and maintenance manual
4. Measure performance of a moving sprinkler irrigation system	4.1 Identify and record variations in pressures 4.2 Measure and record water flow rates according to workplace procedures 4.3 Identify and record variations in water flow and distribution 4.4 Measure and record pump performance parameters as necessary 4.5 Measure and record variations in pump performance parameters where relevant 4.6 Inspect distribution and delivery systems 4.7 Identify and repair system malfunctions and record actions 4.8 Identify and record factors external to the system that may cause interference
5. Review system performance status	5.1 Record system pressures and variations 5.2 Record system flow rates and variations 5.3 Calculate and record distribution uniformity and mean application rates 5.4 Determine and record watering depth 5.5 Calculate and compare energy use and water efficiency to industry benchmarks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding managing moving sprinkler irrigation systems
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare water test results

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG440 Manage a moving sprinkler irrigation system	AHCIRG422 Manage a moving sprinkler irrigation system	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG440 Manage a moving sprinkler irrigation system

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed a moving sprinkler irrigation system on at least two occasions and has:

- developed and supervised procedures for moving sprinkler irrigation system, including:
 - pre-start valve adjustment, and filter and emitter checking
 - start up
 - shutdown
 - isolation
 - system flushing
- removed and installed system components according to operation and maintenance manual and workplace environmental procedures
- identified adverse environmental impacts of irrigation activities and taken appropriate remedial action
- measured, interpreted and adjusted flow rates and pressures
- monitored and recorded system effectiveness, including:
 - application rates
 - depth of irrigation
 - infiltration and runoff
 - irrigation times
 - pressure variations and blockages
 - salinity levels and water quality
 - soil moisture levels
 - sprinkler coverage and output
- measured and recorded output and efficiency of an irrigation system
- used records to review an irrigation system.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- irrigation schedules
- general irrigation methods for moving sprinkler systems
- main components of moving sprinkler irrigation systems
- best practices for reducing environmental impacts of irrigation
- component specifications
- environmental hazards of runoff and compaction
- environmental impacts of irrigation using water from any ground or underground source
- moving sprinkler irrigation technologies
- moving sprinkler and travelling mechanism operation and maintenance manual servicing and maintenance procedures
- critical measures for moisture availability, including:
 - field capacity
 - readily available water
 - wilting point
- soil compaction and drainage monitoring
- soil moisture testing techniques
- soil, plant and water relationships
- water requirements of plants and crops consistent with sound environmental management
- pump types used in moving sprinkler irrigation systems and their output and efficiency ratings
- pump types used in moving sprinkler irrigation systems and their operation
- energy efficiency indicators and benchmarks for moving sprinkler irrigation, including:
 - application efficiency
 - average application rate
 - instantaneous application rate
- physical soil characteristics, including:
 - infiltration rate
 - water holding capacity
 - wetted volume in the root zone.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - moving sprinkler irrigation system equipment and tools
 - moving sprinkler irrigation system measuring, and recording equipment and manual

- specifications:
 - moving sprinkler and travelling mechanism operation and maintenance manual
 - environmental procedures applicable to moving sprinkler irrigation systems
 - industry energy and water efficiency benchmarks
- timeframes:
 - according to the job requirements
- relationships:
 - staff members.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG441 Evaluate water supply for irrigation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to determine irrigation water needs, assess water quality of water source, determine cost and availability of alternative water sources and complete water sourcing or acquisition arrangements.

The unit applies to individuals who apply specialised skills and knowledge to evaluate water supply for irrigation. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine water needs for irrigation	1.1 Determine the water needs of plants to be irrigated 1.2 Calculate the permeability of the soil and deep drainage losses 1.3 Calculate evapotranspiration rates through the growing season 1.4 Calculate soil water deficits throughout the season based on expected rainfall

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Calculate the amount of irrigation water required through the growing season
2. Assess a water source for water quality	2.1 Test and record water source for electrical conductivity and analyse results 2.2 Collect water samples for testing and interpret results
3. Determine cost and availability of alternative water sources	3.1 Evaluate water availability and access requirements for water sources 3.2 Cost capital expenditure requirements 3.3 Cost operating expenditure requirements 3.4 Investigate regulatory requirements for sourcing irrigation water and incorporate into business planning
4. Complete water sourcing or acquisition arrangements	4.1 Make contractual arrangements for sourcing of water 4.2 Plan for short term purchasing or selling of water depending on seasonal conditions if necessary

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding water supply for irrigation
Writing	<ul style="list-style-type: none"> Record scheduling system information for each irrigation, significant rainfall events and other appropriate parameters
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG441 Evaluate water supply for irrigation	AHCIRG426 Evaluate water supply for irrigation	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG441 Evaluate water supply for irrigation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has evaluated water supply for irrigation on at least one occasion and has:

- estimated the irrigation requirements of plants
- calculated water losses in an irrigation system
- interpreted results for electrical conductivity of irrigation water
- taken water samples
- calculated capital and operating expenditure for a water supply system
- compared costs for different water sources.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- plant water requirements in terms of water quality and frequency of supply
- salinity and composition impacts on soil structure and plant growth
- soils and water, soil moisture retention and movement, plant root zones and development, infiltration and leaching
- climatic factors in irrigation development, rainfall, evaporation, evapotranspiration and hydrology
- irrigation drainage, seepage, surface and subsurface drainage systems
- irrigation scheduling, soil moisture measurement
- efficiency of irrigation systems and long-term viability
- management planning and operation of water allocations
- cost benefit analysis
- capital and operating expenditure calculations to source water
- operations and maintenance requirements
- legislation relevant to the supply of water for irrigation.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - water source sampling and testing equipment and procedures
 - legislation relevant to the supply of water for irrigation
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG442 Supervise irrigation system installation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop construction procedures, interpret irrigation system design, and coordinate and supervise the construction and installation of a range of irrigation systems.

The unit applies to individuals who apply specialised skills and knowledge to the supervision of irrigation system installation and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop and implement construction procedures	1.1 Develop employment and contract management procedures 1.2 Develop procedures for controlling and recording site deliveries 1.3 Develop procedures for recording the hire of plant and equipment 1.4 Assess workplace health and safety risks associated with

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>construction activities and implement suitable controls and procedures to minimise risk</p> <p>1.5 Notify client, authorities and agencies of the schedule of works</p> <p>1.6 Develop procedures to minimise environmental impacts of construction work</p>
2. Interpret the irrigation system design for the site	<p>2.1 Determine the purpose, scale and required output of the irrigation system</p> <p>2.2 Assess the landscape of the site</p> <p>2.3 Determine construction requirements and verify with the designer</p> <p>2.4 Select components to meet design specifications and site requirements</p>
3. Organise resource requirements	<p>3.1 Nominate tasks, timelines and required resources</p> <p>3.2 Organise labour requirements</p> <p>3.3 Verify and check parts and equipment delivered to the site</p> <p>3.4 Select and maintain equipment and machinery according to operation and maintenance manual</p> <p>3.5 Allocate jobs and tasks to the work team</p> <p>3.6 Carry out safety induction for the task and site</p>
4. Supervise construction work	<p>4.1 Interpret plan and supervise construction work</p> <p>4.2 Confirm site is prepared and set out appropriately</p> <p>4.3 Confirm the correct lay out of the main line</p> <p>4.4 Supervise the insertion of sub-mains and flushing manifold</p> <p>4.5 Supervise the installation of risers, emitters and other components</p>
5. Complete installation work and test components	<p>5.1 Connect water supply</p> <p>5.2 Check emitters for optimal coverage and efficiency</p> <p>5.3 Set valves to allow water to targeted areas</p> <p>5.4 Start up and flush the system</p> <p>5.5 Attach measuring devices and controllers to the system</p>
6. Commission system	<p>6.1 Identify operating faults and take corrective action to meet design specifications</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	6.2 Calibrate testing and monitoring equipment 6.3 Carry out testing procedures and record results 6.4 Document irrigation system operating procedures 6.5 Hand over system in operating order

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding supervising irrigation system installation
Oral communication	<ul style="list-style-type: none"> Use clear language to notify client, authorities and agencies of installation activities Initiate discussions with client using clear language to communicate irrigation system hand over
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG442 Supervise irrigation system installation	AHCIRG431 Supervise irrigation system installation	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG442 Supervise irrigation system installation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has supervised an irrigation system installation on at least one occasion and has:

- implemented employment procedures
- conducted work health and safety risk assessment
- developed irrigation system construction and installation procedures
- interpreted irrigation designs
- supervised installation tasks including:
 - assembling sprinklers, pressure regulators and hose directors
 - checking operating specifications for pressures and flow rates
 - completing installation work and testing components
 - installing irrigation components
 - installing power and pumping plant
 - laying and joining sprinkler lateral pipelines
 - laying and joining supply and distribution pipeline
 - pressure testing the system
 - setting out and preparing site
 - setting up irrigation controllers
 - undertaking start-up procedures
- developed irrigation system operating procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- employment procedures
- project management principles

- safe work practices for construction
- design interpretation
- volume and pressure requirements
- water quality and water filtration techniques
- behaviour of water on varying terrain and soil types
- calculations for installing low volume irrigation systems
- operating specifications for pressures and flow rates
- pump capacity
- types of pumps and water flow rates
- licensing requirements for electrical work
- equipment and machinery operation and maintenance manual
- principles and practices of irrigation system installation supervision
- characteristics and operation of joints, valves and sprinkler components
- setting up fertigation equipment
- distribution uniformity
- start-up procedures
- setting up irrigation controllers
- commissioning procedures
- soil water retention testing techniques.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation system testing and monitoring equipment and manual specifications:
 - workplace procedures applicable to health and safety in the workplace, environment and irrigation system installation
- relationships
 - client, authorities and agencies
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG443 Supervise irrigation system maintenance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop an irrigation system maintenance program, supervise irrigation maintenance, maintain testing equipment, supervise pest and weed control in an irrigated area and complete irrigation system maintenance records.

The unit applies to individuals who apply specialised skills and knowledge to the supervision of irrigation system maintenance and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a maintenance program for an irrigation system	1.1 Establish the maintenance requirements for the irrigation site, components and structures 1.2 Determine the frequency of maintenance activities required and develop a schedule

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify and quantify total maintenance costs</p> <p>1.4 Assess the workplace health and safety risks associated with the maintenance program and implement suitable controls</p> <p>1.5 Minimise environmental impacts of irrigation system maintenance activities</p> <p>1.6 Develop a system for reporting maintenance activities</p>
2. Supervise maintenance of irrigation components	<p>2.1 Develop maintenance checklists for irrigation components</p> <p>2.2 Monitor component operation, identify operating faults and take appropriate action</p> <p>2.3 Identify and investigate abnormal operation or frequent and recurring breakdowns and organise maintenance as required</p> <p>2.4 Identify situations requiring expert advice seek and specialist assistance</p> <p>2.5 Review equipment condition routinely to ensure and maintain efficient operations</p>
3. Carry out maintenance of testing equipment	<p>3.1 Perform preventative maintenance on testing equipment</p> <p>3.2 Identify and report equipment wear and faults</p> <p>3.3 Perform minor repairs within limits of authorisation</p> <p>3.4 Replace defective parts and make adjustments</p> <p>3.5 Seek expert help where difficulties are encountered</p> <p>3.6 Update maintenance and calibration records</p>
4. Identify weed or pest infestation and seek specialist advice	<p>4.1 Identify and report weed or pest infestation</p> <p>4.2 Seek specialist advice on weed or pest infestation</p> <p>4.3 Ensure weed or pest control methods are scheduled at the optimum time that will have minimal damage to the crop</p> <p>4.5 Maintain infestation and treatment records</p>
5. Complete records of irrigation system maintenance	<p>5.1 Maintain maintenance activity records</p> <p>5.2 Assess maintenance work results against the maintenance program</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding supervising irrigation system maintenance
Oral communication	<ul style="list-style-type: none"> Use clear language to consult with specialist technical personnel
Numeracy	<ul style="list-style-type: none"> Estimate and calculate maintenance costs for material requirements, equipment, staff and specialist technical personnel
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility
Technology	<ul style="list-style-type: none"> Use of technology to record data electronically

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG443 Supervise irrigation system maintenance	AHCIRG432 Supervise irrigation system maintenance	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG443 Supervise irrigation system maintenance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has supervised irrigation system maintenance on at least one occasion and has:

- developed workplace procedures for pre-season, irrigation and post-season maintenance
- carried out visual checks for blockages or signs of wear in components
- checked connections and controllers
- checked sprinkler output and function
- confirmed operational pressures
- ensured proper operation of automatic flush valves
- inspected irrigation systems
- serviced irrigation equipment
- pressure tested systems
- tested emitter output and function
- tested irrigation equipment
- maintained testing equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of irrigation system maintenance supervision
- operation and maintenance requirements
- workplace procedures for pre-season, irrigation and post-season maintenance
- pre and post-season maintenance procedures
- workplace health and safety hazards and safe work procedures
- environmental impacts of irrigation maintenance
- drainage systems
- system components

- system inspection
- operating pressures and output
- pumping and distribution systems
- distribution uniformity
- visual checks for blockages or signs of wear in components
- equipment testing
- pressure testing procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation system testing equipment and manual specifications:
 - workplace procedures applicable to health and safety in the workplace and irrigation system maintenance
- relationships:
 - specialist technical personnel
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG444 Manage irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare an irrigation system for operation, develop start-up, shutdown and isolation procedures, trouble shoot for faults and blockages, and measure and review irrigation system performance.

The unit applies to individuals who apply specialised skills and knowledge to the management of irrigation systems and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare irrigation system for operation	1.1 Assess staff training needs for carrying out pre-start checks and routine servicing and arrange training for those that require it 1.2 Program or adjust the irrigation controller to meet required schedule 1.3 Develop procedures for adjusting valves and checking filters and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	emitters
2. Develop start-up, shutdown and isolation procedures	2.1 Develop start-up procedures for the system 2.2 Develop shutdown sequence and isolation procedures 2.3 Install safety or security lock off devices and signage 2.4 Provide instructions for flushing the system as required
3. Supervise trouble shooting activities	3.1 Organise access to faulty components and blockages 3.2 Organise removal and repair or disposal of faulty components 3.3 Supervise selection and installation of replacement components
4. Supervise irrigation system performance measurement	4.1 Identify and record variations in pressures 4.2 Measure and record water flow rates 4.3 Identify and record variations in water flow and distribution 4.4 Measure and record pump performance parameters as necessary 4.5 Measure and record variations in pump performance parameters where relevant 4.6 Inspect distribution and delivery systems 4.7 Identify and repair delivery system malfunctions and record actions 4.8 Identify and record factors external to the system that may cause interference
5. Review system performance status	5.1 Record system pressures and variations 5.2 Record system flow rates and variations 5.3 Calculate and record distribution uniformity and mean application rates 5.4 Determine and record watering depth 5.5 Calculate and compare energy use and water efficiency to industry benchmarks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding managing irrigation systems
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG444 Manage irrigation systems	AHCIRG433 Manage irrigation systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG444 Manage irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed the operations of an irrigation system on at least two occasions and has:

- measured, interpreted and adjusted flow rates and pressures
- developed procedures for irrigation system start up, shutdown and operational checks
- accessed and prepared data records for both print-based and computer-based data
- calculated pressure differentials, flow rates, crop yields, estimated water usage and actual water usage
- monitored system effectiveness
- applied measuring and testing techniques
- measured output and efficiency of an irrigation system.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of irrigation system management
- irrigation schedules
- irrigation technologies
- component specifications
- pump types used in irrigation systems and their output and efficiency ratings
- soil moisture testing techniques
- using records to review an irrigation system
- water in soils and plants.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation system measuring, and recording equipment and manual specifications:
 - industry energy and water efficiency benchmarks
 - computer for record keeping and managing data
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG445 Manage surface irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare a surface irrigation system for operation, develop and implement start-up, shutdown and isolation procedures, trouble shoot for faults and blockages, and measure and review surface irrigation system performance.

The unit applies to individuals who apply specialised skills and knowledge to the management of surface irrigation systems and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1.Prepare surface irrigation system for operation	1.1 Assess staff training needs for carrying out pre-start checks and routine servicing and arrange training for those that require it 1.2 Program or adjust the irrigation controller to meet the required schedule

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Develop procedures for adjusting valves and checking outlets
2. Develop and implement start-up and shut down procedures for a surface irrigation system	2.1 Develop start-up procedures for the system 2.2 Provide training in priming pumps and setting gates to commence irrigating 2.3 Develop shut down sequence and isolation procedures 2.4 Specify soil conditions for operation and maintain tracks to reduce compaction
3. Measure performance of a surface irrigation system	3.1 Identify and record variations in pressures at the head works and control valves 3.2 Measure and record water flow rates according to workplace procedures 3.3 Identify and record variations in water flow and distribution 3.4 Measure and record pump performance parameters as necessary 3.5 Measure and record variations in pump performance parameters where relevant 3.6 Inspect distribution, drainage and water measurement systems 3.7 Identify and repair system malfunctions and record actions 3.8 Identify and record factors external to the system that may cause interference
4. Review system performance status	4.1 Record system pressures and variations 4.2 Record system flow rates and variations 4.3 Calculate and record distribution uniformity and mean application rates 4.4 Determine and record watering depth 4.5 Measure quantity and quality of tail water, and amount of reused water 4.6 Calculate and compare energy use and water efficiency to industry benchmarks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding managing surface irrigation systems
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG445 Manage surface irrigation systems	AHCIRG434 Manage surface irrigation systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG445 Manage surface irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed the operations of a surface irrigation system on at least two occasions and has:

- developed procedures and provided staff training to:
 - perform running repairs on irrigation delivery and drainage systems
 - carry out shut down procedures
 - check pressure at the head works and control valves
 - set up pipes, system equipment and outlets
 - use siphons
- developed procedures for surface irrigation system start up, shutdown and operational checks
- identified and recorded variations in water flow and distribution
- measured and recorded water flow rates.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of surface irrigation management
- main components of surface irrigation systems
- water in soils and plants
- pump types used in surface irrigation systems their operation and operating requirements
- physical soil characteristics such as infiltration rate, water holding capacity and wetted volume in the root zone
- soil moisture testing techniques
- set up of headwater, tail water, channels and beds
- critical measures for moisture availability, including:
 - evapotranspiration

- field capacity
- infiltration rates
- readily available water
- water holding capacity
- wilting point
- calculating irrigation efficiency using records to review an irrigation system.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - surface irrigation system equipment and tools
 - surface irrigation system measuring, and recording equipment and manual
- specifications:
 - industry energy and water efficiency benchmarks
- timeframes:
 - according to the job requirements
- relationships
 - staff interactions.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG446 Provide irrigation sales and service

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify customer needs, provide advice, recommend irrigation components and pumps, research irrigation innovations and conduct retail transactions.

The unit applies to individuals who apply specialist skills and knowledge to providing irrigation sales and service. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish customer needs	1.1 Use interpersonal skills to engage with customer and identify needs 1.2 Handle customer enquiries courteously and promptly according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures and legislative requirements 1.3 Match available products to customer needs and against ecological considerations
2. Research and provide product advice	2.1 Research and update knowledge and understanding of irrigation products regularly from authoritative sources 2.2 Provide advice to customers on products and/or services in a timely and professional manner according to workplace procedures and legislative requirements 2.3 Explain or showcase product and/or service details to meet customer needs 2.4 Suggest alternative and additional products and services as necessary 2.5 Address customer client concerns and questions
3. Recommend irrigation components and pumps	3.1 Interpret irrigation design 3.2 Confirm pump and component requirements and discuss with customer 3.3 Provide advice on irrigation pumps based on suitability for the task, energy efficiency from pump curves and serviceability 3.4 Provide advice on components based on technically correct and current information
4. Conduct retail transactions with irrigation customers	4.1 Estimate quantities for irrigation installation projects 4.2 Prepare and supply quotes on products and services 4.3 Negotiate price and payment options 4.4 Provide advice on irrigation product warranties 4.5 Organise product service and repairs according to workplace procedures 4.6 Organise delivery of irrigation merchandise in a timely manner to meet customer needs
5. Research irrigation innovations and products	5.1 Maintain contacts in irrigation product development, and review new products regularly 5.2 Study exhibitions and field displays to update technical expertise 5.3 Read and incorporate technical and extension information into advice to customers

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about irrigation product range, including product specifications and warranty terms and conditions, workplace procedures and legislative requirements Interpret textual information from irrigation designs
Oral communication	<ul style="list-style-type: none"> Use clear language with customers to gather information and match products to customer needs, explain products and suggest additional products and services
Numeracy	<ul style="list-style-type: none"> Interpret numerical information from irrigation designs and pump curves Estimate irrigation product quantities and costs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG446 Provide irrigation sales and service	AHCMER407 Provide irrigation sales and service	Unit code and sector changed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG446 Provide irrigation sales and service

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has provided irrigation sales and service on at least two occasions, and has:

- engaged with and advised customers on the range of irrigation products, and received information on their specific application and environment
- complied with relevant legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- represented the workplace in a professional manner when dealing with customers
- researched irrigation information to retain technical currency in all aspects of irrigation relevant to local district requirements
- interpreted and estimated requirements for materials and components from an irrigation design
- used pump curves to determine energy and water efficiency
- selected irrigation components for a system.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of irrigation sales and service
- principles of customer service and sales techniques
- legislative requirements in sales environments, including fair trading, trade practices and sales of goods legislation and public liability
- relevant components of state or territory Acts relating to irrigation use
- irrigation components technical specifications and suitability
- workplace procedures for providing advice on irrigation products
- irrigation products and pump range of store

- demonstration and assembly of irrigation products and components
- pump and irrigation equipment components, controls, features and functions
- determination of pump capacities in relation to proposed application
- pump and irrigation equipment characteristics, technical capabilities and limitations
- price negotiation techniques and payment options for store
- interpretation of manufacturer specifications
- store product and service and repair policy.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation products and pumps
 - irrigation products and pumps specifications and warranties
 - irrigation design
 - pump curves
- specifications:
 - legislative requirements in sales environments, including fair trading, trade practices and sales of goods legislation and public liability
 - relevant components of state or territory Acts relating to irrigation use
 - workplace procedures for providing advice on irrigation products
- relationships:
 - customers.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG506 Design irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to identify design requirements, determine specifications, define pumping and power system requirements, determine capital expense and operating expense budgets, and design irrigation systems.

The unit applies to individuals who apply specialised skills and knowledge to the design of irrigation systems, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine design requirements	1.1 Analyse water quantity and quality needs for a particular crop or situation so that an estimation can be made for sufficiency and timeliness 1.2 Evaluate water transfer, recharge, reuse and harvesting systems 1.3 Determine water collecting and storing processes that do not

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>degrade the water quality</p> <p>1.4 Determine construction specifications that satisfy organisational and regulatory requirements</p> <p>1.5 Investigate regional geology and geography to predict irrigation system parameters</p> <p>1.6 Conduct a site investigation to assess type of soil, depth of soil, depth of ground water, soil and water salinity, and structural or chemical impediments</p> <p>1.7 Determine the most cost effective irrigation system</p> <p>1.8 Document design calculations and decisions</p> <p>1.9 Identify and protect environmentally sensitive areas according to local, state and federal legislation and regulations</p>
2. Define pumping and power systems	<p>2.1 Identify pumps that can deliver water efficiently when needed, from the water storage at the flow and at the pressure required to operate the distribution system to the design specifications</p> <p>2.2 Select pump motor combinations that are efficient, reliable, functional, serviceable and flexible for the intended application</p> <p>2.3 Determine energy requirements and layout of electricity lines and check with local authorities</p> <p>2.4 Optimise the relationship between capital and operational costs including a comparison of energy sources</p> <p>2.5 Document performance indicators, design calculations and decisions</p> <p>2.6 Design construction specifications that define work required to make suitable pumping and power systems available</p>
3. Design an irrigation distribution system	<p>3.1 Investigate regional geology and geography so that a prediction can be made on the sustainability of irrigation</p> <p>3.2 Evaluate distribution systems and design with respect to a range of key variables</p> <p>3.3 Size pipes, valves and fittings according to design system specifications so that capital cost is balanced against operation costs over the anticipated system life</p> <p>3.4 Calculate and document flows, water levels and pressures so that they are within the acceptable tolerances for optimum performance</p> <p>3.5 Include mechanisms for controlling and adjusting pressure and</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>confirm isolation valves to direct water to areas with different irrigation schedules</p> <p>3.6 Design distribution and monitoring systems to meet industry recommendations and calculate distribution system flow and velocity</p> <p>3.7 Design construction plans and specifications that define the work required to achieve the required standards of uniformity and efficiency of water application</p> <p>3.8 Document irrigation distribution system design</p>
4. Determine capital expense budget	<p>4.1 Document design calculations and decisions and communicate relevant information through plans, specifications and manuals</p> <p>4.2 Determine and document materials requirements from plans and specifications</p> <p>4.3 Estimate labour requirements based upon documented work schedule with reasonable allowance for variances in work schedules</p> <p>4.4 Base costing attributed to each component on quoted information from suppliers, or sound analysis of individual elements</p> <p>4.5 Document capital expense budget</p> <p>4.6 Confirm capital expense budget output with an appropriately experienced and qualified person</p>
5. Determine operating expense budget	<p>5.1 Calculate an operating expense budget that includes all expenses applicable to the completed irrigation system</p> <p>5.2 Document operating expense budget</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding design requirements for irrigation system, including regional geology and geography information and environmentally sensitive areas

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with local authorities, using clear language to communicate energy requirements and check layout of electricity lines, and confirm power supply design specification with power authorities Use clear communications with appropriately experienced and qualified person to discuss design output and capital expense budget outputs
Numeracy	<ul style="list-style-type: none"> Use site investigations data to determine the most cost-effective irrigation system
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG506 Design irrigation systems	AHCIRG503 Design irrigation, drainage and water treatment systems	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG506 Design irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has designed an irrigation system on at least one occasion and has:

- collected and analysed information for the design
- compared costings
- developed system specifications
- documented outcomes
- identified system design requirements
- identified adverse environmental impacts of irrigation activities and taken appropriate remedial action
- developed budgets.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- developments in irrigation technology
- workplace health and safety and environmental protection legislation and regulations, codes of practice and workplace policies and procedures relevant for the irrigation system design
- soil types and their impact on the systems
- design processes
- environmental impacts of irrigation systems
- control and monitoring systems
- cost/benefit analysis.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - regional geology and geography information
 - irrigation system sites
- specifications:
 - irrigation system water and soil testing equipment and procedures
 - local, state and federal workplace health and safety and environmental protection legislation, regulations, codes of practice and workplace requirements applicable to irrigation system design
- relationships:
 - local authorities, appropriately experienced and qualified person
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG507 Audit irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to collect and collate data, assess data, compile a system evaluation report and recommend alterations to improve irrigation system performance.

The unit applies to individuals who apply specialised skills and knowledge to the audit of irrigation systems, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect and collate all available data	1.1 Collect data on system performance 1.2 Collect data on environmental and workplace health and safety issues 1.3 Collect data on equipment supply and usage

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Collect data on crop production 1.5 Collect data on water use and quality 1.6 Collect data on climatic trends 1.7 Collect data on physical and chemical properties of soil 1.8 Collate and record available data using computer software
2. Assess actual data against benchmarks, specifications and predictions	2.1 Analyse system performance and compare with system specifications and performance predictions 2.2 Analyse supply and stock use and compare with previous and estimated usage and costs 2.3 Analyse crop production and compare with previous and predicted production 2.4 Analyse water usage and quality and compare with past and predicted usage and quality 2.5 Analyse climatic information and compare with predicted trends 2.6 Analyse soil properties and compare with previous and predicted properties 2.7 Analyse production costs related to irrigation system and compare with previous and predicted costs
3. Compile a report of system evaluation	3.1 Examine indicators of good performance 3.2 Examine indicators of poor performance 3.3 Examine causes of deviations from performance specifications and requirements 3.4 Prepare a report that includes discussion of results of data analysis and conclusions reached on irrigation system performance in relation to crop production and business performance
4. Recommend alterations to achieve performance improvement	4.1 Document recommendations to modify or eliminate causes of poor performance, or to enhance current performance 4.2 Report audit findings and recommendations to property owner or manager

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding irrigation system performance and audit requirements
Oral communication	<ul style="list-style-type: none"> Initiate discussions with property owner or manager, using clear language to communicate audit report findings and recommendations
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information about audit report findings and recommendations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG507 Audit irrigation systems	AHCIRG501 Audit irrigation systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG507 Audit irrigation systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has audited an irrigation system on at least two occasions and has:

- analysed and organised data
- identified adverse environmental impacts of irrigation system activities and recommended appropriate remedial action
- recommended relevant workplace health and safety and environmental procedures
- used computer software for irrigation auditing
- solved performance problems and recommended solutions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental impacts of irrigation systems using water from any ground or underground source
- relevant workplace health and safety legislation, codes of practice and workplace requirements
- statistical data analysis procedures and software
- evaluation procedures
- irrigation system performance indicators.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- irrigation system performance data related to irrigation system being audited
- system specifications and performance prediction information related to irrigation system being audited
- computer and statistical data analysis procedures and software
- relationships:
 - property owner or manager
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG508 Design irrigation system maintenance and monitoring programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to design irrigation system maintenance and monitoring programs.

The unit applies to individuals who apply specialised skills and knowledge to the design of irrigation system maintenance and monitoring programs, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Design an irrigation system maintenance program	1.1 Specify resources needed to perform maintenance tasks 1.2 Specify repairs, replacements and servicing requirements for equipment and machinery 1.3 Specify activities required to maintain the irrigation site, system

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>hardware and water quality</p> <p>1.4 Analyse manufacturer operating manuals and use as guidance to specify maintenance activities, schedule and skills required</p> <p>1.5 Take into account water supply authority constraints and requirements for water and maintenance when scheduling system maintenance program activities</p> <p>1.6 Determine labour and workplace health and safety requirements for each activity and record</p> <p>1.7 Ensure weed control, water storage and treatment maintenance form an integral part of the system maintenance program</p> <p>1.8 Specify strategies for dealing with and minimising environmental impacts and maximising positive impacts of irrigation, drainage and water treatment systems</p> <p>1.9 Document irrigation system maintenance program</p>
2. Design a monitoring and scheduling program	<p>2.1 Integrate procedures for monitoring and recording system hardware use and performance into the monitoring and scheduling program</p> <p>2.2 Integrate procedures for scheduling, monitoring and recording water use</p> <p>2.3 Develop procedures for monitoring and recording operating costs</p> <p>2.4 Develop water restriction contingency plans</p> <p>2.5 Document irrigation system monitoring and scheduling program</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding design requirements for irrigation system maintenance and monitoring programs Interpret manufacturer operating manual information related to irrigation system maintenance and monitoring program design Interpret water quality guidelines for fresh and marine water,

Skill	Description
	workplace health and safety and environmental protection legislation, codes of practice and workplace requirements related to irrigation system monitoring and maintenance programs
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG508 Design irrigation system maintenance and monitoring programs	AHCIRG502 Design irrigation system maintenance and monitoring programs	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG508 Design irrigation system maintenance and monitoring programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has designed an irrigation system maintenance and monitoring program on at least one occasion and has:

- identified and scheduled irrigation system maintenance and monitoring activities
- analysed and organised information
- designed scheduling and recording procedures
- developed and included relevant workplace health and safety and environmental procedures
- identified adverse environmental impacts of irrigation, drainage and water treatment activities and taken appropriate remedial action.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- maintenance and monitoring design requirements
- drainage and water treatment using water from any ground or underground source
- irrigation, drainage and water treatment maintenance activities
- water quality guidelines for fresh and marine water
- water supply authority constraints
- workplace health and safety and environmental protection legislation, regulations, codes of practice and workplace requirements applicable to monitoring and maintenance programs
- environmental impacts of irrigation.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - manufacturer operation manuals relevant to irrigation system maintenance and monitoring program design
 - water quality guidelines for fresh and marine water
 - workplace health and safety and environmental protection legislation, regulations, codes of practice and workplace requirements applicable to monitoring and maintenance programs
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG509 Develop an irrigation and drainage management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to compile information and develop an irrigation and drainage management plan.

The unit applies to individuals who apply specialised skills and knowledge to the development of an irrigation and drainage management plan, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Compile property background information	1.1 Identify ownership details 1.2 Compile irrigation history 1.3 Identify locality and property details

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify agreements and easements with surrounding properties 1.5 Develop property maps to illustrate locality and property boundaries
2. Compile information on infrastructure and topography	2.1 Define significant topographical and infrastructure features 2.2 Identify opportunities and strengths of the property 2.3 Identify limitations and weaknesses of the property 2.4 Identify local planning issues that may affect the irrigation and drainage management plan 2.5 Develop a map overlay to illustrate topography and infrastructure
3. Compile information on natural resources	3.1 Gather soil survey information 3.2 Identify strategies to minimise and reduce soil erosion, and physical and chemical soil deterioration 3.3 Identify water source availability and quality 3.4 Identify ground water depth and salinity issues 3.5 Define climatic characteristics 3.6 Develop a map overlay to illustrate natural resource features
4. Compile information on workplace cropping and planting	4.1 Define the suitability of soils and water quality for crops and plants 4.2 Identify any special irrigation requirements of crops and plants 4.3 Develop monthly and annual water budgets for each crop and plant program 4.4 Identify current yields and compare with benchmark crop yields 4.5 Establish targets with consideration for any factors which could limit optimum production 4.6 Define intended crop rotations 4.7 Develop a map overlay to illustrate crop and plant detail
5. Compile information on existing irrigation and drainage system where used	5.1 Evaluate current system performance 5.2 Compare current system performance to benchmark performance parameters 5.3 Develop scheduling procedures 5.4 Define drainage management performance including

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	environmental authority compliance issues 5.5 Identify areas for improvement in system management and structure 5.6 Develop a map overlay to illustrate irrigation system layout
6. Develop an irrigation and drainage management plan with specifications for new or up-graded irrigation and drainage system	6.1 Summarise performance requirements for distribution, treatment and drainage systems 6.2 List new or replacement components 6.3 Develop a development timetable 6.4 Define proposed scheduling system 6.5 Define performance monitoring procedures and workplace health and safety requirements 6.6 Define drainage management processes 6.7 Develop a map overlay to illustrate proposed irrigation and drainage development 6.8 Document irrigation and drainage management plan

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for irrigation and drainage management plan
Numeracy	<ul style="list-style-type: none"> Interpret statistical data and measurements
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility
Technology	<ul style="list-style-type: none"> Use for researching, collecting and collating data

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG509 Develop an irrigation and drainage management plan	AHCIRG504 Develop an irrigation and drainage management plan	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG509 Develop an irrigation and drainage management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed an irrigation and drainage management plan on at least one occasion and has:

- compiled and analysed complex information
- used a range of irrigation and information management software
- interpreted statistical data and measurements
- developed plans and reports
- developed and implemented relevant workplace health and safety and environmental procedures
- identified adverse environmental impacts of irrigation system activities and recommended appropriate remedial action.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace policies and procedures relevant to irrigation and drainage management planning
- measuring and monitoring procedures
- readily available water
- water table and salinity
- soil, plant and water relationships
- computerised irrigation systems
- methods and techniques of irrigation
- environmental impacts of irrigation systems using water from any ground or underground source
- irrigation system options.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer and irrigation and information management software
- specifications:
 - workplace policies and procedures relevant to irrigation and drainage management planning
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCIRG510 Establish and maintain an irrigation-related environmental protection program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to establish and maintain an irrigation-related environmental protection program.

The unit applies to individuals who apply specialised skills and knowledge to establish and maintain an irrigation-related environmental protection program, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish and maintain an irrigation and drainage environmental protection program	1.1 Develop an irrigation and drainage environmental protection plan in consultation with property owner or manager 1.2 Define environmental responsibilities for the property and include

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>in the duties of all staff</p> <p>1.3 Include financial and human resources to implement the environmental protection plan in a timely and consistent manner</p> <p>1.4 Establish and maintain workplace environmental records</p>
2. Encourage staff involvement in the environmental protection program	<p>2.1 Develop environmental issue reporting procedures and processes that allow and encourage staff to provide input into environmental issues</p> <p>2.2 Address environmental issues raised by with staff</p> <p>2.3 Document environmental issues and solutions</p> <p>2.4 Incorporate solutions into environmental protection plan</p>
3. Develop environmental protection program risk management procedures	<p>3.1 Establish and maintain procedures for identifying and assessing existing and potential risks to the environment arising from irrigation practices and related activities</p> <p>3.2 Design work processes and procedures to reduce or eliminate risks and hazards to the environment</p> <p>3.3 Establish and maintain organisational and administrative systems to control risks to the environment arising from irrigation practices and related activities</p> <p>3.4 Establish and maintain procedures to monitor risks to the environment and compliance with relevant legislation, regulations and codes of practice</p>
4. Develop procedures for responding to environmental pollution events	<p>4.1 Identify potential environmental pollution events</p> <p>4.2 Develop procedures to control the level of risk associated with pollution events in consultation with relevant environmental protection agencies and local government authorities</p> <p>4.3 Provide appropriate information and training to staff to ensure prompt implementation of response procedures</p>
5. Develop and maintain an environmental protection induction and training program	<p>5.1 Develop an environmental protection induction and training program</p> <p>5.2 Incorporate environmental protection training into the organisational staff training program</p> <p>5.3 Maintain environmental protection training records</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding environmental protection legislation, regulation, codes of practice and workplace procedures and requirements for environmental protection plan and program
Oral communication	<ul style="list-style-type: none"> Initiate discussions and use clear language with property owner or manager and staff to develop irrigation-related environmental protection plan and program Initiate discussions with relevant environmental protection agencies and local government authorities to establish procedures to control level of risk and maintain compliance with relevant legislation and regulations
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information about irrigation-related environmental protection program, plan, procedures and processes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG510 Establish and maintain an irrigation-related environmental protection program	AHCIRG505 Establish and maintain an irrigation-related environmental protection program	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCIRG510 Establish and maintain an irrigation-related environmental protection program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has established and maintained an irrigation-related environmental protection program on at least one occasion and has:

- developed environmental protection program, plan, policies and procedures
- used technology to draft documents, develop environmental information and audit data bases
- developed and implemented relevant workplace health and safety and environmental procedures
- identified adverse environmental impacts of irrigation activities and taken appropriate remedial action
- applied and complied with environmental requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental impacts of irrigation, using water from any ground or underground source
- environmental protection planning for irrigation and drainage
- external factors that may affect the system
- relevant workplace health and safety and environmental protection legislation, regulation, codes of practice and workplace procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:

- workplace health and safety and environmental protection legislation, regulations, codes of practice and workplace procedures applicable to establishing and maintaining an irrigation-related environmental protection program
- relationships:
 - property owner, manager, staff, environmental protection agency and local government authorities
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW201 Operate a handheld GPS device

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to operate a handheld Global Positioning System (GPS) device, including tablet and phone-based GPS systems, and record and use spatial information relating to points, tracks and routes.

The unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. This includes undertaking defined activities and work in a structured context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan GPS operations	1.1 Identify purpose and use of the GPS and data collected from supervisor instructions 1.2 Prepare equipment and materials for GPS operations 1.3 Identify key operational parameters, and adjust GPS device settings according to operator manual

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Source and upload support data to GPS device 1.5 Plan power supply strategy for field operations 1.6 Assist with the identification of fieldwork health and safety hazards, and apply controls according to supervisor instructions and workplace procedures
2. Collect, use and store GPS information in the field	2.1 Establish accuracy of device for current position 2.2 Clear GPS logs to establish starting point for temporal data sequence 2.3 Operate handheld device to perform basic functions and record spatial and temporal data 2.4 Manage power supply for portable devices for field operations
3. Use basic software to retrieve, manipulate, display and store GPS data	3.1 Select software required for GPS data manipulation 3.2 Upload/sync GPS data from handheld device 3.3 Sort and categorise data for storage according to workplace requirements 3.4 Manipulate and edit data and data sets according to software procedures 3.5 Create simple visual reports for data interpretation and display
4. Shut down, maintain and store handheld GPS equipment	4.1 Turn off GPS device and prepare for storage 4.2 Record GPS use and identified faults according to workplace procedures 4.3 Clean and store GPS device

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret instructions from supervisor and GPS operator's manual to effectively upload required GPS data, operate GPS equipment and download data requested

Skill	Description
Writing	<ul style="list-style-type: none"> Record and upload data using protocols for data transfer

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW201 Operate a handheld GPS device	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW201 Operate a handheld GPS device

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, operated a handheld Global Positioning System (GPS) unit and software-based GPS on handheld portable devices, and has:

- navigated settings on the GPS/tablet to change datum, coordinate system and units
- adjusted display parameters to suit operating conditions
- managed power supply for portable devices
- identified and followed workplace health and safety procedures for fieldwork and reported unsafe situations to supervisor
- collected, used and stored GPS information in the field, including:
 - recorded and labelled points
 - recorded and labelled tracks
 - navigated to points
 - created a route using recorded waypoints
 - navigated a route
- used basic software to retrieve, manipulate, display and store GPS data, including:
 - edited symbols, labels and names
 - added notes and other information
 - created routes from waypoints and tracks
 - created and edited files and datasets of spatial information
 - used data to modify/update support dataset for future work
- used software to create simple visual reports for data interpretation and display
- decommissioned and stored GPS equipment, including:
 - updated retained dataset on device and checked labels/names
 - removed temporary and superfluous data from the device
 - restored settings according to workplace standards

- removed batteries.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic GPS function, principles and limitations of the technology
- a range of portable GPS devices
- a range of supporting devices and software, including:
 - chargers and power banks
 - laptops and tablets
 - memory cards
- mapping and reporting software, including stand-alone and web-based applications
- operational parameters, including:
 - datum
 - coordinate system
 - units
 - naming protocols
- sources of error in GPS
- enterprise procedures and practice for GPS operations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - handheld GPS device, phone or tablet with GPS capability
 - software for using a GPS and manipulating data
- specifications:
 - workplace procedures for use, storage and data management of handheld GPS device.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW301 Supervise park visitor activities

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to give information and advice, and supervise public access and activities within a park or reserve.

All work is done in accordance with enterprise procedures, legislative and public health and safety requirements.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Provide information on opening and closing	1.1 Operate security systems 1.2 Inform public of opening and closing times

Element	Performance criteria
times	
2. Advise public on park or reserve access and activities	2.1 Communicate with public in a courteous, confident and effective manner 2.2 Inform public of responsibilities and safety requirements when using park facilities 2.3 Check park access and facilities are suitable for access 2.4 Inform public of changes to access to park facilities when these have been affected by severe weather or other event
3. Monitor visitor activities	3.1 Monitor visitor activities to ensure there is no risk of environmental degradation or destruction or to biosecurity 3.2 Monitor visitor activities to ensure the safety of staff and the general public 3.3 Act upon non-compliance with site access conditions 3.4 Report and respond to incidents

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLPW301A Supervise park visitor activities.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW301 Supervise park visitor activities

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- advise public on park or reserve access and activities
- provide information on safety requirements
- monitor visitor activities to ensure compliance with park or reserve conditions of entry, safety and environmental requirements
- act on non-compliance activities promptly
- report incidents according to organisation procedures and legislative requirements
- use standard industry terminology
- follow work health and safety policies and procedures and monitor visitor activities to ensure safety of general public

Knowledge Evidence

The candidate must demonstrate knowledge of:

- limits to personal and legal authority to act on non-compliance with site access conditions
- enterprise procedures, work health and safety and legislative requirements
- enterprise security systems and communication equipment
- conditions for visitors entering park

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW302 Implement a biodiversity monitoring plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to conduct fieldwork for the implementation of a biodiversity monitoring plan on a site.

The unit applies to individuals who work under broad direction and take responsibility for their own work, including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for monitoring biodiversity of a given area	1.1 Confirm site location, purpose and biodiversity monitoring techniques to be used with supervisor 1.2 Identify work team involved for monitoring plan 1.3 Identify site operating conditions and hazards, assess risks and implement controls according to workplace health and safety procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Assemble equipment and materials required for monitoring plan
2. Prepare, transport and install equipment and resources	2.1 Select, check, maintain, and repair or replace equipment according to workplace procedures and monitoring requirements 2.2 Transport equipment and work team to monitoring site safely 2.3 Install and secure equipment according to operating procedures and regulatory requirements 2.4 Test equipment in field conditions
3. Conduct biodiversity work under supervision	3.1 Implement operating procedure to monitor biodiversity under supervision 3.2 Conduct observations according to monitoring plan and ethical and environmentally sensitive work practices 3.3 Record and report incidents and unplanned events to supervisor
4. Record biodiversity data	4.1 Record data according to monitoring plan and supervisor instructions 4.2 Record location and times of observations 4.3 Complete a summary report of activity according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Interact with supervisor using collaborative and inclusive techniques, including active listening and questioning and reading of verbal and non-verbal signals, to convey and clarify information for monitoring program
Numeracy	<ul style="list-style-type: none"> Interpret and manipulate numerical information of collected data and timelines during monitoring program

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW302 Implement a biodiversity monitoring plan	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW302 Implement a biodiversity monitoring plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, monitored biodiversity for a site over a period of time specified in the monitoring plan, and has:

- interpreted purpose and implemented techniques for monitoring biodiversity on a site
- installed and used monitoring equipment
- secured monitoring equipment from theft, vandalism, damage and weather
- selected, maintained, repaired and transported monitoring equipment for site
- recorded data accurately
- conducted biological observations according to ethical and environmentally sensitive procedures
- reported outcomes of biodiversity monitoring according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- relationship of ecosystems and the key processes that support them, and impact on monitoring programs
- basic plant and animal classification
- monitoring techniques for flora, vertebrate and invertebrate fauna and microorganisms
- factors affecting monitoring locations within a site
- condition classifications to track changes over time
- types of monitoring equipment used, including:
 - vertebrate and invertebrate traps and trapping techniques
 - digital imaging
 - audio recording

- sampling and collecting plants and mycological samples
- preparation, calibration and adjustments
- setting up and securing monitoring equipment
- biosecurity and maintenance
- securing, labelling and storage of equipment
- data recording techniques and reporting
- ethical standards required for biodiversity monitoring programs
- environmental impact of biodiversity monitoring programs.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on an actual site over a specified time period
- resources, equipment and materials:
 - monitoring equipment specified in monitoring plan
 - personal protective equipment
- specifications:
 - workplace policies and procedures for biodiversity monitoring
 - state/territory and Commonwealth regulations, guidelines, standard operating procedures for ethical and legal monitoring practices
 - manufacturer operating instructions for monitoring equipment
 - workplace monitoring plan
- relationships:
 - supervisor
 - monitoring team
- timeframes:
 - within a specified time period.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW303 Construct access tracks

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to construct access tracks and clear vegetation on rural land.

This unit applies to workers in land management who are required to implement erosion control principles and apply specialised earthmoving techniques to fine tolerances. Work is often carried out in varied conditions and landscapes that require operators to develop skills that are unique to this sector.

All work is undertaken in accordance with relevant national, State, and local legislation and/or regulations.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

Licenses for vehicles and machinery may be required for this unit. Specific determination should be sought through the relevant State or Territory.

Pre-requisite Unit

Nil.

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for construction of access track	1.1 Confirm construction details and work sequence 1.2 Confirm compliance with relevant regulatory planning and environmental legislation 1.3 Confirm equipment is ready for work 1.4 Match equipment and attachments to tasks and terrain 1.5 Locate survey pegs and site indicators on work site 1.6 Follow organisational work health and safety procedures 1.7 Adhere to site environmental concerns 1.8 Apply principles of erosion and sediment control to the construction of track 1.9 Determine control points, required grades and water crossing points and structures from field observations and any available additional information 1.10 Obtain permits or licences required for the construction 1.11 Schedule and coordinate people, materials and equipment
2. Construct access track	2.1 Use earthworks methods and patterns for specific machines during construction according to job requirements 2.2 Monitor and maintain optimum machine loads to suit prevailing conditions 2.3 Use safe machine operating techniques and procedures to match terrain, site conditions and other operators 2.4 Complete excavation, transport, dumping and compaction of material in line with job sequence and endorsed industry practices 2.5 Clear vegetation according to industry best practice 2.6 Liaise with neighbouring landholders, local authorities and interest groups during the construction activity 2.7 Complete documentation required by organisation 2.8 Communicate with staff, clients and contractors during construction 2.9 Ensure work methods meet environmental sustainability, biosecurity and work health and safety requirements
3. Apply final finish to track	3.1 Use endorsed industry methods to surface track to achieve job specifications 3.2 Retain site features and vegetation in line with work plan 3.3 Clear site and remove debris in line with contract requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLPW303A Construct access tracks.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW303 Construct access tracks

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- select and prepare equipment
- determine control points, required grades and water crossing points and structures from field observations
- confirm that plans comply with legislative requirements by checking with a supervisor or authorised person
- construct tracks to organisational standards
- excavate, transport, dump and compact road material according to job sequence and endorsed industry practices
- finish track surface
- clean worksite to organisational standards
- operate machinery according to manufacturer and safe operating procedures
- apply work health and safety practices in the context of own work
- apply biosecurity measures in the context of own work
- apply appropriate sustainability practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- erosion and sediment control standards, principles and issues that apply to the construction of the access track, including:
 - soils and soil formation
 - earthmoving principles
 - total catchment issues
 - how to manage peak water flows

- subsurface and surface drainage principles and systems
- key concepts of the relevant wildlife, environmental, planning, ground water legislation
- biosecurity in the context of own work
- permits and licenses required for the construction of access tracks

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW304 Carry out inspection of designated area

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out an inspection of a designated area.

All work is undertaken in accordance with statutory and local authority requirements.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

Vehicle licenses apply to this unit. Specific determination should be sought through the relevant State or Territory.

Pre-requisite Unit

Nil.

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Define area and target of inspection	1.1 Confirm location and size of area to be inspected 1.2 Identify features of natural environment in target area 1.3 Set frequency of inspection according to management strategy

Element	Performance criteria
	1.4 Determine targets of inspection from management strategy 1.5 Confirm characteristics and favoured conditions for targets with management
2. Carry out risk assessment and minimisation	2.1 Check time and duration of inspection and notify relevant personnel 2.2 Identify risks to the environment associated with the inspection 2.3 Take precautions to minimise environmental risks associated with the inspection 2.4 Identify safety hazards associated with the inspection 2.5 Follow work health and safety policies and procedures to minimise safety risks
3. Prepare for inspection	3.1 Identify vehicles, equipment and materials required for the inspection 3.2 Check vehicles, equipment and materials for serviceability
4. Carry out inspection	4.1 Operate vehicles and equipment 4.2 Carry out inspection within the specified area 4.3 Identify and record target occurrence as required by the management strategy 4.4 Follow statutory requirements and enterprise protocols regarding entering private property 4.5 Follow regulatory requirements and enterprise procedures for dealing with landholders or their employees 4.6 Implement precautions to minimise risks to the environment and self 4.7 Note and report incursions of non-targeted threats
5. Establish the impact of the specified target	5.1 Collect information on potential impacts from stakeholders 5.2 Collect and analyse data on environmental hazards resulting from target presence
6. Prepare a report	6.1 Document collated data, inspection records and analysis of findings with appropriate recommendations 6.2 Report targets as required by legislation or regulation 6.3 Submit report to supervisor or other authority 6.4 Ensure samples submitted comply with legislative requirements or regulations 6.5 Clean and store equipment and materials according to industry standards

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLPW304A Carry out inspection of designated area.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW304 Carry out inspection of designated area

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- define the scope and criteria on which to base inspection
- define the hazards and risks to work health and safety and the environment associated with the inspection
- conduct inspections, complying with statutory requirements and enterprise protocols for entry to private property
- conduct inspections in a manner that minimises environmental impacts
- operate equipment and vehicles according to organisation procedures
- establish environmental impacts caused by the presence of the target
- document the inspection findings and recommend follow up actions
- apply work health and safety practices in the context of own work
- take precautions to minimise environmental risks during inspection

Knowledge Evidence

The candidate must demonstrate knowledge of:

- risk management processes
- characteristics of inspection targets
- inspection procedures and techniques
- monitoring techniques
- reporting protocols
- relevant legislative and regulatory requirements including environmental protection legislation

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW305 Perform diving for scientific purposes

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to dive to support scientific research, monitoring and inspection roles associated with places or areas of significance.

All work is undertaken to legislative, manufacturer, enterprise and code of practice requirements.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

This unit requires compliance with the current Australian Standard for Occupational Diving Operations: Scientific Diving.

Dive certificates and licensing apply for this unit and specific determination should be sought from the relevant State or Territory.

Pre-requisite Unit

Nil.

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Plan diving operations	1.1 Determine dive objectives 1.2 Assess number and type of dives to develop a dive program that will meet objectives 1.3 Determine equipment and personnel required for dive operations 1.4 Consult appropriate people about the dive objectives and proposed program
2. Prepare for diving operations	2.1 Obtain equipment and personnel required for dive operations 2.2 Obtain appropriate notification and consents for dive plans 2.3 Check equipment condition 2.4 Send faulty equipment for repair or replacement 2.5 Assess requirements for and source consumables 2.6 Check personnel for competence and possession of a current medical clearance 2.7 Develop safety and emergency procedures for the dive program 2.8 Conduct a safety hazard analysis and risk assessment
3. Conduct dive	3.1 Establish communications procedures for all dives 3.2 Perform pre-dive checks 3.3 Complete assessment of environmental factors before entering the water 3.4 Conduct dives within the parameters of the special dive plan, including entry, descent, working on dive objective and exit 3.5 Amend dive procedures within enterprise requirements, codes of practice and personal authority in light of dive conditions, and any changes to dive objectives 3.6 Monitor dive conditions and suspend or cancel dives where safety or equipment operation considerations warrant 3.7 Suspend dives where personnel have completed allowed number of dives according to no-decompression limit tables 3.8 Remove equipment from site at completion of dives 3.9 Log dives Carry out dives according to Australian Standard
4. Debrief diving team	4.1 Review procedures and outcomes after dive 4.2 Amend procedures and dive plans 4.3 Record dive debriefing
5. Check and store equipment	5.1 Check dive equipment for condition and operation 5.2 Send faulty equipment for repair or replacement 5.3 Test and store equipment

Element	Performance criteria
	5.4 Record equipment use
6. Review diving program	6.1 Review dive plan in light of debriefing, outcomes achieved, risk assessments and safety analysis and future requirements 6.2 Record and report review conclusions
7. Respond to diving incidents	7.1 Monitor dive operations to identify potential or actual incidents 7.2 Suspend or cancel dive operations where potential or actual maladies have been identified 7.3 Ensure a rescue plan has been developed for all dives and that the plan has been communicated to the dive team as part of the pre-dive briefing 7.4 Apply diver first aid to injured or distressed personnel 7.5 Notify emergency authorities where assistance is required 7.6 Review procedures and dive plan in light of risks identified and potential or actual malady 7.7 Record all incidents on the enterprise register

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLPW305A Perform diving for scientific purposes.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW305 Perform diving for scientific purposes

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan to carry out a dive
- prepare to dive
- carry out pre-dive checks and safety risk assessments
- monitor dive conditions, respond to incidents and amend dive procedures if necessary
- debrief dive team
- store diving equipment
- dive safely and according to organisational policies and procedures

Knowledge Evidence

The candidate must demonstrate knowledge of:

- interpretation of no-decompression limit tables to determine maximum length and number of dives allowed
- the physics of diving
- dive equipment
- safety risks associated with scientific dives
- dive planning
- Australian Standards for occupational diving
- rescue procedures
- oxygen administration procedures
- agency standing orders for notification
- emergency service procedures
- dive communication procedures and equipment

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW306 Undertake sampling and testing of water

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan and carry out sampling and testing of water quality as part of a monitoring program.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan for sampling and testing field work	1.1 Confirm monitoring schedule 1.2 Identify water quality and environmental parameters 1.3 Identify samples to be collected 1.4 Determine and arrange equipment requirements for water sampling and testing 1.5 Assess range of likely operating conditions, hazards and difficult

Element	Performance criteria
	or sensitive environments for impact on sampling and testing
2. Prepare equipment and resources	2.1 Obtain equipment required for sampling and testing 2.2 Check and calibrate equipment for availability and serviceability 2.3 Verify correct and accurate performance of equipment 2.4 Repair and maintain field-based equipment and instruments 2.5 Collect data or record sheets for use 2.6 Install and protect equipment 2.7 Brief staff undertaking sampling and testing on responsibilities
3. Carry out sampling and testing of water	3.1 Undertake tests in accordance with monitoring plan 3.2 Take and test samples in accordance with monitoring standards 3.3 Prepare, package and send samples to laboratory for external analysis 3.4 Make specific and general observations including information on relevant ambient and antecedent environmental conditions 3.5 Inform appropriate person of obvious water quality or environmental issues immediately
4. Complete water sampling and testing activities	4.1 Clean, repair and store equipment and clothing 4.2 Repair damaged or malfunctioning equipment on site or send to manufacturer or specialist 4.3 Record test results and observations on data sheets 4.4 Report changes in field conditions and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLPW306A Undertake sampling and testing of water.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW306 Undertake sampling and testing of water

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan a water sampling program under direction according to regulatory and organisation requirements
- test and calibrate equipment according to regulatory and organisation requirements
- sample and test water according to regulatory and organisation requirements
- record results on data sheets
- record and report water testing results to organisational standards
- report obvious water quality issues observed during sampling to supervisor or manager immediately
- apply work health and safety practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- water monitoring schedules and guidelines
- standards for water quality
- sampling and testing methods

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW307 Perform restricted diving for scientific purposes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to support a diving expedition for scientific research, monitoring and inspection using self-contained underwater breathing apparatus (SCUBA) for both air and enriched air nitrox (EAN) breathing gases.

The unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

Dive certificates and licensing apply for this unit and specific determination should be sought from the relevant state or territory authorities. This unit also requires compliance with the current version of the Australian Standard for training and certification of occupational divers for restricted occupational self-contained underwater breathing apparatus (SCUBA).

Pre-requisite Unit

SISOSCB001 SCUBA dive in open water to a maximum depth of 18 metres

SISOSCB006 Perform diver rescues

HLTAID011 Provide First Aid

HLTAID015 Provide advanced resuscitation and oxygen therapy

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan diving operations	1.1 Receive and interpret dive objectives and activities from

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>instructions</p> <p>1.2 Assess number and type of dives required to meet dive objectives</p> <p>1.3 Plan and organise a dive program</p> <p>1.4 Determine equipment and dive team required for dive operations</p> <p>1.5 Source and secure equipment and dive team for dive operations</p> <p>1.6 Ensure dive team are competent and possess current medical clearances according to industry standards</p> <p>1.7 Source and secure first aid equipment and pure oxygen administration equipment</p> <p>1.8 Obtain and secure permits required for dive plan</p>
2. Prepare for diving operations	<p>2.1 Check serviceability and condition of equipment and resolve defective equipment according to workplace procedures</p> <p>2.2 Select and prepare dive breathing gas and cylinders according to workplace procedures and industry standards</p> <p>2.3 Identify and source materials and consumables required for dive</p> <p>2.4 Develop operational safety and emergency procedures for dive program</p> <p>2.5 Identify hazards, assess risk and implement controls according to safe diving operations, dive plan and workplace procedures</p> <p>2.6 Establish communications procedures with dive team</p> <p>2.7 Develop emergency procedures for dive according to industry standards and codes of practice and emergency management plan</p> <p>2.8 Communicate emergency procedures and rescue plan to dive team at a pre-dive briefing</p> <p>2.9 Stow and transport dive equipment and resources to dive site</p>
3. Conduct dives for scientific purposes with SCUBA compressed air, or (EAN) systems	<p>3.1 Perform pre-dive checks according to workplace and standard operating procedures</p> <p>3.2 Prepare equipment and resources required for compressed air and EAN diving</p> <p>3.3 Assess environmental factors before entering the water and apply workplace safety procedures</p> <p>3.4 Conduct dives for scientific purposes to achieve objectives of dive plan according to industry standards and codes of practice</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.5 Operate dive equipment during dive according to manufacturer instructions</p> <p>3.6 Monitor dive conditions and amend dive procedures according to enterprise requirements, codes of practice and safety procedures</p> <p>3.7 Monitor and suspend dive according to no-decompression requirements</p> <p>3.8 Exit water and assist others to exit water safely without damage to equipment</p> <p>3.9 Update records of dive and activity according to workplace procedures</p>
4. Respond to emergency diving incidents	<p>4.1 Monitor dive operations and identify emergency incidents</p> <p>4.2 Activate emergency management plan for identified incidents</p> <p>4.3 Suspend or cancel dive operations according to emergency management plan</p> <p>4.4 Implement actions according to type and nature of emergency incident</p> <p>4.5 Apply diver first aid to personnel involved in emergency incident</p> <p>4.6 Notify authorities where emergency assistance is required according to workplace procedures</p> <p>4.7 Review emergency incident and modify procedures and dive plan to prevent reoccurrence</p> <p>4.8 Record emergency incident according to workplace and industry practices</p>
5. Check and store equipment	<p>5.1 Remove and assist others to remove dive attire and equipment according to workplace procedures</p> <p>5.2 Disassemble and remove equipment from dive site on completion of dive</p> <p>5.3 Check and test dive equipment for condition and correct operation</p> <p>5.4 Arrange for repair or replacement of faulty equipment according to workplace procedures</p> <p>5.5 Store equipment according to manufacturer instructions and workplace procedures</p> <p>5.6 Maintain records of equipment use according to workplace procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
6. Debrief diving team	6.1 Review and assess procedures and outcomes of dive plan with dive team 6.2 Identify recommendations to amend procedures and dive plan 6.3 Record dive team debriefing session according to workplace procedures
7. Review diving program	7.1 Compile recommendations for amendments to procedures and dive plans 7.2 Review dive plan and amend as appropriate 7.3 Record and report review conclusions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret dive plans and instructions and consolidates information to determine requirements for dive
Writing	<ul style="list-style-type: none"> Accurately complete organisational records and programs using clear language and industry terminology
Oral Communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges with dive team using collaborative and inclusive techniques including active listening and questioning and reading of verbal and non-verbal signals to convey and clarify information
Numeracy	<ul style="list-style-type: none"> Interpret numeric information to determine pressures and to assess and calculate dive times based on depth, pressure and no-decompression tables

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW307 Perform restricted diving for scientific purposes	AHCLPW305 Perform diving for scientific purposes	Redesigned unit to align with Australian training standards for occupational divers	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW307 Perform restricted diving for scientific purposes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared for scientific dives and has:

- interpreted dive objectives and planned the equipment, resources, and consumables required to carry out a dive
- prepared resources, equipment and dive team for dive: including:
 - inspected equipment for signs of deterioration, damage or corrosion and tested for proper operation
 - selected equipment for dive and ensured correct storage during transport
- used decompression tables, including Defence and Civil Institute of Environmental Medicine tables (DCIEM) to calculate safe diving profiles, including:
 - depth increments
 - time increments
 - stop time
 - ascent rates
 - total decompression time
 - bottom time
 - total dive time
 - surface interval
- used decompression tables to calculate the following without error:
 - 'No stop' bottom time for a given depth
 - decompression depth/time increments
 - repetitive dive time increments
- prepared compressed air and enriched air nitrox cylinders (EAN) for diving operations according to legislative requirements, including:
 - inspected and maintained compressors
 - determined cylinder pressure for dive

- charged air cylinders using high pressure air compressor according legislative requirements, and workplace health and safety procedures
- charged air cylinders by decanting according legislative requirements, and workplace health and safety procedures
- tested the quality of gas
- analysed oxygen content of dive mix for EAN
- used approved cylinder types for compressed air and EAN according to Industry standards and workplace health and safety procedures
- maintained positive pressure in EAN cylinders to prevent ingress of atmospheric air
- carried out pre-dive checks and performed a safety risk assessments for dive site
- ensured availability of first aid equipment, and oxygen administration kit
- monitored dive conditions, responded to incidents and amended dive procedures according to identified issues.

There must also be evidence that the individual has undertaken dives using compressed air and EAN in open water to a maximum depth of 30 metres which must include the following dives:

- one dive between 27 metres and 30 metres
- two dives with zero visibility in two to nine metres depth of water with a minimum of 20 minutes per dive
- one night dive
- four boat dives
- four dives at depths greater than 20 metres, simulating decompression stops during ascent
- at least three dives must be undertaken using EAN procedures including:
 - selected the blend and equipment to meet industry and safety criteria for EAN operations
 - conducted dive preparation for EAN dives according to industry standards, workplace health and safety policies and equipment manufacturer operating procedures
 - completed EAN dive according to dive plan and EAN procedures

Dives must be undertaken in conformance with statutory work health and safety, Australian Standards and codes of practices, with evidence the individual has:

- fitted and removed dive equipment and assisted other divers to fit and remove dive equipment in correct sequence
- selected water entry and exit methods appropriate to the situation and water conditions
- entered and exited water safely with no damage to equipment and assisted other divers to enter and exit water
- checked and reported dive equipment for leaks on entering water
- conducted dive in open water safety according to dive plan, including:
 - adapted operational techniques according to prevailing conditions
 - used buoyancy control techniques and equipment appropriate to diving conditions
 - demonstrated correct breathing techniques
 - demonstrated decent and ascent techniques appropriate to the dive conditions
- demonstrated safety-critical underwater skills during dive, including:

- monitored gas consumption and gas supply and ascended when predetermined level of gas remained to prevent exhaustion of gas supply
- changed over to reserve gas supply and notified surface
- managed life line to minimise entanglement and facilitate line signals
- followed life line to surface
- monitored depth and time throughout the dive
- conducted dive practices for compressed air and EAN within diving maximum limits to meet industry technical standards and workplace health and safety policies and procedures
- conducted specified dive operations according to objectives of operational dive plan
- used basic non-powered hand tools to complete objectives according to planned dive operations
- checked, cleaned maintained and stored hand tools according to workplace procedures
- communicated with others in the dive team underwater, diver to diver and diver to surface using each of the following:
 - hand signals
 - line signals
 - voice communications
- demonstrated decompression procedures according to dive profile using each of the following:
 - lazy shot rope
 - fixed shot rope
 - lazy shot rope during drift dives
 - lazy shot using a life line
 - float line
 - ascent rate control and depth control at water stops
- performed at least two of the following search techniques during the dive:
 - circular
 - jackstay grid
 - snag line
 - grid mesh
 - semi-circular
 - parallel
- performed at least two of the following survey techniques during the dive:
 - line transect
 - quadrat search
 - photographic quadrat
 - video transect
 - timed swim
 - measured time swim

- used basic rope work and rigging techniques during dive operations using the following knots:
 - reef knot
 - bowline
 - clove hitch
 - rolling hitch
 - round turn and two half hitches
 - sheet bend
 - figure of eight
 - figure of eight on the bite
- established effective working relationships with dive team, including:
 - established communications under water
 - monitored dive team members for compliance with 'no-decompression' requirements
 - debriefed dive team after dive activity
- communicated and activated an emergency management plan and taken action in an emergency situation including:
 - used emergency drills, procedures and methods
 - acted as a surface standby diver
 - acted as an in-water standby diver when divers are near enough to communicate and act as standby diver for each other
 - performed an effective in-water rescue of an unconscious diver to boat or shore
 - acted in a self-rescue emergency situation
- performed first aid on diving casualty which must include:
 - recognised and assessed diver for adverse health conditions
 - determined if emergency services are required and obtain and provide support
 - administer first aid to diving casualty promptly according to workplace procedures
 - used an oxygen administration kit
- performed post dive personnel and equipment checks, including:
 - check and report supporting diver condition
 - read and record cylinder pressure
- reviewed dive plans following debriefing and risk analysis
- disassembled, cleaned, inspected, maintained and stored compressed air and EAN diving equipment according to manufacturer instructions including:
 - ensured EAN compatible parts and processes for elevated oxygen mixture according to industry standards and workplace health and safety procedures
 - reported equipment faults according to workplace procedures following dive
- maintained records according to industry standards and workplace requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- industries associated with underwater work and the type of work performed
- qualifications, legislative and regulatory requirements for occupational divers including restricted occupational SCUBA diving and occupational health and safety legislation as it relates to divers and their employers.
- dive planning processes, including risk assessment, hazard identification and control
- additional planning required for EAN diving, including:
 - requirements of EAN use and associated hazards
 - aspects of dive plan where EAN specific considerations are needed
- use of industry recognised decompression tables and dive computers to plan and carry out safe diving practices
- anatomy, physiology and physics of underwater diving, including:
 - anatomical and physiological systems of the human body including respiratory, circulatory and nervous systems, musculoskeletal, cardiovascular, ears, sinuses, vestibular organs, gastrointestinal, endocrine and immune systems
 - common units of measurement and the relationship between pressure, volume and temperature in the context of diving
 - definitions of atmospheric pressure, hydrostatic pressure, absolute pressure, ambient pressure and gauge pressure
 - Boyles Law and relationship between pressure and volume and the calculations relevant to depth and pressure
 - barotrauma and typical barotrauma injuries
 - use of decompression tables to determine safe diving profiles
 - partial pressure and gas solubility and their effect on the human body including Daltons Law
 - basic relationship between pressure and temperature including Charles Law, and calculating pressure changes with temperature
 - effect of buoyancy and effect on divers and underwater objects including Archimedes Principle including, diffusion, saturation, desaturation, equilibrium
 - behaviour of light and sound underwater and impact on divers, including equipment used to compensate
 - impact of temperature on cylinder pressure
 - heat loss and impact on diver
 - decompression as it relates to partial pressure and solubility of gasses (Henry's Law)
 - inert gas narcosis
- diving equipment, testing, operation and maintenance including:
 - selecting diving equipment for operational activities
 - assembly and disassembly of equipment used in dive operations
 - pre and post dive checks and maintenance

- selection of appropriate diving equipment for required tasks such as masks, fins, cylinders, regulators, buoyancy compensation devices, harnesses, weights and safety devices
- compressors for air and EAN cylinder charging
- safety procedures
- inspecting equipment and signs of disrepair
- gas quality and gas testing standards used in Australia
- record keeping practices for equipment
- correct fitting and removal of dive equipment on divers including assisting others on fitting and removal
- types of ropes used in diving operations their purpose, application, including:
 - care and maintenance
 - basic rigging techniques
 - knots and other rigging devices used in diving operations their purpose and application
- tools and equipment for scientific diving operations, their use and maintenance
- navigation, search and recovery techniques and their application in scientific diving
- survey techniques and their application in scientific diving
- health and safety risks associated with diving, including:
 - statutory health and safety requirements
 - standards and codes of practice
 - roles and responsibilities
 - risk assessment and developing control measures
- emergency procedures and their implementation, including:
 - dive rescue procedures
 - oxygen administration procedures
 - agency standing orders for notification
 - emergency service procedures
 - recognising the need for decompression chamber and support
- first aid for divers, including:
 - recognising signs and symptoms of diving related ill health including, decompression illness, mask and suit squeeze, ear and sinus problems, near drowning, vomiting under water, gas embolism and pulmonary barotrauma, breathing gas contamination, carbon monoxide poisoning, carbon dioxide poisoning, oxygen toxicity, anoxia and hypoxia, hypothermia and hyperthermia, injury/illness from marine organisms
 - assessing when first aid is required
 - administering first aid to divers
 - use of defibrillators in a wet environment
- compression chamber theory
- specialised diving modes including but not limited to zero and low visibility diving, tethered, night and deep diving.
- effective teamwork and team communications, including

- underwater communication procedures and equipment
- statutory and workplace record keeping procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in open water to a depth of no greater than 30 metres
 - conditions must comply with the current version of the Australian Standard for training and certification of occupational divers - restricted occupational SCUBA diver
- resources, equipment and materials:
 - SCUBA equipment
 - safety equipment
 - compressors for filling cylinders with air and enriched air nitrox
 - cylinders for filling and use
 - tools and equipment for conducting dives, searches and surveys
- specifications:
 - workplace documents such as policies, procedures, processes, forms
 - manufacturer's operating instructions for equipment
 - workplace instructions and job specifications including risk assessment requirements
 - legislation, codes of practice and standards for occupational diving
- relationships:
 - dive team member
- timeframes:
 - dives must comply with times specified in no-decompression tables and calculations.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

In addition, the following specific assessor requirements apply to this unit:

- assessors must be qualified as occupational SCUBA diving instructor through a recognised diver training organisation.
-

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW308 Coordinate and report on data collection

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to coordinate the collection and organisation of data, simple treatments and sorting of the data, and its storage in a digital recording system.

The unit applies to individuals who work under broad direction and take responsibility for their own work, including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm requirements of data collection	1.1 Clarify and confirm data format and collection requirements 1.2 Identify source of errors and expected tolerance in data sets 1.3 Select equipment and materials required to collect and store data 1.4 Prepare data capture equipment according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Identify and confirm data rights and access arrangements 1.6 Establish data backup and data security arrangements 1.7 Identify reporting requirements
2. Coordinate data collection	2.1 Assemble equipment and materials for data collection 2.2 Brief work team on processes, methodology and requirements 2.3 Coordinate data recording, collection and entry 2.4 Check, sort, transfer and store data 2.5 Apply treatments to data according to workplace data management procedures and level of authority 2.6 Implement data backup and data security arrangements 2.7 Implement access arrangements to data set
3. Report on data collection	3.1 Review data collection activity and identify improvements 3.2 Identify data security risks 3.3 Report on data collection and security risks according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Clearly explain detailed information for data collection with work team using language, tone and pace appropriate to audience

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW308 Coordinate and report on data collection	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW308 Coordinate and report on data collection

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, coordinated and used data collection equipment to capture, record and manipulate data for conservation and land management work.

There must also be evidence that the individual has:

- clarified and confirmed data collection activity, including:
 - purpose of data collection
 - data verification checks
 - data manipulations required
 - the format data is to be collected and presented in
 - type and nature of data
- identified potential source of errors and tolerances for final data set
- selected equipment and materials required for data collection and transported according to workplace procedures
- briefed work team on recording processes, methodology and requirements
- coordinated data collection and recording
- checked, sorted, transferred and stored data according to data collection requirements
- applied simple manipulations to data, including:
 - identified data with labels or metadata
 - performed calculations for totals and averages
 - selected range and outlying records
 - measured effort
- backed up data and managed access and security arrangements and identified data security risks
- reported on data collection.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of data and formats used in conservation work, including ecological, cultural, geographical and resources
- checks and treatments of data used in conservation work: adding labels/metadata, totals, averages, range, outlying records, measure of effort
- sources of error and tolerance in data sets
- equipment and materials used for data recording, including:
 - paper-based records
 - digital technology – tablets, laptops, desktops
 - cameras
 - loggers
 - support equipment – power banks, batteries, cords and connections
 - software
- movement and transport methods for electronic equipment
- data rights and access agreements
- data backup and data security procedures and risks
- reporting methods.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field for specific data collection activities, or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - data collection and storage materials, hardware and software
- specifications:
 - workplace policies and procedures for data collection, storage and security
 - workplace instructions and specifications for type of data to collect and required manipulations.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW309 Operate remotely piloted system for conservation work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to operate remotely piloted systems (RPS) for support, imaging and management for conservation work.

The unit applies to individuals who work under broad direction and take responsibility for their own work, including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

Commonwealth, state/territory and local government licensing, legislative or certification requirements may apply to the use of RPS. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine operational plan for use of remotely piloted system	1.1 Clarify and confirm objectives of RPS operations plan 1.2 Confirm location and operational route of system 1.3 Identify operating conditions and hazards, assess risk and implement controls according to workplace health and safety

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	procedures 1.4 Select equipment and materials required for RPS operations 1.5 Confirm workplace operating procedure to be followed with supervisor/controller 1.6 Verify licences, permits and agreements have been approved for operations according to workplace procedures and regulatory requirements
2. Prepare and transport equipment and resources	2.1 Assemble equipment and materials required for RPS operations 2.2 Check equipment for correct operations and functionality according to operator instructions 2.3 Clean and maintain RPS ready for use, and rectify faults 2.4 Transport equipment to site/s and prepare for operation 2.5 Set parameters for RPS according to operations plan and operational route 2.6 Test and calibrate equipment under field conditions in preparation for operation
3. Commence use of piloted system	3.1 Operate RPS according to safe operating procedures (SOP), planned route and regulatory requirements 3.2 Monitor and record operations 3.3 Perform RPS tasks according to RPS operations plan 3.4 Record and report incidents and unplanned events to supervisor/controller
4. Finalise operation of remotely piloted system for conservation work	4.1 Shut down and disassemble RPS according to operator instructions 4.2 Process data files 4.3 Maintain and store RPS according to workplace procedures 4.4 Report results of RPS operations according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret maps, charts and plans for determining operational route of RPS
Numeracy	<ul style="list-style-type: none"> Interpret and manipulate distances, altitude/depth and speed for determining operating parameters of RPS and inputting operational route into devices

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW309 Operate remotely piloted system for conservation work	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW309 Operate remotely piloted system for conservation work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, operated a remotely piloted system for conservation and land management work according to legislative and regulatory requirements.

There must also be evidence that the individual has:

- confirmed operational objectives, parameters and regulatory requirements with supervisor
- interpreted workplace procedures for operation of remotely piloted system (RPS)
- selected and prepared RPS equipment and resources
- maintained and transported RPS equipment to operations site
- checked RPS equipment for correct operation
- adjusted settings on RPS, controller and attachments according to operations plan and operational route objectives, including:
 - lens and camera adjustments for imaging objectives
 - adjustments of attachments
 - operational route perimeter and altitude
 - automated responses
 - safety factors
- operated RPS according to regulations, safe operating procedures and route plan
- monitored, recorded and reported operational information, incidents and unplanned events
- downloaded, sorted, labelled and stored digital and route data
- shut down, disassembled and stored RPS according to operator instructions and workplace procedures
- reported on operation.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- regulations and the expectations of stakeholders in the area of operation
- permissions, permits and authorisation required for use of RPS in different land management settings
- workplace procedures and safe operating principles for operation of RPS
- RPS system components, controllers, cameras and other attachments and their safe operation
- calibration of RPS system components
- computing hardware and software to support RPS operation
- planning processes, including:
 - assessments of hazards, risk, and risk control
 - terrain
 - weather conditions
 - operational limitations
- transport and storage of remotely piloted systems equipment, including efficient use, recharge and storage of batteries
- operations for which RPS are commonly used in land management, including:
 - photography and videography
 - collecting samples from inaccessible sites
 - pest and weed control operations
 - monitoring and mapping activities
 - search and rescue operations
- recording, processing and storing data collected by RPS, including:
 - digital photographs and videos
 - operational route information
 - geographic information system (GIS) data
- reporting and recording methods and procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a conservation and ecosystem management site
- resources, equipment and materials:
 - RPS and attachments specified in the operations plan
 - tools and equipment for assembling and maintaining the RPS
 - specific items of personal protective equipment
- specifications:

- workplace policies and procedures for operating and reporting on RPS use
- manufacturer operating instructions for RPS and attachments
- RPS operations plan
- regulations relating to the RPS
- relationships:
 - supervisor/controller
- timeframes:
 - according to times specified in operations plan and permits.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW310 Supervise park visitor activities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to provide information and advice, and to supervise public access and activities within a park or reserve.

The unit applies to individuals who work with visitors and the general public in parks or reserves. They operate under broad direction and use discretion and judgement in the selection and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Provide information on opening and closing times	1.1 Operate security systems for entry to parks and facilities 1.2 Inform public of opening and closing times
2. Advise public on park or reserve access and activities	2.1 Communicate with visitors according to workplace procedures and legislative requirements 2.2 Inform public of responsibilities and safety requirements when

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	using park facilities 2.3 Conduct a risk assessment of park and its facilities for suitability for visitor access 2.4 Inform public of changes of access to park and its facilities when conditions are not suitable
3. Monitor visitor activities	3.1 Monitor visitor activities for risk to environmental degradation, or damage and biosecurity risk 3.2 Monitor visitor activities to ensure safety of staff and visitors 3.3 Assess visitor activities and implement control measures for non-compliance with site access conditions 3.4 Report and respond to incidents according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral Communication	Communicate effectively with visitors using appropriate language, tone and pace

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW310 Supervise park visitor activities	AHCLPW301 Supervise park visitor activities	Minor changes to Application and Performance Criteria for clarity Added Foundation Skills and updated Performance	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Evidence and Knowledge Evidence	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW310 Supervise park visitor activities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least two occasions, supervised visitor access to a park and its facilities. At least one interaction should represent a difficult parks customer/visitor.

There must also be evidence that the individual has:

- assessed the park and facilities for safe access
- provided information to visitor on access, activities and safety requirements
- monitored visitor activities, ensuring compliance with park requirements, including:
 - conditions of entry
 - safety of visitors and parks staff
 - environmental requirements
- identified issues of non-compliance activities and implemented control measures
- reported incidents according to workplace procedures and legislative requirements
- followed workplace health and safety policies and procedures, and monitored visitor activities to ensure safety of general public.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- strategies for effective communication with visitors, including:
 - methods of communication
 - reading and recognising visual cues
 - dealing with difficult visitors
- policies and procedures for visitors accessing parks site and facilities, including:
 - personal and legal authority to act on non-compliance with site access conditions

- procedures for notifying visitors of changed conditions
- park conditions that may render restricted access, including:
 - road and track degradation
 - environmental and ecological exclusions
 - weather
 - temporary or seasonal closures
 - safety concerns
- enterprise procedures, workplace health and safety and legislative requirements
- enterprise security systems for accessing parks and facilities, including:
 - surveillance and monitoring
 - gates and keyed locking systems
 - locks and keypads
 - surveillance systems
- conditions for visitors entering park.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a park or reserve with relevant security and facilities appropriate for visitor access, or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - communications equipment
- specifications:
 - policies and procedures for park access and communications protocols with visitors
- relationships:
 - visitors.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW311 Construct access tracks

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to construct access tracks and clear vegetation on rural land, and implement erosion control by using specialised earthmoving techniques at fine tolerances.

The unit applies to individuals who work in land management, performing work that is often carried out in varied conditions and landscapes that require operators to develop skills that are unique to this sector. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems

Licenses for heavy vehicles and excavation equipment and machinery may be required in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for construction of access track	1.1 Confirm construction details and work sequence with construction plans and supervisor 1.2 Obtain permits and licences required for construction according to regulatory planning and environmental legislation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Locate survey pegs and site indicators on work site 1.4 Conduct visual survey of planned track location to determine track construction control points 1.5 Select and prepare equipment and attachments for tasks and terrain 1.6 Follow workplace health and safety procedures and environmental procedures 1.7 Schedule and coordinate work team, materials and equipment
2. Construct access track	2.1 Use earthworks methods and patterns for specific machines during construction 2.2 Monitor and maintain optimum machine loads for prevailing conditions 2.3 Operate machinery safely using techniques and procedures for site conditions and terrain 2.4 Conduct track construction works according to job sequence and industry best practices 2.5 Clear vegetation according to planned earthworks, environmental procedures and industry best practice 2.6 Liaise and communicate with stakeholders during the construction activity 2.7 Complete documentation required by workplace 2.8 Ensure construction work complies with environmental, sustainability, biosecurity and workplace health and safety requirements
3. Apply final finish to track	3.1 Apply surface finish to track according to job specifications and industry best practice 3.2 Retain site features and vegetation according to planned works and specifications 3.3 Clean site and remove construction equipment and waste material according to specifications and workplace environmental and biosecurity procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret basic construction plans and specifications, and consolidate information to determine equipment required, methods and location of track and the tolerances required
Numeracy	<ul style="list-style-type: none"> Make measurements and perform calculations to check site layout against plans for track construction Make basic volumetric calculations for measuring and estimating excavation materials during construction works

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW311 Construct access tracks	AHCLPW303 Construct access tracks	<p>Updated Application</p> <p>Updated and consolidated Performance Criteria for clarity and brevity</p> <p>Moved specificity to Knowledge Evidence and Performance Evidence</p> <p>Edited and updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW311 Construct access tracks

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, demonstrated the ability to construct an access track in a rural or land management context.

There must also be evidence that the individual has:

- selected and prepared equipment suitable for track construction works
- conducted a site survey to determine control points, including identified:
 - required grades
 - water crossing points
 - and structures
- confirmed construction works activities and regulatory compliance with supervisor or project manager
- operated equipment safely to construct track according to job sequence, specifications and workplace procedures and industry standards, including:
 - excavated
 - transported
 - dumped
 - compacted road material
 - finished track surface
- cleaned work site to according to environmental, biosecurity and workplace procedures
- operated machinery according to manufacturer and safe operating procedures
- complied with workplace procedures and policies during construction works, including:
 - workplace health and safety
 - biosecurity
 - environmental
 - and sustainability.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- erosion and sediment control standards, principles and issues that apply to the construction of tracks in land management, including:
 - soils and soil formation
 - total catchment issues
 - how to manage peak water flows
 - subsurface and surface drainage principles and systems
- control points relevant to track construction, including:
 - required grades
 - water crossing points
 - structures
- safety while working on a construction site, including:
 - proximity to machinery
 - personnel
 - impediments
 - terrain
- construction of tracks and sequencing of track construction works, including:
 - excavation and earthmoving principles
 - transport
 - dumping
 - compaction
 - surface finish
- site communications and methods
- recognising the stakeholders and their impact on construction works, including:
 - neighbouring landholders
 - local authorities
 - special interest groups
 - staff
 - clients
 - contractors
- legislative and regulatory requirements and codes of practice relevant to track construction, including:
 - wildlife
 - environmental
 - planning
 - ground water
 - biosecurity
- permits and licenses required for the construction of access tracks.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a surveyed and pegged out track construction site with designated control points
- resources, equipment and materials:
 - machinery and equipment suitable for track construction
 - personal protective equipment
- specifications:
 - policies, procedures and processes for compliance with biosecurity, environmental and legislative requirements
 - manufacturer operating instructions for machinery and equipment
 - workplace track construction plans and specifications
 - legislation and codes of practice relevant to track construction works
- relationships:
 - construction team members and supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW312 Carry out inspection of designated area

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to carry out an inspection of a designated area.

The unit applies to individuals who work under broad direction and use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

Vehicle licenses apply to this unit. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Define area and target of inspection	1.1 Confirm location and size of area to be inspected 1.2 Identify features of natural environment in target area 1.3 Set frequency of inspection according to management strategy 1.4 Determine targets of inspection from management strategy 1.5 Confirm characteristics and favoured conditions for targets with management

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Carry out risk assessment and minimisation	<p>2.1 Check time and duration of inspection and notify relevant personnel</p> <p>2.2 Identify risks to the environment associated with the inspection</p> <p>2.3 Take precautions to minimise environmental risks associated with the inspection</p> <p>2.4 Identify safety hazards associated with the inspection</p> <p>2.5 Follow work health and safety policies and procedures to minimise safety risks</p>
3. Prepare for inspection	<p>3.1 Identify vehicles, equipment and materials required for the inspection</p> <p>3.2 Check vehicles, equipment and materials for serviceability</p>
4. Carry out inspection	<p>4.1 Operate vehicles and equipment safely during inspection</p> <p>4.2 Carry out inspection within the specified area</p> <p>4.3 Identify and record target occurrence as required by the management strategy</p> <p>4.4 Enter private property according to statutory requirements and workplace procedures</p> <p>4.5 Communicate with stakeholders according to regulatory requirements and workplace procedures</p> <p>4.6 Implement controls to minimise risk to the environment and personnel</p> <p>4.7 Note and report incursions of non-targeted threats</p>
5. Establish the impact of the specified target	<p>5.1 Collect information on potential impacts from stakeholders</p> <p>5.2 Collect and analyse data on environmental hazards resulting from target presence</p>
6. Prepare a report	<p>6.1 Document collated data, inspection records and analysis of findings with appropriate recommendations</p> <p>6.2 Report targets as required by legislation or regulation</p> <p>6.3 Submit report to supervisor or other authority</p> <p>6.4 Ensure samples submitted comply with legislative requirements or regulations</p> <p>6.5 Clean and store equipment and materials according to industry</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	standards

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Communicate the relationship between collated information and data for inspection objectives into a report in a style appropriate to the audience Select and use vocabulary, grammatical structures and conventions appropriate to the report and reader
Oral Communication	<ul style="list-style-type: none"> Interact with stakeholders using appropriate collaborative and inclusive techniques relevant to the individual, including active listening, questioning and reading of verbal and non-verbal signals to convey and clarify information
Numeracy	<ul style="list-style-type: none"> Select and interpret familiar numerical information for calculating areas of site and for determining timing and duration of inspections

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW312 Carry out inspection of designated area	AHCLPW304 Carry out inspection of designated area	Minor changes to Application, minor changes to Performance Criteria Added Foundation Skills Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW312 Carry out inspection of designated area

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted at least one inspection for a designated area for a specified purpose, including:

- defined the scope, criteria and target on which to base inspection
- defined the hazards and risks to work health and safety and the environment associated with inspection
- conducted inspections, complying with statutory requirements and workplace protocols for entry to private property
- conducted inspections in a manner that minimises environmental impacts
- operated equipment and vehicles during the inspection according to workplace procedures
- established environmental impacts caused by target
- produced a report that:
 - documents the inspection findings and results
 - analyses the outcomes of inspection
 - provides recommendations and follow-up actions
- complied with workplace health and safety practices while conducting the inspection
- implemented controls to minimise environmental risks during inspection.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- risk management processes, including:
 - identifying hazards
 - analysing and ranking risk
 - identifying and implementing controls
 - monitoring risk

- types and characteristics of inspection targets
- procedures and techniques for planning and conducting inspections, including:
 - defining the inspection scope and purpose
 - working with stakeholders
 - gathering and collating information and data
- monitoring of designated areas and techniques used
- basic reporting procedures, including:
 - analysing information and data
 - presenting the analysis in a written form
 - decision making and defining recommendations
 - basic report writing skills
- legislative and regulatory requirements, including environmental protection legislation.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated for an actual inspection on a defined area
- resources, equipment and materials:
 - specific tools and equipment required for the inspection and specified target
 - computer or similar device for collating, analysing and documenting inspection results
- specifications:
 - workplace policies, procedures and processes for conducting inspections
 - workplace instructions and specifications for purpose and scope of inspection
 - legislation and regulations governing access to private premises
- relationships:
 - stakeholder/s.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW313 Undertake sampling and testing of water

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan and carry out sampling and testing of water quality as part of a monitoring program.

The unit applies to individuals who work in the land management sector. They work under broad direction and use discretion and judgement in the selection, allocation and use of available resources and for problem solving.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan for sampling and testing fieldwork	1.1 Confirm sampling and testing program from supervisor instruction and sampling plan 1.2 Identify parameters for water quality tests 1.3 Identify characteristics and number of samples to be collected 1.4 Identify and select equipment required for water sampling and testing

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Identify hazards, assess risks and implement controls for safe operating conditions and environmental impact of sampling and testing
2. Prepare equipment and resources	2.1 Obtain equipment required for sampling and testing 2.2 Check equipment for availability and serviceability 2.3 Check and calibrate equipment according to workplace procedures and industry standards 2.4 Prepare data or recording documents ready for use 2.5 Secure testing equipment 2.6 Commence use of testing equipment
3. Carry out sampling and testing of water	3.1 Collect and test water samples according to sampling and testing program, industry standards and workplace procedures 3.2 Prepare, package and store samples for transport 3.3 Conduct and record observations for ambient and antecedent environmental conditions 3.4 Report urgent water quality or environmental issues according to workplace procedures
4. Complete water sampling and testing activities	4.1 Clean, check and store equipment 4.2 Consign unserviceable equipment to specialist for repair 4.3 Check data for accuracy and integrity 4.4 Record and report test results and observations according to workplace procedures and traceability requirements 4.5 Report changes in field conditions and equipment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and comprehend standards and operating procedures for

Skill	Description
	conducting water tests and recording and presenting results
Numeracy	<ul style="list-style-type: none"> Calculate quantities and measurements required to prepare water samples and reagents for testing from standards and operating procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW313 Undertake sampling and testing of water	AHCLPW306 Undertake sampling and testing of water	Minor changes to Application Changes to Performance Criteria for clarity and brevity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW313 Undertake sampling and testing of water

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has collected, tested, prepared and dispatched at least five water samples to a laboratory. The water samples must be from at least three of the following bodies of water:

- fresh water – river or stream
- fresh water – lakes or impoundments
- storm water and drains
- marine – open ocean
- marine – coastal or intertidal
- salt lakes
- water with high turbidity
- farmland dams and impoundments
- bore water.

There must also be evidence that the individual has:

- planned a water testing and sampling program under direction according to regulatory and organisation requirements
- tested, verified accuracy and prepared equipment according to manufacturer instructions and regulatory and workplace requirements
- collected and tested water samples according to regulatory requirements, workplace procedures and industry standards, including tested for at least five of any of the following:
 - pH
 - electrical conductivity
 - dissolved oxygen
 - turbidity
 - nitrate

- phosphorous
- prepared data sheets and recorded results
- reported water testing results according to workplace procedures
- reported urgent water quality and environmental concerns observed during sampling according to workplace procedures
- ensured traceability forms have been completed for environmental protection agencies
- applied workplace health and safety practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- water monitoring in land management, including:
 - purpose for testing water
 - types of water bodies and their related ecological and environmental characteristics
 - scheduling guidelines for testing water quality
 - standards for water quality
- methods and steps involved in collecting water samples, including:
 - water sampling equipment operation and maintenance
 - sampling techniques and procedures
 - storing water samples
 - transporting water samples
 - packaging and labelling for despatch to laboratories
 - packaging and labelling procedures for workplace testing
- purpose of water test, equipment used, methods and procedures, including for:
 - temperature (in situ)
 - pH
 - electrical conductivity
 - dissolved oxygen
 - turbidity
 - nitrate
 - phosphorous
- varied operating conditions, hazards and environmental conditions that may impact sampling and testing in the field.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in the field, on sites covering a range of environments indicated in the Performance Evidence
- access to a water testing laboratory or an environment that accurately represents a water testing laboratory
- resources, equipment and materials:
 - equipment and resources required for collecting and storing water samples
 - equipment and consumables used for conducting tests on water samples
- specifications:
 - workplace procedures and processes for collecting and testing water samples
 - manufacturer operating instructions for testing equipment
 - safety data sheets for chemical reagents used in testing procedures
 - workplace instructions and specifications for purpose of water sampling
 - legislation, codes of practice and industry standards for conducting tests.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW406 Supervise the monitoring of biodiversity

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to supervise a biodiversity monitoring program in a given area, and record and summarise findings.

The unit applies to individuals who work as natural area managers and seek information on natural systems or areas. These individuals take limited responsibility in known or changing contexts within established guidelines.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for monitoring biodiversity	1.1 Determine aims and goals of monitoring plan 1.2 Select monitoring operations to obtain data required in monitoring plan 1.3 Assess range of likely operating conditions, hazards and difficult or sensitive environments for impact on monitoring 1.4 Consider alternative land, sea and air operations to collect data

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.5 Obtain certificates, licenses and authorisations to conduct monitoring plan</p> <p>1.6 Identify hazards, assess risk and document controls according to workplace health and safety procedures</p>
2. Select and test equipment, resources and data management processes	<p>2.1 Source resources required for monitoring</p> <p>2.2 Pilot monitoring procedures in field conditions to test reliability, timeline and safety</p> <p>2.3 Ensure equipment and process prevents lasting detrimental impact on environment</p> <p>2.4 Develop procedures to capture, maintain, process and store data</p>
3. Oversee biodiversity monitoring	<p>3.1 Oversee observations according to monitoring plan</p> <p>3.2 Coordinate recording, preparation and storage of data</p> <p>3.3 Validate data collection and recording accuracy according to monitoring plan and workplace procedures</p>
4. Collate and assess data, and report on biodiversity monitoring	<p>4.1 Document and submit reporting requirements for certificates, licenses and authorisations</p> <p>4.2 Examine records of monitored data for consistency and accuracy within requirements of the monitoring plan</p> <p>4.3 Process data sets and produce a summary for reporting purposes</p> <p>4.4 Compile and update data storage according to workplace procedures</p> <p>4.5 Report on biodiversity monitoring program according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Analyse biodiversity monitoring plans and consolidate information for the development of the monitoring program

Skill	Description
Writing	<ul style="list-style-type: none"> Prepare reports using clear, industry specific language to convey explicit information and requirements for biodiversity monitoring

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW406 Supervise the monitoring of biodiversity	AHCLPW405 Monitor biodiversity	Change to title Redesigned unit with changes to Elements and Performance Criteria Redesigned Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW406 Supervise the monitoring of biodiversity

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, prepared and supervised a biodiversity monitoring program.

There must be evidence that the individual has:

- selected monitoring operations and assessed conditions and data collection methods from the biodiversity monitoring plan
- selected, sourced and tested equipment suitable for monitoring procedures
- identified systems to capture, maintain and analyse data
- supervised monitoring tasks and data collection for biodiversity
- validated, processed and stored data according to workplace procedures
- analysed and compiled data and reported on biodiversity monitoring.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- monitoring biodiversity in different ecosystems and the impact of their structure and interactions for monitoring
- identifying flora and fauna and methods of monitoring, including:
 - plants
 - major groups of fungi
 - mammals, birds, reptiles and amphibians
 - major groups of insects
- monitoring techniques for flora, fauna and microorganism populations
- legislative and regulatory requirements for biodiversity monitoring, including:
 - ethics and ethical standards

- animal welfare
- permits and applications processes
- property access
- protecting the environment
- principles and procedures for monitoring changes over time with respect to project goals
- resource requirements for supervising a biodiversity program, including:
 - personnel
 - monitoring equipment
 - materials
- scientific processes and procedures for monitoring biodiversity
- data recording and data validation techniques.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field for a regional biodiversity monitoring program, or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computer with data management and storage software
- specifications:
 - use of specific workplace policies, procedures, processes and application forms required to administer biodiversity monitoring programs
 - access to legislation relevant to flora and fauna conservation and biodiversity
- relationships:
 - team engaged in biodiversity monitoring.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW407 Process applications for changes in land use

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to assess the impact of changes in land use and to process applications from landowners for change.

The unit applies to individuals who work in land management roles under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish client requirements	1.1 Discuss and confirm the application for proposed changes with the landholder 1.2 Review the catchment characteristics in view of the proposed land use 1.3 Explain current impacting legislation and policies to the landholder

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Discuss possible strategies with the landholder and confirm the best option
2. Determine scope of the request	2.1 Determine profile of site from survey and aerial photographs 2.2 Undertake initial inspection checks against legislative or agency procedures 2.3 Check native vegetation types against maps and local guidelines 2.4 Check threats to local species against local resources 2.5 Check catchment characteristics of the land 2.6 Determine the impact on soil and water of proposed land use 2.7 Assess cultural heritage issues according to agency guidelines 2.8 Consider the application against eligibility criteria, and according to workplace policies and legislation
3. Present findings	3.1 Provide applicant with technical data following program guidelines 3.2 Report findings relating to the formal application 3.3 Inform applicant of specific requirements relating to submitting a formal application 3.4 Communicate and confirm assessment process 3.5 Communicate potential risks associated with proceeding with the application

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically interpret and analyse application forms from clients, and consolidate information to make determinations and recommendations
Oral Communication	<ul style="list-style-type: none"> Use collaborative and inclusive techniques to elicit and clarify information for clients and present outcomes of assessment of

Skill	Description
	applications

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW407 Process applications for changes in land use	AHCLPW401 Process applications for changes in land use	Changes made to Application Minor changes to Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW407 Process applications for changes in land use

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has received and processed at least one application from a landowner to make change to land use, including:

- established client intentions and requirements
- communicated the process, policies and relevant legislation to the applicant
- discussed the scope and application of the submission in light of preliminary discussion
- presented findings and feedback to the applicant
- provided further information and explained the appeal process if application is rejected
- explained provisions within federal and state legislation on relevant land use to landholder
- interpreted aerial photographs, maps and geographical information systems to identify particular landmarks and areas
- undertaken investigations to determine scope and impact of request.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- applications process for changes in land use, including:
 - documentation
 - roles and responsibilities
 - procedure for administering application
 - process for appeals if application is rejected
- relevance and impact of federal and state legislation and regulations related to land use
- catchment characteristics of land in question, including:
 - potential for erosion
 - permeability

- acid potential
- fertility
- potential catchment sediment load
- ecological and environmental impacts of changes to land use, including:
 - vegetation types native to site
 - flora and fauna and habitat conservation
- assessing signs and landmarks of site, including the use of:
 - aerial photographs
 - maps
 - geographic information system (GIS)
- workplace and agency policies and procedures for processing applications
- communicating with stakeholders, including:
 - formats for presenting information to clients
 - oral communication skills
 - negotiation skills
 - managing landholder disputes.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a property where there is an application for change in land use, or in an environment that accurately represents workplace conditions
- specifications:
 - - workplace policies, procedures, processes and forms relevant to changes to land use applications
 - change in land use application for client
 - legislation relevant to land use
- relationships:
 - client/s.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW408 Implement land and sea management practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement sustainable land and sea management practices for both Indigenous and non-Indigenous cultural landscapes for a given area according management plans and strategies, community guidelines and cultural protocols

The unit applies to individuals who are responsible for implementing management plans for conservation and land management work, and who apply specialist skills to provide solutions to technical and unpredictable problems. They work autonomously, instruct, and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine Indigenous land and sea management practices	1.1 Identify and follow cultural protocols when discussing and evaluating Indigenous land and sea management practices 1.2 Review Indigenous land and sea management plans and priorities

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Determine Indigenous practices for a specified area</p> <p>1.4 Determine resources for Indigenous management practices for a specific area or practice</p> <p>1.5 Seek advice and direction for Indigenous land and sea management practices</p> <p>1.6 Determine cultural protocols and customs relating to confidentiality of Indigenous land and sea management practices</p>
2. Determine non-Indigenous land and sea management practices	<p>2.1 Identify legislative, workplace and best practice parameters governing non-Indigenous land and sea management practices</p> <p>2.2 Review non-Indigenous land and sea management plans and priorities</p> <p>2.3 Determine non-Indigenous practices for a specified area</p> <p>2.4 Define resources for non-Indigenous land and sea management practices</p> <p>2.5 Seek advice and direction for non-Indigenous land and sea management practices</p>
3. Develop approach to implementation of land and sea management practices	<p>3.1 Contrast and compare Indigenous and non-Indigenous land management practices</p> <p>3.2 Develop options for land and sea management practices based on comparison</p> <p>3.3 Consult with stakeholders to confirm preferred options</p> <p>3.4 Prepare staging strategy for preferred option within budget</p> <p>3.5 Consult stakeholders of specified area in setting priorities for management work and practices</p>
4. Undertake land and sea management practices	<p>4.1 Undertake land and sea management practices according to agreed approach</p> <p>4.2 Undertake work according to workplace procedures, industry standards, community expectations and workplace health and safety policies and procedures</p> <p>4.3 Follow and respect cultural customs and protocols</p> <p>4.4 Ensure practices are carried out by authorised personnel</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Negotiate and confirm stakeholder needs using collaborative, inclusive and culturally appropriate techniques, including active listening and questioning and reading of verbal and non-verbal signals

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW408 Implement land and sea management practices	AHCLPW402 Implement land and sea management practices	Change to Application Minor changes and consolidated Performance Criteria for clarity and brevity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW408 Implement land and sea management practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, reviewed Indigenous and non-Indigenous land and sea management practices and determined and implemented an approach.

There must also be evidence that the individual has:

- consulted with key Indigenous and non-Indigenous stakeholders to determine land and sea management practices
- developed preferred options for land and sea management practices
- implemented land and sea management practices according to agreed approach and cultural customs and protocols
- applied workplace health and safety practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- cultural protocols of local Indigenous communities that relate to land and sea management activities, including:
 - cultural privacy, secrecy and confidentiality
 - land and sea rights and ownership
 - sacred and significant cultural sites
 - Indigenous artefacts
- Indigenous land and sea management practices
- non-Indigenous land and sea management practices
- planning and prioritising work activities, including:
 - sequencing and staging works
 - working within a budget

- resource requirements for land management practices, including:
 - human
 - technology
 - budget and financial constraints
 - equipment
 - materials
- strategies for implementing land and sea management practices
- workplace health and safety, environmental legislation and codes of practice.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a natural land and sea environment, or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - resources relevant to the land and sea management strategy
- specifications:
 - specific workplace documents such as policies, procedures, processes, forms
 - workplace plans and priorities for land and sea management
 - legislation/codes of practice
- relationships:
 - Indigenous and non-Indigenous stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW409 Inspect and monitor culturally significant places

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to inspect and monitor the fabric and setting of heritage or culturally significant places to identify inconsistencies with conservation and management plans.

The unit applies to individuals who work in an environment requiring a high level of cultural awareness and the need to observe cultural protocols. They provide solutions to technical and unpredictable problems, work autonomously, instruct, and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for inspection	1.1 Determine significance of place from cultural and/or heritage management plans 1.2 Determine specific facilities and equipment required for inspection according to operational request

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Obtain charters and specifications for evaluating the condition of cultural place
2. Carry out comprehensive inspection	<p>2.1 Follow work health and safety policies and procedures for carrying out inspections</p> <p>2.2 Inspect condition of cultural place for deterioration and damage</p> <p>2.3 Assess and record non-conformity with conservation and management plans</p> <p>2.4 Evaluate deterioration and damage to the cultural place to determine impact on the significance</p> <p>2.5 Determine threats to cultural place</p> <p>2.6 Determine and schedule maintenance works for the cultural place</p> <p>2.7 Identify potential hazards, assess risk, and document controls for cultural place according to workplace safety procedures</p>
3. Submit report and recommendations	<p>3.1 Action urgent substandard cultural conditions in accordance with conservation management plan</p> <p>3.2 Document inspection into a draft report and submit to stakeholders for feedback</p> <p>3.3 Review frequency and scope of inspection requirements in management systems</p> <p>3.4 Develop recommendations for future action according to conservation management plan, industry best practice, legislative requirements and international environmental standards</p> <p>3.5 Prepare final report incorporating feedback and recommendations, and submit to management</p> <p>3.6 Update information management system with inspection results according to workplace procedures</p>
4. Monitor cultural area and surrounds	<p>4.1 Monitor cultural area for deterioration and damage</p> <p>4.2 Determine the short-term and long-term deterioration and impact on the significance of cultural place</p> <p>4.3 Plan required restoration or modification of potential deterioration of the cultural area and surrounds</p> <p>4.4 Integrate maintenance, restoration and modification of cultural place</p>
5. Monitor stakeholder	5.1 Seek feedback from stakeholders on the significance and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
views on significance	maintenance of cultural place 5.2 Review feedback and record stakeholder views on significance and maintenance of cultural place 5.3 Report assessment of changed views to workplace, charter processes and Indigenous places guidelines

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse charters and specifications for consolidating information for the development of maintenance and monitoring of cultural places
Writing	<ul style="list-style-type: none"> Prepare reports using clear and detailed language in order to convey explicit information, requirements and recommendations for inspecting and monitoring cultural places

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW409 Inspect and monitor culturally significant places	AHCLPW403 Inspect and monitor cultural places	Change to title Updated Application, reviewed and consolidated Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW409 Inspect and monitor culturally significant places

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, inspected and monitored a cultural place, including:

- established the value and significance of cultural place from management plans
- obtained charters and specifications used to evaluate the condition of cultural place
- inspected at least one cultural place to establish:
 - a schedule of maintenance
 - a process to monitor site management
- prepared and submitted report to workplace standards, which must include:
 - results of inspection
 - feedback from stakeholders
 - recommendations based on inspection, feedback and review of existing management plan
- monitored cultural area surroundings to establish restoration, reclamation, modification and protection required for each of the potential causes:
 - biological agents
 - changes to the geophysics of the site
 - biosecurity risks
- conducted safety hazard analysis and risk assessments according to workplace policies and procedures
- monitored stakeholder views for impact on cultural significance, approach to maintenance, restoration and modification, and current and proposed uses of the cultural place
- applied work health and safety practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- Australian Heritage Commission legislation and requirements, state or territory heritage requirements and World Heritage requirements for cultural places
- definition of cultural and heritage places with either natural or cultural value or significance, including:
 - aesthetic
 - historic
 - scientific
 - social
- application of national charters and International Charters of the International Council on Monuments and Sites (ICOMOS), including the Burra Charter, to monitoring cultural places
- environmental legislation and codes of practice, including:
 - relevant environmental standards
 - best practice guidelines
- strategies for communicating with, and seeking feedback from, stakeholders, including:
 - Indigenous and other cultural groups
 - visitors
 - agency personnel
 - special interest groups
- processes and causes of environmental and artefact deterioration and damage, including:
 - indigenous and exotic biological agents causing damage and degradation
 - geophysical changes
 - biosecurity risks
- methods for assessing and monitoring cultural places, including:
 - equipment and resources
 - techniques
 - timing and scheduling
- maintenance, restoration and modifications that could be applied to place or area:
 - exclusion zones, fencing and barriers
 - signage
- threats to cultural place or area, including:
 - visitor impact
 - climate and exposure to weather
- report writing skills, including:
 - report structure
 - organising content
 - presenting data

- summarising
- formatting and presenting reports.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated at a culturally significant place, or in an environment that accurately represents workplace conditions
- specifications:
 - workplace policies, procedures and processes
 - workplace conservation and management plans for cultural places
 - national and international charters relevant to Australian cultural places
 - legislation, codes of practice and standards relevant to the maintenance of cultural places
- relationships:
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW410 Produce maps for land management purposes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to access geographical information and incorporate it into maps for use in land management.

The unit applies to individuals whose job role includes preparing maps by hand or by using geographical information systems (GIS) for land management purposes, and applying specialist skills to provide solutions to technical and unpredictable problems. They work autonomously, instruct, and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Obtain information for a specific land management purpose	1.1 Define information required from data sets 1.2 Collect and record information from stakeholders consistent with local area management strategy 1.3 Collect temporal and spatial data

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Review information for relevance and accuracy
2. Assess data availability	2.1 Ascertain availability of data sets 2.2 Establish intellectual property ownership of data and access requirements 2.3 Obtain data in accordance with industry standards, statutory requirements and enterprise policy 2.4 Develop procedures to capture data
3. Assess data quality	3.1 Assess data for integrity and suitability for task 3.2 Investigate and resolve disparities between data sets
4. Format and present data	4.1 Identify compatible formats for data 4.2 Assemble data elements according to proposed map purpose 4.3 Select data formats to meet user's requirements 4.4 Present information using suitable media 4.5 Present information according to workplace requirements and Australian Standards
5. Incorporate data onto maps	5.1 Use computer applications to manipulate data onto maps 5.2 Produce draft maps showing spatial and temporal data according to land management strategy 5.3 Review and edit maps to ensure accuracy 5.4 Develop a key to identify map elements according to purpose 5.5 Analyse map for data required in land management planning
6. Review stakeholder satisfaction	6.1 Seek feedback on suitability for purpose from stakeholders 6.2 Review and modify map to resolve concerns raised in feedback

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically interpret and analyse complex data and information for integration into map of a specific design
Writing	<ul style="list-style-type: none"> Use technology to produce, edit and proofread maps to ensure accuracy, clarity of meaning and consistency of information
Numeracy	<ul style="list-style-type: none"> Extract and manipulate mathematical information from data sets to produce accurate maps for scale and distances

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW410 Produce maps for land management purposes	AHCLPW404 Produce maps for land management purposes	Updated Application Minor edits to Performance Criteria for clarity and brevity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW410 Produce maps for land management purposes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has produced at least one map, for any three of the following land management purposes:

- land use map
- vegetation or fauna survey map
- walking trail
- cultural heritage site map
- fishing or fishing exclusion map or chart
- land or sea navigation map or chart
- fire trail or fire management map
- other map specified by workplace.

There must be evidence that the individual has:

- sourced data sets that provide the required information, ensuring data complies with intellectual property (IP) and copyright legislation
- validated data for currency and compared to ground observations
- presented data according to workplace requirements
- incorporated data onto a map
- used computer software for drafting and editing maps and checking and managing data according to workplace standards
- provided a map key and any supporting information required
- reviewed and assessed maps suitability for purpose and value with stakeholders.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of mapping and mapping styles for use in land management and production systems

- sources of information and data sets required for map development:
 - spatial data
 - temporal data
 - internally generated data
 - external data sets and IP and copyright
 - access and restrictions
- equipment used for obtaining and checking mapping data, including:
 - cameras, scanners and drones for capturing digital images
 - basic survey equipment for checking direction and distances
 - global positioning systems (GPS)
 - computers for accessing satellite and other data sets
- land management processes relevant to map being prepared
- mapping principles and conventions, including:
 - layout
 - keys and legends
 - scale
 - media
 - printing and presentation styles
- use of software and hardware, including:
 - GPS
 - geographic information systems (GIS)
 - computer-aided design (CAD)
 - desktop publishing
 - desktop mapping
 - multimedia and graphic animation
 - plotters and printers
- assessing and evaluating processes for map and map design, including:
 - soliciting feedback from stakeholders
 - analysing and integrating feedback in map editing.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a land management environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology with mapping and data access software
 - basic survey equipment for verifying mapping data

- specifications:
 - workplace policies, procedures, processes for mapping tasks
 - workplace specifications for mapping requirements
 - specific standards for map making.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW504 Assess land use applications for legislative compliance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to assess formal applications for changes in land use against legislative requirements, and make recommendations to ensure compliance.

The unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge in specific technical areas for the use and management of land. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

Land usage legislation and regulations exist in all states and territories and must be adhered to. Users are advised to check with the relevant authority.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for assessment	1.1 Review and confirm data for suitability of application for changes in land use 1.2 Communicate with client intention to process application

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Confirm land ownership by undertaking a title search 1.4 Notify client of irregularities in application according to workplace procedures 1.5 Establish timing of inspection and data collection with client
2. Collect site evidence	2.1 Check accuracy of submitted site plans against known mapping data 2.2 Investigate and collect site data pertinent to the application 2.3 Investigate and assess threats to biota and biodiversity 2.4 Assess impact of proposed land use on soil and water conditions 2.5 Investigate and record potential cultural and heritage issues
3. Compile final report	3.1 Assess site evidence and application data against criteria according to workplace procedures 3.2 Document outcomes of assessment 3.3 Compile a report and recommendations in accordance with legislative and workplace requirements 3.4 Present final report and supporting documentation to stakeholders

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and critique information from application forms, supporting documentation and compliance standards, drawing on a broad range of reading strategies
Oral Communication	<ul style="list-style-type: none"> Establish and maintain effective communication when communicating with stakeholders from a range of backgrounds and literacy levels, including clients, agency representatives and management
Numeracy	<ul style="list-style-type: none"> Analyse and synthesise embedded mathematical information in application forms, maps and plans when validating site information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW504 Assess land use applications for legislative compliance	AHCLPW503 Assess applications for legislative compliance	Changes to Application, Performance Evidence for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW504 Assess land use applications for legislative compliance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assessed at least four applications for change in land use. Each application should represent a different land use scenario, which may have an impact on any one of the following conditions:

- quality of an adjoining water body
- drainage
- soil erosion or slippage
- native flora
- native fauna
- Indigenous cultural site
- heritage site
- construction
- adjoining buildings and structures.

There must also be evidence that the individual has:

- reviewed existing data on land use
- conducted a title search and validated site mapping data
- scheduled site inspection with client
- collected and assessed the validity of evidence from the site and potential impact on:
 - existing biota
 - biodiversity
 - soil
 - water quality
- assessed the application for compliance with legislative requirements and workplace procedures
- recorded evidence of issues with cultural and heritage values for the site

- assessed the evidence and compiled report and recommendations according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- relevant Commonwealth and state/territory legislation and regulations that apply to land use, including:
 - native vegetation
 - agriculture and horticulture
 - mining
 - water
 - forestry
 - conservation
 - residential
- forms, policies and procedures for managing and assessing applications for change in land use
- approaches for investigating and assessing sites and land use
- communications strategies with stakeholders, including:
 - negotiation skills
 - presenting reports and recommendations
- methods of establishing accurate site data, including the use of:
 - site maps
 - aerial photographs
 - geographic information systems (GIS)
- assessing the impact of changes of land use on the site and surrounding area, including:
 - quality of an adjoining water body
 - water drainage
 - soil erosion and slippage
 - native flora and fauna
 - Indigenous cultural sites and heritage values
 - construction, buildings and structures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated for sites and applications for change in land use as stated in the Performance Evidence resources, equipment and materials:

- materials and equipment suitable for site visits and assessment
- specifications:
 - workplace policies, procedures, processes for assessing change in land use applications
 - application forms and access to sites for inspection
 - access to legislation and regulations for processing applications
- relationships:
 - stakeholders, clients or their representatives.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW506 Develop a management plan for a designated area

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required for the development of a management plan covering the range of biodiversity present in a designated area.

The unit applies to individuals who work in a conservation and land management role and who analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge in specific technical areas. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Define the need for a management plan	1.1 Identify management plan objectives for the designated area 1.2 Consult with client to achieve agreement on brief 1.3 Identify planning team, specialists and consultants

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Undertake preliminary planning activities	2.1 Identify stakeholders impacted by management plan 2.2 Identify legislative and regulatory impacts on designated area 2.3 Ascertain availability of specialists to assist in management planning work and preparation of contracts 2.4 Establish timelines for development of the management plan and reporting arrangements 2.5 Identify resources required for the development of management strategies
3. Prepare a site description	3.1 Identify and map landscape values of designated area 3.2 Identify and map physical features and characteristics of designated area 3.3 Identify site use and impact on designated area 3.4 Assess and document physical condition and civil concepts according to client brief 3.5 Document biological characteristics and influences on biota
4. Analyse site information and description	4.1 Assess site description against core principles and objectives in client brief 4.2 Determine priorities and key conservation issues 4.3 Prepare longitudinal projections of continuing impacts 4.4 Assess performance of site for proposed use 4.5 Identify and document opportunities and constraints to meeting planning objectives and goals 4.6 Seek stakeholder feedback and amend planning documentation
5. Identify management strategies	5.1 Identify management options to achieve defined objectives 5.2 Design management strategies to address defined objectives 5.3 Cost and compare management strategies against budget and available resources 5.4 Plan work scheduling to prioritise outcomes and resource allocation 5.5 Consult with stakeholders and incorporate feedback into planning documentation
6. Prepare the	6.1 Consolidate site information and management strategies into draft

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
management plan	management plan 6.2 Seek feedback from stakeholders and clients and amend draft management plan 6.3 Prepare and present a final management plan according to client brief

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Prepare detailed management plan and documentation demonstrating advanced writing skills by selecting appropriate conventions and stylistic devices to express precise meaning for clients and stakeholders
Oral communication	<ul style="list-style-type: none"> Establish and maintain effective communication in a broad range of contexts suited to the client or stakeholder understanding

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW506 Develop a management plan for a designated area	AHCLPW501 Develop a management plan for a designated area	Edited Application and Performance Criteria for clarity and brevity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW506 Develop a management plan for a designated area

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, developed a management plan for a designated area.

There must also be evidence that the individual has:

- discussed and defined management plan objectives, deliverables and timeline with client
- prepared a site plan detailing the following:
 - values of designated area
 - physical features and characteristics
 - past and present uses
 - legislative and regulatory implications
 - physical condition
 - biological characteristics
- assessed site performance for proposed use and identified conservation issues for designated site and surrounding area
- analysed site information and description to assess management options to achieve objectives
- developed and costed management strategies according to client brief
- produced a draft management plan and presented to client for feedback
- consulted with stakeholders and incorporated feedback into final management plan
- prepared and presented management plan according to workplace standards and client requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- management planning principles and issues, including civil design concepts
- Indigenous ownership and cultural heritage sensitivities
- non-Indigenous cultural heritage
- municipal zoning and planning
- environmental assessment, survey and analysis techniques and practical application for a range of habitats and landscapes
- biota and biological influence on ecology, including:
 - impact, interactions of native flora and fauna
 - population density
 - seasonal influences and nutritional influences on lifecycle
 - wildlife habitats and local geographic regions and vegetation types
- pest plants, animals and microorganisms and impact on ecology, including:
 - identification and physiology
 - pest management, control techniques and strategies
 - equipment
 - pesticides
 - ecological requirements
- ecosystem management strategies, including:
 - techniques
 - rehabilitation, restoration and regeneration
 - enterprise use of native Australian habitats, species and landscapes
- Indigenous flora regeneration and revegetation techniques, including equipment and methods of application relevant to landscape characteristics
- management and rehabilitation techniques for the wildlife and habitat
- soil, plant and water testing processes and procedures, interpretation and application of results
- levels of stakeholder engagement and engagement strategies, including:
 - negotiation skills for developing client briefs
 - working with special interest groups
 - communication styles for different client and stakeholder groups
- legislation, regulations, standards and codes of practice relevant to management planning.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated for at least one designated area resource
 - equipment and materials
 - access to computer or other equipment required for producing written documents to specified standards

- specifications:
 - client brief
 - legislation, regulations, standards and codes of practice skills must be demonstrated for at least one designated area resource
- relationships:
 - client and other stakeholders
- timeframes:
 - within a specific time period as specified in client brief.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW507 Implement natural and cultural resource management plans

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement natural and cultural resource management plans.

The unit applies to individuals who are responsible for the management of natural and cultural resources and who analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge in technical areas. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine priorities in management plan	1.1 Identify priorities in natural and/or cultural resource management plan 1.2 Refine priorities in plan into development or maintenance projects

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Develop procedures to address conservation priorities according to legislation, codes of practice and workplace health and safety procedures
2. Develop projects to priorities	2.1 Determine development and maintenance projects according to legislation, current charters and standards, and biosecurity procedures 2.2 Identify outcomes and key project actions 2.3 Identify resource and funding requirements
3. Obtain and manage funds	3.1 Develop budget for operations and project actions 3.2 Apply for funds according to workplace procedures 3.3 Allocate funds and manage budget
4. Brief work team on plan, priorities and project	4.1 Brief work team on plan objectives, priorities, actions and safe implementation 4.2 Train work team to follow new procedures 4.3 Develop project implementation program

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and extract information relevant to operationalising natural and cultural resource management plans, including legislation, regulations, charters and standards
Writing	<ul style="list-style-type: none"> Create detailed procedural documents, including actions, budgets and schedules and for defining the management priorities for the work team, taking into account the needs of a culturally and linguistically diverse workforce
Oral communication	<ul style="list-style-type: none"> Present planning and implementation in an informal or training environment using clear and convincing language, tone and pace appropriate for the audience
Numeracy	<ul style="list-style-type: none"> Interpret financial information and perform calculations to translate operational costings and scheduling for inclusion in

Skill	Description
	management plan

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW507 Implement natural and cultural resource management plans	AHCLPW505 Implement natural and cultural resource management plans	Changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW507 Implement natural and cultural resource management plans

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed the implementation of at least one natural resource management plan and one cultural resource management plan.

There must also be evidence that the individual has:

- determined priorities within the plan, including:
 - areas of high significance
 - level of risk to sensitive areas
 - potential for revenue generation
- identified projects from priorities, including:
 - new or continuing natural and culturally significant works
 - requirement for new procedures
 - new and continuing development or maintenance projects
- included financial management for the project, including:
 - costed the activities
 - applied for funding
 - developed a budget
- briefed and trained work team to implement activities safely according to workplace policies, procedures and management plan
- applied workplace health and safety, biosecurity and sustainability policies to the development of procedures and program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- approaches to management of natural and cultural resource management for parks and reserves, including:
 - assessing and identifying priorities in plans for conservation, places of high significance and threats, managing risks, and generating revenue
 - developing procedures
 - developing schedules and setting timelines
- human resource management, including:
 - communicating with work team
 - training
 - preparing work team for work activity
- financial management for management plan implementation, including:
 - costing project activity
 - preparing budgets
 - monitoring budgets
- project management practice
- legislation and government policies and their purpose for resource managers, including:
 - levels of governance
 - regional specific regulations
 - catchment plans
 - health and safety
 - sustainable practices
 - biosecurity
- national and international charters for cultural and heritage sites, including:
 - Australian Natural Heritage Charter
 - Burra Charter
 - interpretation of charters.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated for sites and applications stated in the Performance Evidence and in an environment that accurately represents workplace conditions
- specifications:
 - workplace policies, procedures, processes for implementing management plans
 - natural and cultural resource management plans for a specified region
 - legislation, codes of practice, and heritage and cultural site charters
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLPW602 Coordinate the preparation of a regional resource management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to engage stakeholders and operate at a strategic level to coordinate the development of regional natural resource management plans.

The unit applies to individuals who work at a strategic level within the conservation and land management industry, working with specialists in regional planning. They analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge of resource management. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements are apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Lands, Parks and Wildlife (LPW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review existing information	1.1 Access and review scoping documents and plans to determine starting point for planning process

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Identify sources of additional information required for input 1.3 Examine previous natural resource management issues to determine current and future impact 1.4 Identify scope and potential solutions from documentation for use in planning process
2. Form groups to support process	2.1 Contact key stakeholders to elicit views on consultative structures and processes 2.2 Develop consultative structure allowing for diversity, and promote engagement 2.3 Organise working groups to elicit stakeholder views and assistance
3. Plan and conduct consultations	3.1 Develop process to ensure stakeholder input 3.3 Organise consultation 3.2 Record formal consultations for reporting
4. Coordinate the collection of data	4.1 Coordinate data collection and surveys 4.2 Develop rules and relationships between various data sets for database structure 4.3 Engage data processing specialists to generate report formats 4.4 Record data in database 4.5 Manage data collection and recording within budgetary constraints
5. Coordinate the development of goals and strategies	5.1 Engage technical advisers to coordinate development of goals and strategies 5.2 Obtain technical advice on issues at regional and local levels for integration into goals and strategies 5.3 Provide advice to stakeholders to assist in development of goals and strategies 5.4 Facilitate groups to provide suggestion for goals and strategies and their formulation at a regional level 5.5 Review original scope and basis for planning process at major developmental stages
6. Coordinate the preparation of a draft plan	6.1 Coordinate preparation of draft plan using technical and stakeholder input 6.2 Coordinate personnel to structure the draft plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>6.3 Ensure draft plan is structured according to workplace requirements</p> <p>6.4 Review plan against legislative requirements and government and regional policies and processes</p> <p>6.5 Submit draft plan for editing, review and approval before stakeholder feedback</p>
7. Coordinate the revision of the plan to reflect consultations	<p>7.1 Revise draft plan to reflect stakeholder feedback</p> <p>7.2 Engage technical advisers to develop responses to feedback</p> <p>7.3 Submit revised plan for editing and review</p> <p>7.4 Submit revised plan to regional planning groups</p>
8. Submit plan for approval	<p>8.1 Submit final plan for approval and publication</p> <p>8.2 Evaluate planning process and outcomes for future improvements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and critique ideas and information from reports, plans and other information, and draw on a broad range of strategies to build and maintain understanding throughout the resource management planning process
Writing	<ul style="list-style-type: none"> Prepare detailed planning documentation demonstrating advanced writing skills by selecting appropriate conventions and stylistic devices and formatting to express precise meaning to the target audience
Oral Communication	<ul style="list-style-type: none"> Establish and maintain complex and effective communication in a consultative contexts

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLPW602 Coordinate the preparation of a regional resource management plan	AHCLPW601 Coordinate the preparation of a regional resource management plan	Changes to Application and minor edits and changes to Performance Criteria order for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLPW602 Coordinate the preparation of a regional resource management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, coordinated the development of a regional resource management plan.

There must also be evidence that the individual has:

- reviewed existing planning documents and sources of information required for regional planning
- identified land management issues and potential solutions
- identified stakeholders from diverse interest groups, formed consultative groups and elicited input for planning
- organised the collection and analysis of data to inform planning and monitor progress
- worked with stakeholders and technical advisers to develop goals and performance criteria
- developed a draft plan for widespread consultation and feedback, which must include goals, strategies and outcomes that reflect consultation and technical advice
- compiled feedback and amended plan to reflect recommended changes
- finalised the regional resource management plan according to workplace standards.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- regional and rural planning concepts from town planning, rural industry planning, and natural resource planning perspectives
- impact of government processes and industry activities in social and economic terms
- consultative groups and techniques that take into consideration cross-cultural and cultural factors, including:
 - special interest groups
 - Indigenous and cultural

- commercial
- recreational
- social
- local government operations that affect the regional resource management plan
- natural resource management and issues
- sources of technical advice.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - computers and word processing and data management software
 - communications and consultation facilities for working groups
- specifications:
 - workplace policies, procedures, processes and style guides for regional plan development
 - legislation and regulations relevant to regional resources to be managed
- relationships:
 - stakeholders from a diverse range of interest groups.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC101 Support landscape work

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency covers the skills and knowledge required to provide support to others undertaking landscape works in public, commercial and domestic situations

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape [LSC]

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare materials, tools and equipment for landscaping work	1.1 Identify the required materials, tools and equipment according to lists provided or supervisor's instructions 1.2 Conduct checks on materials, tools and equipment with insufficient or faulty items reported to the supervisor 1.3 demonstrate correct manual handling techniques when loading and unloading materials 1.4 Select and check suitable personal protective equipment (PPE) 1.5 Provide landscaping support according to workplace health and safety requirements and workplace information 1.6 Identify and report workplace hazards to the supervisor

Element	Performance criteria
2. Undertake landscape work as directed	2.1 Follow instructions and directions provided by supervisor and seek clarification when necessary 2.2 Undertake landscape work in a safe and environmentally appropriate manner 2.3 Carry out interactions with other staff and customers in a positive manner 2.4 Follow enterprise policy and procedures in relation to workplace practices, handling and disposal of materials 2.5 Report problems or difficulties in completing work to required standards or timelines to supervisor
3. Handle materials and equipment	3.1 Store waste material and debris produced during landscape work in a designated area according to supervisor's instructions 3.2 Handle and transport materials, equipment and machinery according to supervisor's instructions and enterprise guidelines 3.3 Maintain a clean and safe work site while undertaking landscaping activities
4. Clean up on completion of landscaping work	4.1 Return materials to store or dispose of according to supervisor's instructions 4.2 Clean, maintain and store tools and equipment according to manufacturer's specifications and supervisor's instructions 4.3 Make good the site according to supervisor's instructions 4.4 Report work outcomes to the supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC101A Support landscape work.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC101 Support landscape work

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply safe work practices in landscape construction and maintenance
- clean up on completion of landscaping work
- prepare materials, tools and equipment for landscaping work
- undertake landscape work as directed

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for supporting landscape work
- safe work practices
- preparing for landscape work and cleaning up on project completion
- basic construction techniques
- landscaping tools and equipment
- maintenance practices for planted areas
- repair and maintenance of landscape features
- workplace health and safety and safe work practices

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC102 Support landscape work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to undertake routine landscape work under direct supervision and to support the landscape work of others in public, commercial and domestic situations.

The unit applies to individuals who support landscape work while working alongside a supervisor, exercising limited autonomy within established and well known parameters. They identify and seek help with simple problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for landscaping work	1.1 Collect required materials, tools and equipment according to lists provided and supervisor instructions 1.2 Fit and use personal protective equipment (PPE) applicable to job requirements 1.3 Use correct manual handling techniques when loading and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	unloading materials 1.4 Check and report faulty or unsafe materials, tools, equipment or PPE to supervisor 1.5 Recognise and report workplace hazards to supervisor
2. Undertake landscape work as directed	2.1 Provide landscaping support according to workplace health and safety requirements and supervisor instruction 2.2 Follow instructions and directions provided by supervisor, and seek clarification when necessary 2.3 Handle and dispose of materials according to workplace practices and procedures 2.4 Maintain a clean and safe work site while undertaking landscaping work 2.5 Undertake landscape work in a safe and environmentally appropriate manner 2.6 Report problems or difficulties in completing work to required standards or timelines to supervisor
3. Handle materials and equipment	3.1 Handle and transport materials, tools, equipment and machinery according to supervisor instructions and workplace procedures 3.2 Store or dispose of waste material and debris according to supervisor instructions
4. Clean up on completion of landscaping work	4.1 Make good the work site according to supervisor instructions 4.2 Clean, maintain and store materials, tools and equipment according to supervisor instructions 4.3 Report malfunctions, faults, wear or damage of tools to supervisor 4.4 Report work outcomes to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Oral communication	<ul style="list-style-type: none"> • Use clear language and standard industry terminology to report malfunctions, faults, wear or damage to tools • Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC102 Support landscape work	AHCLSC101 Support landscape work	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC102 Support landscape work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supported landscape work on at least two occasions, and has:

- prepared materials, tools and equipment for landscaping work
- fitted and used personal protective equipment (PPE)
- applied safe and environmentally appropriate work practices in landscape construction and maintenance
- undertaken landscape work as directed
- handled, transported, cleaned and stored materials, tools, equipment and machinery as directed
- reported work outcomes and malfunctioning, faulty, worn or damaged of tools.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- procedures for preparing for landscape work and cleaning up on project completion
- safe work practices used in landscape work
- principles and practices of landscape work, including:
 - basic landscape construction techniques
 - landscaping tools and equipment use, storage and maintenance
 - maintenance practices for planted areas
 - repair and maintenance of landscape features.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to supporting landscape work
 - landscaping materials, tools, equipment and machinery
 - PPE applicable to supporting landscape work
- relationships:
 - supervisor, staff and customers
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC201 Assist with landscape construction work

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide support to others undertaking landscape works in public, commercial and domestic situations.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare materials, tools and equipment for landscaping work	1.1 Identify required materials, tools and equipment according to lists provided and supervisor's instructions 1.2 Check all materials, tools and equipment and tell supervisor if there are insufficient or faulty items 1.3 Use correct manual handling techniques when loading and unloading material to minimise damage to the materials and the vehicle 1.4 Select and maintain suitable personal protective equipment (PPE)

Element	Performance criteria
	1.5 Identify and report any workplace health and safety hazards to supervisor
2. Undertake landscape work as directed	2.1 Follow instructions and directions provided by supervisor and ask for clarification when necessary 2.2 Communicate with other staff and clients in a positive and professional manner 2.3 Handle and dispose of materials as directed 2.4 Tell supervisor if there are problems or difficulties in completing work to required standards or timelines
3. Handle materials and equipment	3.1 Store waste material and debris produced during landscape work in a designated area 3.2 Handle and transport materials, equipment and machinery 3.3 Maintain a clean and safe work site while undertaking landscaping activities
4. Clean up on completion of landscaping work	4.1 Return materials to store or dispose of as directed 4.2 Clean, maintain and store tools and equipment 4.3 Restore site according to supervisor's instructions 4.4 Tell supervisor of work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC201A Assist with landscape construction work.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC201 Assist with landscape construction work

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare materials, tools and equipment
- undertake landscape work as directed
- handle materials and equipment
- follow safe work practices and safety directions
- clean up on completion of landscape work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of assisting with landscape construction work
- basic construction techniques
- how to repair and maintain landscape features
- landscaping tools and equipment
- maintenance practices for planted areas
- safe work practices

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC202 Construct low-profile timber or modular retaining walls

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to construct low-profile timber or modular retaining walls in landscape settings.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare work	1.1 Read work instructions relating to constructing the retaining wall and confirm instructions with the supervisor 1.2 Prepare tools and equipment and use according to the supervisor's instructions 1.3 Identify and report to supervisor any manual handling and other work health and safety hazards

Element	Performance criteria
	1.4 Select, use and maintain personal protective equipment (PPE) and clothing 1.5 Check the quantity and quality of materials to make sure they conform to the requirements of the job plans 1.6 Locate and mark out services
2. Mark out site for retaining wall	2.1 Mark out the position of the retaining wall according to site plans 2.2 Determine the location and depth of excavations 2.3 Establish profiles to conform to the designated tolerances 2.4 Establish survey benchmarks
3. Prepare footings according to industry standards	3.1 Excavate foundations for the retaining wall to the required depth and dimensions as designated on the site plans 3.2 Remove soil and waste material and stockpile to ensure a safe working area 3.3 Locate reinforcing or steps in the excavated site and position accordingly 3.4 Position pegs to maintain levels of even depth and horizontal plane to the top of footings 3.5 Place, consolidate and finish footings to determined levels, to ensure coverage of reinforcement as necessary
4. Prepare and install retaining wall components	4.1 Prepare and lay out components for installation 4.2 Mark components to be cut to length and shape, and cut to the requirements of profiles already established 4.3 Install drainage media 4.4 Construct base layer of retaining wall to a point above the top of the drainage media and form weep holes where indicated 4.5 Back-fill and compact fill material behind base of retaining wall 4.6 Construct retaining wall components to required dimensions, profiles and levels as specified on the site plans 4.7 Set capping to top of retaining wall to specified levels with a tolerance appropriate to the style of capping
5. Clean up site and store tools and equipment	5.1 Dispose of or recycle soil and waste material from the site to minimise damage to the environment 5.2 Store and stack unused construction materials for future re-use 5.3 Clean and store all tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC202A Construct low-profile timber or modular retaining walls.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC202 Construct low-profile timber or modular retaining walls

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can

- read and interpret site and construction plans
- identify work health and safety hazards
- calculate materials required and mark out the area to be retained
- mark out the site and assemble materials
- construct footings and place reinforcing
- construct retaining walls as specified
- clear up the site and dispose of waste

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of low profile retaining walls
- construction approaches and methods
- construction materials for retaining walls
- safe lifting practices for large and heavy components
- methods of disposing soil and waste materials in order to minimise damage to the environment
- the environmental effects of altering water flow when installing retaining walls with or without drainage media
- the environmental impact of soil disturbance when excavating an area to be retained

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC203 Install aggregate paths

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to install aggregate paths in landscape projects.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare for installation	1.1 Confirm work instructions with the supervisor 1.2 Prepare tools and equipment for use 1.3 Check the quantity and quality of materials 1.4 Identify and report to supervisor manual handling issues and other

Element	Performance criteria
	work health and safety hazards 1.5 Select, use and maintain personal protective equipment (PPE) and clothing 1.6 Put in place measures to avoid environmental impacts before starting work
2. Set out the site for path construction	2.1 Mark out the location of the proposed path 2.2 Put public risk protection measures in place
3. Undertake ground preparation	3.1 Clear the area of debris and excavate to base level 3.2 Relocate or dispose of soil and waste materials 3.3 Place and compact base material to the required finished level 3.4 Install drainage structures 3.5 Install edge restraints, where required 3.6 Check set out work at regular intervals with supervisor, according to the site plan
4. Lay surface aggregate materials	4.1 Spread surface aggregate materials over the area to the designated depth 4.2 Screed material to ensure consistent depth of materials 4.3 Level aggregate materials to the designated level and falls 4.4 Compact aggregate materials using appropriate machinery
5. Make good the site	5.1 Dispose of or recycle soil and waste material from the site 5.2 Reinststate areas disturbed by installation works 5.3 Clean and store all tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC203A Install aggregate paths.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC203 Install aggregate paths

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan and prepare for installation and site safety
- read and interpret site plans
- undertake ground preparation for the path
- lay base material and surface aggregate materials
- set the path out
- reinstate site at completion of work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of aggregate path installation
- base and aggregate materials and their performance
- environmental impacts of soil disturbance when installing paths
- types of machinery used in path construction
- types of signs and barriers that need to be erected around the site
- tools and equipment used for installing paths

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC204 Lay paving

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to lay modular paving in landscape projects.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare for paving work	1.1 Confirm work instructions with the supervisor 1.2 Prepare tools and equipment 1.3 Select, use and maintain personal protective equipment (PPE) and clothing 1.4 Check the quantity and quality of materials to make sure they

Element	Performance criteria
	<p>conform to the requirements of the job plans</p> <p>1.5 Identify work health and safety hazards, assess risks and report to supervisor</p>
2. Set out and prepare paving area	<p>2.1 Mark out the area to be paved according to site plan</p> <p>2.2 Assist with pegging the reduced levels of the proposed paving area according to site plans and supervisor's instructions</p>
3. Undertake ground preparation	<p>3.1 Excavate the area to shape, depth and dimensions to sub-base level</p> <p>3.2 Trim the sub base to the designated level and falls to ensure that the final level of paving can be achieved</p> <p>3.3 Construct drainage systems as necessary according to site plan</p> <p>3.4 Place and compact base material to the required finished level</p>
4. Lay bedding material	<p>4.1 Establish screed rails to ensure the bedding course is maintained</p> <p>4.2 Spread bedding material loosely over the area to ensure the designated bedding depth can be attained</p> <p>4.3 Level bedding material to the designated level and falls</p>
5. Lay pavers to a given pattern	<p>5.1 Set grid string lines to required levels to ensure the designated pattern of the project is attained and to maintain straight lines of components</p> <p>5.2 Set out pavers to the required dimensions and pattern</p> <p>5.3 Lay whole pavers and compact to the established finish level</p> <p>5.4 Mark, cut and fit pavers to fill gaps in the pattern within nominated tolerances</p> <p>5.5 Install permanent edge constraints to prevent movement of pavers</p> <p>5.6 Spread sand on the paved area and compact to the finished level</p>
6. Clean site and store tools and equipment	<p>6.1 Sweep paving to produce a clean and flat surface free of debris</p> <p>6.2 Dispose of or recycle soil and waste material from the site to ensure minimal impact on the environment</p> <p>6.3 Clean and store all tools and equipment</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC204A Lay paving.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC204 Lay paving

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- read, interpret and apply information from a site plan
- prepare the site for paving
- lay bedding material
- lay pavers to pattern
- clean up the site and dispose of waste

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of paving
 - methods of disposing of soil and waste materials
 - pavers
 - paving styles and methods
 - site layout and planning
- the potential environmental impact of a paving project
- the types of signs and barriers that need to be erected around an area to be paved

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC205 Install tree protection devices

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to protect trees during construction work by installing protective devices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to install	1.1 Read work instructions relating to the task and confirm with the supervisor 1.2 Prepare tools and equipment and use according to the supervisor's instructions

Element	Performance criteria
	1.3 Identify and report manual handling and other work health and safety hazards 1.4 Select, use and maintain personal protective equipment (PPE) and clothing 1.5 Identify trees to be protected, and method of protection to be used 1.6 Collect protection devices or materials to assemble devices and check against requirements as indicated in tree protection plan
2. Install protection devices	2.1 Assemble and install tree protection devices 2.2 Carry out work in a manner that minimises risk of damage to trees and the surrounding environment
3. Complete installation activities	3.1 Check protection devices for their effectiveness 3.2 Report damaged and ineffective devices to the supervisor 3.3 Maintain a clean and safe area throughout and on completion of work 3.4 Record workplace outcomes and report to the supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC205A Install tree protection devices.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC205 Install tree protection devices

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- read and interpret site and tree protection plans
- select and operate tools and equipment for protecting trees, constructing and assembling tree protection devices and for traffic control
- measure materials used in constructing and assembling tree protection devices
- assemble and build protection devices
- clean up materials and maintain worksite

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of installing tree protection devices
- how to care and maintain trees during protection operations
- techniques for assembling or constructing a range of tree protection devices
- the application of a range of tree protection devices suitable to the requirements of the tree species
- the damage that can occur to trees during construction work
- principles and techniques relating to the choice of tools and equipment for installing tree protection devices

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC206 Assist with landscape construction work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to assist with landscape works, including preparing for and undertaking landscape construction work as directed, handling materials and equipment, and clean up on completion of landscaping work in public, commercial and domestic situations.

The unit applies to individuals who assist with landscape construction work under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare materials, tools and equipment for landscaping work	1.1 Confirm with supervisor landscape construction work to be undertaken 1.2 Select landscaping materials, tools and equipment according to lists provided and supervisor instructions 1.3 Select, fit and use personal protective equipment (PPE) applicable

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>to the task</p> <p>1.4 Use correct manual handling techniques when loading and unloading materials</p> <p>1.5 Identify and report workplace hazards to supervisor</p>
2. Undertake landscape work as directed	<p>2.1 Follow instructions and directions provided by supervisor, and seek clarification when necessary</p> <p>2.2 use selected tools safely and effectively</p> <p>2.3 Follow workplace policies and procedures in relation to workplace practices and handling and disposal of materials</p> <p>2.4 Maintain a clean and safe work site while undertaking landscaping work</p> <p>2.5 Report problems or difficulties in completing work to required standards or timelines to supervisor</p>
3. Handle materials and equipment	<p>3.1 Handle and transport materials, tools, equipment and machinery according to workplace procedures</p> <p>3.2 Clean, maintain and store materials, tools and equipment according to workplace procedures</p>
4. Clean up on completion of landscaping work	<p>4.1 Store or dispose of waste material and debris in a designated area</p> <p>4.2 Restore site according to supervisor instructions</p> <p>4.3 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> • Use clear language and standard industry terminology to report malfunctions, faults wear or damage to tools • Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC206 Assist with landscape construction work	AHCLSC201 Assist with landscape construction work	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC206 Assist with landscape construction work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assisted with landscape construction work on at least two occasions, and has:

- undertaken landscape work as directed
- prepared and used materials, tools and equipment for landscape construction work as directed
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- applied workplace policies and procedures relevant to assisting with landscape construction work
- assisted with clean up on completion of landscape work and disposed of waste
- reported landscape construction work and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of landscape construction work, including:
 - basic landscape construction techniques
 - landscaping tools and equipment
- workplace requirements applicable to health and safety in the workplace for assisting in landscape construction work, including appropriate use of PPE
- workplace policies and procedures relevant to assisting with landscape construction work.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace policies and procedures applicable to assisting with landscape construction work
 - materials, tools, equipment and machinery applicable to landscape construction work
 - PPE applicable to landscape construction work
- relationships:
 - supervisor, staff and customers
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC207 Construct low-profile timber or modular retaining walls

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to construct low-profile timber or modular retaining walls in landscape settings, including preparing for work, marking out site, preparing footings, installing wall components and cleaning up site.

The unit applies to individuals who construct low-profile timber or modular retaining walls under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare work	1.1 Read work instructions relating to constructing the retaining wall and confirm with supervisor 1.2 Prepare and use tools and equipment according to supervisor instructions 1.3 Check and confirm quantity and quality of materials according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	job plan requirements 1.4 Identify manual handling and workplace health and safety hazards, assess risks and report to supervisor 1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task 1.6 Locate and mark out services
2. Mark out site for retaining wall	2.1 Mark out position of retaining wall according to site plan 2.2 Determine location and depth of excavations according to supervisor instructions 2.3 Establish profiles according to designated tolerances 2.4 Establish survey benchmarks
3. Prepare footings according to industry standards	3.1 Excavate retaining wall foundations to required depth and dimensions according to site plans 3.2 Remove and stockpile soil and waste material to ensure a safe working area 3.3 Locate reinforcing or steps in excavated site and position accordingly 3.4 Position pegs to maintain levels of even depth and horizontal plane to the top of footings 3.5 Place, consolidate and finish footings to determined levels, to ensure coverage of reinforcement
4. Prepare and install retaining wall components	4.1 Prepare and lay out components for installation 4.2 Mark components to be cut to length and shape, and cut to requirements of profiles already established 4.3 Construct base layer of retaining wall to point above the top of drainage media and form weep holes where indicated 4.4 Install protective membrane as specified in site plan 4.5 Install drainage media and material as specified in site plan 4.6 Back-fill and compact fill material behind base of retaining wall 4.7 Construct retaining wall components to required dimensions, profiles and levels as specified on site plan 4.8 Set capping to top of retaining wall to specified levels with tolerance appropriate to style of capping

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Clean up site and store tools and equipment	5.1 Dispose of or recycle soil and waste material from site 5.2 Store and stack unused construction materials for future re-use 5.3 Clean, maintain and store tools and equipment 5.4 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and standard industry terminology to report malfunctions, faults, wear or damage to tools Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC207 Construct low-profile timber or modular retaining walls	AHCLSC202 Construct low-profile timber or modular retaining walls	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC207 Construct low-profile timber or modular retaining walls

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has constructed at least one low-profile timber and one modular retaining wall and has:

- read and interpreted site and construction plans
- marked out the site and assembled materials
- calculated materials required and marked out the area to be retained
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- consolidated base material
- constructed retaining walls as specified
- installed protective membrane as specified
- cleared up the site and disposed of waste
- reported low-profile timber or modular retaining wall construction operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of low profile retaining walls, including:
 - construction approaches and methods
 - construction materials for retaining walls
 - drainage media and material use and placement
 - protective membrane installation methods
 - safe lifting practices for large and heavy components
 - soil and waste material disposal methods

- environmental effects of altering water flow when installing retaining walls with or without drainage media
- environmental impact of soil disturbance when excavating an area to be retained
- workplace requirements applicable to health and safety in the workplace for constructing low-profile timber or modular retaining walls, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions applicable to constructing low-profile timber or modular retaining walls
 - materials, tools, equipment and machinery applicable to constructing low-profile timber or modular retaining walls
 - PPE applicable to low-profile timber or modular retaining walls construction work
- specifications:
 - workplace requirements applicable to health and safety in the workplace and constructing low-profile timber or modular retaining walls
 - site plan
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC208 Install aggregate paths

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to install aggregate paths in landscape settings, including preparing for installation, setting out the site, ground preparation, laying aggregate surface and cleaning up site.

The unit applies to individuals who install aggregate paths under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for installation	1.1 Read work instructions relating to installation of aggregate path and confirm with supervisor 1.2 Prepare and use tools, equipment and machinery according to supervisor instructions 1.3 Check and confirm quantity and quality of materials 1.4 Identify manual handling and workplace health and safety hazards,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>assess risks and report to supervisor</p> <p>1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task</p> <p>1.6 Implement measures to avoid environmental impacts before starting work</p>
2. Set out the site for path construction	<p>2.1 Mark out the location of proposed path according to site plan</p> <p>2.2 Implement public risk protection measures</p>
3. Undertake ground preparation	<p>3.1 Clear area of debris and excavate to base level</p> <p>3.2 Relocate or dispose of soil and waste materials</p> <p>3.3 Install drainage structures, where required</p> <p>3.4 Place and compact base material to required finished level</p> <p>3.5 Install edge restraints, where required</p> <p>3.6 Check set out work conforms to site plan with supervisor at regular intervals</p>
4. Lay surface aggregate materials	<p>4.1 Spread surface aggregate materials over area to designated depth</p> <p>4.2 Screed material to ensure consistent depth of materials</p> <p>4.3 Level aggregate materials to designated level and falls</p> <p>4.4 Compact aggregate materials using appropriate machinery</p>
5. Make good the site	<p>5.1 Dispose of or recycle soil and waste material from site</p> <p>5.2 Reinstate areas disturbed by installation works</p> <p>5.3 Clean, maintain and store tools and equipment</p> <p>5.4 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Oral communication	<ul style="list-style-type: none"> • Use clear language and standard industry terminology to report malfunctions, faults wear or damage to tools • Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC208 Install aggregate paths	AHCLSC203 Install aggregate paths	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC208 Install aggregate paths

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has installed aggregate paths of at least two metres in length on at least two occasions and has:

- planned and prepared for installation and site safety
- read and interpreted site plans
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- set the path out
- undertaken ground preparation for the path
- laid base material and surface aggregate materials
- reinstated site at completion of work
- reported aggregate path installation operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of aggregate path installation, including:
 - base and aggregate materials and their performance
 - environmental impacts of soil disturbance when installing paths
 - types of machinery used in path construction
 - types of membranes
 - types of edge restraints
 - types of signs and barriers that need to be erected around the site
 - tools and equipment used for installing paths
- workplace requirements applicable to health and safety in the workplace for installing aggregate paths including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions applicable to installing aggregate paths
 - materials, tools, equipment and machinery applicable to installing aggregate paths
 - PPE applicable to aggregate path installation work
- specifications:
 - workplace requirements applicable to health and safety in the workplace and installing aggregate paths
 - site plan
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC209 Lay paving

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to lay modular paving in landscape settings, including preparing for work, setting out paving area, ground preparation, laying bedding material and pavers, and cleaning up site.

The unit applies to individuals who lay paving under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for paving work	1.1 Read work instructions relating to paving work and confirm with supervisor 1.2 Prepare and use tools and equipment according to supervisor instructions 1.3 Check and confirm quantity and quality of materials according to job plan requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify workplace health and safety hazards, assess risks and report to supervisor</p> <p>1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to task</p>
2. Set out and prepare paving area	<p>2.1 Mark out area to be paved according to site plan</p> <p>2.2 Assist with pegging reduced levels of proposed paving area according to site plan and supervisor instructions</p> <p>2.3 Maintain clean and safe worksite during paving activities</p>
3. Undertake ground preparation	<p>3.1 Excavate area to shape, depth and dimensions to sub-base level</p> <p>3.2 Trim subbase to designated level and falls to ensure that final level of paving can be achieved</p> <p>3.3 Assist with construction of drainage systems according to site plan</p> <p>3.4 Place and compact base material to required depth according to site plan</p>
4. Lay bedding material	<p>4.1 Establish screed rails to ensure bedding course is maintained</p> <p>4.2 Spread bedding material evenly over area according to supervisor instructions</p> <p>4.3 Level bedding material to designated level and falls</p>
5. Lay pavers to a given pattern	<p>5.1 Set grid string lines to required levels to ensure designated pattern of project is attained and to maintain straight lines of components</p> <p>5.2 Set out pavers to required dimensions and pattern</p> <p>5.3 Lay whole pavers and compact to established finish level</p> <p>5.4 Mark, cut and fit pavers to fill gaps in pattern within nominated tolerances</p> <p>5.5 Install permanent edge constraints to prevent movement of pavers</p> <p>5.6 Spread jointing material over paved area and compact to finished level</p>
6. Clean site and store tools and equipment	<p>6.1 Sweep jointing material evenly over paving</p> <p>6.2 Dispose of or recycle soil and waste material from site</p> <p>6.3 Clean, maintain and store tools and equipment</p> <p>6.4 Report work outcomes, and malfunctions, faults, wear or damage</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	of tools to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and standard industry terminology to report malfunctions, faults wear or damage to tools Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC209 Lay paving	AHCLSC204 Lay paving	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC209 Lay paving

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has laid two different paving patterns on at least two occasions and has:

- prepared the site for paving
- read, interpreted and applied information from a site plan
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- laid bedding material
- laid and cut in pavers to pattern
- used different edge restraints
- cleaned up the site and disposed of waste
- reported paving operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of paving, including:
 - terminology for types of base and bedding material, edge restraints and their function
 - types of pavers
 - paving patterns, styles and methods
 - potential environmental impact of a paving project
 - types of signs and barriers that need to be erected around the site
 - methods of disposing of soil and waste materials
- workplace requirements applicable to health and safety in the workplace for laying pavers including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions applicable to laying pavers
 - materials, tools and equipment applicable to laying pavers
 - PPE applicable to laying pavers
- specifications:
 - workplace requirements applicable to health and safety in the workplace and laying pavers
 - site plan
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC210 Install tree protection devices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to protect trees during construction work by installing protective devices.

The unit applies to individuals who install tree protection devices under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to install	1.1 Read work instructions relating to installation of tree protection devices and confirm with supervisor 1.2 Prepare and use tools and equipment according to the supervisor instructions 1.3 Identify manual handling and workplace health and safety hazards, assess risks and report to supervisor 1.4 Select, fit, use and maintain personal protective equipment (PPE)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>applicable to the task</p> <p>1.5 Identify trees to be protected, and method of protection to be used</p> <p>1.6 Collect protection devices or materials to assemble devices and check requirements according to tree protection plan</p>
2. Install protection devices	<p>2.1 Assemble, fit and secure tree protection devices</p> <p>2.2 Carry out work in a manner that minimises risk of damage to trees and environment</p>
3. Complete installation activities	<p>3.1 Check protection devices for effectiveness</p> <p>3.2 Report damaged and ineffective devices to supervisor</p> <p>3.3 Maintain a clean and safe area throughout and on completion of work</p> <p>3.4 Clean, maintain and store tools and equipment</p> <p>3.5 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and standard industry terminology to report malfunctions, faults wear or damage to tools Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC210 Install tree protection devices	AHCLSC205 Install tree protection devices	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC210 Install tree protection devices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has installed tree protection devices on at least two occasions and has:

- read and interpreted site and tree protection plans
- selected and operated tools and equipment for:
 - protecting trees
 - constructing and assembling tree protection devices
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- measured materials used in constructing and assembling tree protection devices
- assembled and built protection devices
- cleaned up materials and maintained worksite
- demonstrated use of tools and equipment for installing tree protection devices
- reported tree protection device installation operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of installing tree protection devices, including:
 - how to care for and maintain trees during protection operations
 - techniques for assembling or constructing tree protection devices
 - the application of tree protection devices suitable to the requirements of the tree species
 - the damage that can occur to trees during construction work

- techniques relating to the choice of tools and equipment for installing tree protection devices
- workplace requirements applicable to health and safety in the workplace for installing tree protection devices including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions applicable to installing tree protection devices
 - materials, tools and equipment applicable to installing tree protection devices
 - PPE applicable to tree protection device installation work
- specifications:
 - workplace requirements applicable to health and safety in the workplace and installing tree protection devices
 - site plan and tree protection plan
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC301 Set out site for construction works

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to set out a site for construction works in accordance with site plans and specifications. This may be done in advance of proposed works or in conjunction with construction works already being carried out.

This unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare work	1.1 Interpret plans and specifications 1.2 Compare site plan and specifications with other available plans 1.3 Select tools and equipment required for setting out construction

Element	Performance criteria
	works and check for serviceability 1.4 Identify hazards, assess risks and implement controls 1.5 Consider environmental impact of proposed construction works in interpreting site plans
2. Locate and mark out position of construction works	2.1 Locate existing site features from the site plan 2.2 Locate position of proposed construction works 2.3 Using the correct scale transfer scale measurements of lines, shapes, angles and dimensions from the site plan to site 2.4 Mark out the shape of proposed construction works on site
3. Establish datum point and survey benchmarks on site	3.1 Establish datum point to ensure all existing and proposed construction works can be linked by survey equipment 3.2 Select and establish survey benchmarks on positions or structures on site according to site plans or specifications
4. Take and verify site levels	4.1 Set up levelling equipment and check for accuracy of readings 4.2 Adjust instruments which are out of specification 4.3 Take levels and verify and record in accordance with established datum point and survey benchmarks 4.4 Clean, maintain and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC301A Set out site for construction works.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC301 Set out site for construction works

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- interpret site plans and specifications
- use mathematical and geometrical principles to mark out a site for construction work
- use a range of surveying instruments
- establish datum points and survey benchmarks on site
- take and verify site levels

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of site set out for landscape works
- how other plans may be referred to in assisting setting out a site
- how to determine if other plans may be referred when setting out a site

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC302 Construct landscape features using concrete

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to construct concrete structures and features as a component of landscape project works.

This unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare work	1.1 Interpret plans and specifications 1.2 Check the quantity and quality of materials 1.3 Select tools and equipment and check for serviceability 1.4 Identify hazards, assess risks and implement controls

Element	Performance criteria
	1.5 Select and use personal protective equipment (PPE) 1.6 Identify and ameliorate environmental impacts of proposed concrete works
2. Set out and prepare the site	2.1 Determine and locate services 2.2 Mark out the position of the structure or feature according to plans 2.3 Establish profiles to conform to the nominated tolerances 2.4 Prepare subsoil by removing all debris, vegetable matter and topsoil to provide a solid foundation for concrete 2.5 Install drainage systems according to plans and specifications 2.6 Install form work to the site in a manner that will ensure it remains rigid during concrete pouring operations 2.7 Place and compact sub-base material to the required finished levels 2.8 Complete preparation of the site according to the type of structure or feature to be constructed 2.9 Place reinforcement as designated in plans and specifications
3. Mix and pour concrete	3.1 Determine proportions for concrete mix according to the strength requirements of the project 3.2 Determine the volume of dry materials necessary to produce final concrete mix 3.3 Mix together all dry ingredients and required additives to ensure a thorough blending of all materials is achieved 3.4 Introduce sufficient water to produce a concrete mix to the required consistency 3.5 Pour concrete to designated levels in a manner to avoid segregation of materials 3.6 Consolidate concrete using an approved vibration method
4. Finish concrete	4.1 Screed concrete to the desired finished level 4.2 Trowel surface to desired finish 4.3 Finish concrete off according to plans and specifications
5. Check quality of work and clean-up site	5.1 Inspect the quality of finished works to ensure the required standard has been achieved 5.2 Remove and clean form work to allow reuse 5.3 Ensure all clean-up works minimise impact to the environment 5.4 Clean, maintain and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC302A Construct landscape features using concrete.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC302 Construct landscape features using concrete

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- interpret site plans and specifications
- set out and prepare a site for concrete
- measure and construct profiles
- establish levels using levelling equipment
- place reinforcement
- pour, consolidate and finish concrete

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of constructing concrete landscape features
- industry standards in relation to reinforcing and consolidating concrete
- MPA testing theory and what affects MPA specifications in a concrete mix
- sub-base and sub-grade materials and preparation
- the comparative environmental implications associated with soil removal and the placement of concrete

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC303 Construct brick and block structures and features

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to construct brick structures and features or block structures and features, or both as a component of a landscaping project.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare work	1.1 Interpret plans and specifications 1.2 Check the quantity and quality of materials 1.3 Select tools and equipment and check for serviceability 1.4 Identify hazards, assess risks and implement controls accordingly

Element	Performance criteria
	1.5 Identify and ameliorate the potential environmental impacts of proposed brick and block construction works 1.6 Select and use suitable personal protective equipment (PPE)
2. Set out and prepare the site	2.1 Determine and locate services 2.2 Mark out the position of the structure or feature according to site plans 2.3 Establish profiles to conform to the nominated tolerances 2.4 Prepare subsoil by removing all debris, vegetable matter and topsoil to provide a solid foundation for construction 2.5 Install drainage systems according to site plans and specifications 2.6 Place and compact sub-base to material the required finished levels
3. Construct structure or feature	3.1 Mix mortar to determined ratio and add bonding and colouring agents and other appropriate admixes, in accordance with specifications 3.2 Lay damp proofing and base course of brick or block work 3.3 Lay courses of brick or block work using designated bond(s) in a manner that will ensure the viability and stability of the structure 3.4 Apply finishes to brick or block work
4. Check quality of work and clean-up site	4.1 Inspect the quality of finished works to ensure the standard of the finished structure or feature has been achieved 4.2 Clean down brick or block work surfaces in an environmentally safe and sensitive manner 4.3 Clean, store and maintain all tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC303A Construct brick and block structures and features.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC303 Construct brick and block structures and features

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- interpret site plans and specifications
- measure and construct profiles using mathematical techniques
- construct brick or block structure or feature
- establish levels using levelling equipment
- check quality of work and cleaning up of site

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of brick and block construction
- components of mortar, including bonding and colouring agents
- environmental impacts of bricks and block construction works

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC304 Erect timber structures and features

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to erect timber structures and features as a component of landscape project works.

This unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare work	1.1 Interpret plans and specifications 1.2 Check the quantity and quality of materials to ensure they conform to design drawings and specifications 1.3 Select tools and equipment and check for serviceability 1.4 Identify hazards, assess risks and implement controls accordingly

Element	Performance criteria
	1.5 Select and use suitable personal protective equipment (PPE)
2. Set out the site and prepare the profile and footings	2.1 Determine and locate services 2.2 Mark out the position of the structure or feature 2.3 Establish profiles to conform to the nominated tolerances 2.4 Excavate and prepare footings according to the type of structure to be erected
3. Prepare and cut timber components	3.1 Prepare components for assembly 3.2 Mark out the length of components and the positions of cuts and joints 3.3 Cut, check and accurately drill components in preparation for joining and assembly
4. Assemble and erect structure	4.1 Fix, join or assemble timber components into position and fix into place 4.2 Install remaining components and fix into position 4.3 Finish off structure to ensure all components are secure and complete 4.4 Apply coatings
5. Check quality of work and clean-up site	5.1 Inspect the quality of finished works to ensure the required standard has been achieved 5.2 Clean debris from structure and site 5.3 Dispose of waste material in an environmentally safe and sensitive manner 5.4 Clean, store and maintain tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC304A Erect timber structures and features.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC304 Erect timber structures and features

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- mark out a site for timber structures and features according to design drawings and specifications
- apply a variety of surface finishes
- establish levels and prepare footings where required
- estimate quantities
- use levelling equipment
- excavate footings
- fix, join or assemble timbers using a variety of recognised methods
- use a power tools efficiently and safely

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices for erecting timber structures
- common timber joins
- levelling principles and techniques
- footings for timber structures and their construction methods
- timber fixing methods and products
- timber properties and characteristics

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC305 Construct stone structures and features

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency covers the skills and knowledge required to construct stone structures and features as a component of landscape project works.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare work	1.1 Interpret plans and specifications 1.2 Check the quantity and quality of materials to ensure they conform to design drawings and specifications 1.3 Select tools and equipment and check for serviceability 1.4 Identify workplace health and safety hazards, assess risks and

Element	Performance criteria
	implement controls 1.5 Identify and report environmental implications of erecting stone structures
2. Set out and prepare the site	2.1 Locate services from site plans 2.2 Mark out the position of the structure or feature according to design drawings and specifications 2.3 Prepare base by removing all debris, vegetable matter and topsoil to provide a solid foundation for construction 2.4 Install drainage systems according to design drawings and specifications 2.5 Place and compact sub-base material to the finished levels
3. Construct structure or feature	3.1 Mix mortar and add bonding and colouring agents and other admixes as required, in accordance with specifications 3.2 Lay damp proofing and base course of stone work according to design drawings and specifications 3.3 Lay courses of stone work using designated bond/s in a manner that will ensure the viability and stability of the structure and according to design drawings and specifications
4. Install stone paving	4.1 Set out and prepare area to be paved according to the site plan 4.2 Excavate the area to shape, depth and dimensions to sub-base level 4.3 Trim the sub base to the designated level and falls and place and compact base material to the finished level 4.4 Spread bedding material over the area and level to the designated level and falls 4.5 Place stone and fit to accurately fill gaps in the pattern within tolerances nominated within the site plan 4.6 Install edge constraints as required by the site plan
5. Check quality of work and clean-up site	5.1 Inspect finished works to ensure the standard of the finished structure or feature is in accordance with design drawings and specifications 5.2 Clean stone work surfaces in an environmentally safe and sensitive manner 5.3 Clean and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC305A Construct stone structures and features.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC305 Construct stone structures and features

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- interpret plans and specifications
- prepare the site and install drainage systems
- set out base for paving
- use levelling equipment
- construct stone work with correct mortar ratio

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for constructing stone structures and features
- comparative environmental implications associated with soil disturbance and the establishment of drainage systems
- bonding and colouring agents and other admix components of mortar used in the construction of stone structures and features
- stone structure construction

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC306 Implement a paving project

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to install and construct a paved surface to a prepared base within a documented scope of works incorporated in a project across a range of situations and environments.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for paving project	1.1 Clarify the requirements of the paving project 1.2 Select and use tools, equipment and machinery and check for serviceability 1.3 Identify workplace health and safety hazards, assess risks and

Element	Performance criteria
	implement controls 1.4 Identify and ameliorate environmental impacts of proposed works 1.5 Select, use and maintain personal protective equipment (PPE) 1.6 Organise delivery of materials to site according to workplace priorities
2. Set out and prepare the site	2.1 Erect site bunting, control pedestrian access and place safety signage 2.2 Locate services 2.3 Make provision for irrigation lines to cross paved areas 2.4 Mark out the paving pattern according to plans and specifications 2.5 Place and compact sub-base material to the required finished levels 2.6 Incorporate surface drainage as specified
3. Implement paving project	3.1 Construct paving 3.2 Install appropriate drainage 3.3 Use tools, equipment and machinery safely in accordance with enterprise safe operating procedures and work health and safety requirements
4. Check quality of work and clean-up site	4.1 Inspect the quality of finished works to ensure they have met the required drawings and specifications standards 4.2 Clean work-site and dispose of debris in an environmentally safe and sensitive manner 4.3 Clean, maintain and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC306A Implement a paving project.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC306 Implement a paving project

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine project requirements from plans
- calculate material and resource requirements
- organise work and use tools and equipment
- use tools and equipment to construct paving
- clean up, store and maintain tools, machinery and equipment

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of paving
- landscape paving materials
- methods and practices for maintaining and repairing paved areas
- methods of work schedule programming
- set-out techniques
- the range and use of required materials, equipment and machinery

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC307 Implement a retaining wall project

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to install and construct a retaining wall.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for retaining wall project	1.1 Interpret plans and specifications 1.2 Identify equipment and material resource requirements according to the scope of the construction work 1.3 Identify workplace health and safety hazards, assess risks and implement controls

Element	Performance criteria
	1.4 Identify and ameliorate environmental impacts of the proposed works 1.5 Select, use and maintain personal protective equipment (PPE) 1.6 Select tools and equipment and check for serviceability 1.7 Organise delivery of materials to site according to workplace priorities
2. Mark out site for retaining wall	2.1 Erect site bunting and place safety signage 2.2 Locate services 2.3 Mark out the position of the retaining wall 2.4 Determine the location and depth of excavations from construction plans 2.5 Establish profiles to conform to the designated tolerances 2.6 Establish survey benchmarks
3. Construct retaining wall	3.1 Assemble or install retaining wall components in accordance to plans and specifications 3.2 Install appropriate drainage in accordance with plans and specifications 3.3 Use tools and equipment safely and in accordance with enterprise safe operating procedures and work health and safety requirements
4. Check quality of work and clean-up site	4.1 Inspect the quality of finished works to ensure the required standard has been achieved 4.2 Clean paved surfaces and dispose of all debris in an environmentally safe and sensitive manner 4.3 Clean, maintain and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC307A Implement a retaining wall project.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC307 Implement a retaining wall project

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- read and interpret documentation associated with retaining wall projects
- calculate material and resource requirements
- establish survey benchmarks
- excavate and profile soil levels
- use tools and equipment to construct retaining wall projects

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of retaining walls
- environmental impacts of landscape works
- landscape retaining wall materials and construction techniques
- legislative requirements and codes of practice affected by landscape works
- local council permit requirements for landscape works
- materials, equipment and machinery that may be required for the project
- methods and practices for maintaining and repairing retaining walls
- set out techniques
- work health and safety issues

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC308 Install metal structures and features

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to install metal structures and features as a component of landscape project works.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare work	1.1 Interpret plans and specifications

Elements	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Check the quantity and quality of materials 1.3 Select tools and equipment and check for serviceability 1.4 Identify hazards, assess risks and implement controls 1.5 Select and use personal protective equipment (PPE)
2. Set out the site for the structure	2.1 Determine and locate services 2.2 Mark out the position of the structure or feature 2.3 Establish profiles to conform to nominated tolerances 2.4 Excavate and prepare footings according to the type of structure to be erected
3. Prepare and cut metal components	3.1 Lay components out for assembly 3.2 Mark the length of components and the positions of joints 3.3 Cut, check and join components in preparation for joining and assembly
4. Assemble and erect structure	4.1 Fix, join or assemble metal components into position and fix into place 4.2 Install remaining components and fix into position 4.3 Finish off structure to ensure all components are secure and complete 4.4 Apply coatings
5. Check quality of work and clean-up site	5.1 Inspect the quality of finished works to ensure they have met the required drawings and specifications standards 5.2 Clean debris from structure and site 5.3 Remove and dispose of all debris in a manner that minimises risk to the environment 5.4 Store unused metal components for future re-use 5.5 Clean, maintain and store tools and equipment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC308 Install metal structures and features Release 2	AHCLSC308 Install metal structures and features Release 1	Minor typographical error corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC308 Install metal structures and features

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan and prepare metal structures and features using plans and specifications
- mark out sites for metal structures and features using design drawings and specifications
- use surveying instruments
- establish levels and prepare footings
- excavate footings
- estimate quantities
- use power tools efficiently and safely
- measure and mark lengths of metal components
- fix, join or assemble metal components using a variety of recognised methods
- apply a variety of surface finishes.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of installing metal structures and features
- levelling principles and techniques
- footings for metal structures and their construction methods.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC309 Install water features

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to install water features. Water features may include waterfalls, ponds, waterways and fountains. They may be prefabricated as supplied by irrigation suppliers and garden centres or formed 'in situ'.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare work	1.1 Interpret plans and specifications 1.2 Check the quantity and quality of materials 1.3 Select tools and equipment and check for serviceability 1.4 Identify work health and safety hazards, assess risks and

Element	Performance criteria
	implement controls 1.5 Select and use personal protective equipment (PPE) 1.6 Identify the environmental implications of constructing water features
2. Set out and prepare the site	2.1 Locate services as specified 2.2 Determine the exact location and depth of excavations and mark out accordingly 2.3 Excavate site to the shape, depth and dimensions as marked out 2.4 Construct drainage systems as specified 2.5 Place and compact bedding material to the required finished levels 2.6 Sort and stockpile soil and waste material ready for removal, reuse or recycling
3. Install water feature and accessories	3.1 Install the waterproof membrane, prefabricated shell or formed 'in situ' feature as specified 3.2 Install all accessories to the feature as specified with consideration to safety issues 3.3 Fill the feature with water, test for leaks and repair accordingly 3.4 Treat water to remove or neutralise contaminants resulting from excavation and installation work
4. Check quality of work and clean-up site	4.1 Check any mechanical features and adjust to ensure correct operation 4.2 Clean debris from structure and site 4.3 Dispose of soil and waste material in an environmentally safe and sensitive manner 4.4 Clean, maintain and store tools and equipment 4.5 Inspect quality of finished works to ensure standard of the finished works is in accordance with drawings and specifications

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC309A Install water features.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC309 Install water features

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine project requirements from plans
- use surveying instruments
- Set out and prepare a water feature site
- measure and calculate area, depth and volume
- use tools and equipment to construct a water feature
- clean up the site

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of water feature installation
- pipe sizes, types and applications
- pumping systems and accessories associated with water features
- set-out techniques
- water treatment methods

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC310 Implement a tree transplanting program

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement a tree transplanting program.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for tree transplantation	1.1 Liaise with local authorities and information services to determine location of services and utilities, local by-laws and regulations governing the transplanting and transportation of trees 1.2 Inspect tree to ensure the appropriate transplanting operations are implemented

Element	Performance criteria
	<p>1.3 Identify hazards, assess risks and implement control measures</p> <p>1.4 Select and use personal protective equipment (PPE)</p> <p>1.5 Select, prepare and use tools, equipment and machinery necessary to implement tree transplanting</p> <p>1.6 Select, prepare and use root ball and crown treatments according to the requirements of the species to ensure the tree remains viable throughout the transplanting process</p> <p>1.7 Notify local residents and authorities where necessary as part of preparing site for transplanting activities</p> <p>1.8 Confirm assets, property and vegetation related to work zone activities are protected, relocated, or secured from potential damage during transplanting</p>
2. Implement transplanting operations	<p>2.1 Excavate the soil around the root zone and undercut the root ball with minimum stress to the plant</p> <p>2.2 Prune roots where required to meet the appropriate Australian Standard</p> <p>2.3 Stabilise tree as the root system is undercut and apply anti-transpirants as a root soak or foliar spray to maintain viability of the plant</p> <p>2.4 Bind root ball with appropriate material to ensure adequate soil is retained and keep moist prior to transportation and installation</p> <p>2.5 Lift tree and secure for potential storage or transportation using safe lifting techniques</p> <p>2.6 Prepare and handle tree or shrub to minimise damage during transportation</p> <p>2.7 Implement appropriate drainage and soil improvements</p> <p>2.8 Re-install and stabilise the tree</p>
3. Maintain health and viability of transplanted tree	<p>3.1 Apply water to the transplanted tree over a sustained period to minimise leaf loss and promote new growth</p> <p>3.2 Apply anti-transpirants and provide nutritional requirements of the species</p> <p>3.3 Install tree protection devices to provide adequate support and protection</p> <p>3.4 Monitor tree condition and site to ensure the plant remains healthy</p> <p>3.5 Clean, maintain and store tools, equipment and machinery at completion of work</p> <p>3.6 Record completed transplanting program and report to management or the client</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC310A Implement a tree transplanting program.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC310 Implement a tree transplanting program

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- locate existing services and utilities, local by-laws and regulations
- determine tree transplanting requirements from specifications
- prepare tools and equipment, tree and new site for tree transplanting
- calculate tree mass and size for safe removal
- bind and wrap root balls and crowns
- lift, reinstall and stabilise a tree

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of tree transplanting
- causes of stress in trees resulting from transplanting, storage and transportation
- environmental impact of tree removal and transplantation
- principles and methods of operating tree moving equipment
- problems and methods relating to the aftercare of trees during their establishment period
- requirements for securing and signage when transporting trees on road vehicles
- safety procedures and potential hazards of removing and transplanting trees
- the relevant Australian Standards and codes of practice
- tree anatomy and physiology as it relates to transplanting trees
- tree transplanting techniques

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC311 Set out site for construction works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to set out a site for construction works, planning, preparing, locating and marking out construction works, establishing survey benchmarks and verifying site levels in accordance with site plans and specifications. This may be done in advance of proposed works or in conjunction with construction works already being carried out.

The unit applies to individuals who set out site for construction works under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare work	1.1 Interpret and compare site plans and specifications with other available plans 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Select tools and equipment required for setting out construction

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	works, and check for safe operation 1.4 Interpret environmental impact of proposed construction works in conjunction with site plans
2. Locate and mark out position of construction works	2.1 Locate existing site features from site plan 2.2 Locate position of proposed construction works 2.3 Using correct scale, transfer scale measurements of lines, shapes, angles and dimensions from site plan to site 2.4 Mark out shape of proposed construction works on site
3. Establish benchmark for construction works	3.1 Identify site datum from plans and specifications to ensure all existing and proposed construction works can be linked by survey equipment 3.2 Find or establish suitable benchmark for site works according to site plans or specifications 3.3 Set out correct reduced levels on site in comparison to benchmark based on plans and specifications 3.4 Interpret reduced levels in relation to benchmark 3.5 Calculate differences in heights on site or between reduced levels provided on plan
4. Take and verify site levels	4.1 Position levelling instrument to take, record and verify levels 4.2 Describe appropriate procedures to follow if a levelling instrument is not accurate 4.3 Take and record site readings, and verify readings are correct according to site plans and specifications
5. Complete work	5.1 Clean, maintain and store tools and equipment in required location 5.2 Identify and report unserviceable tools and equipment according to workplace procedures 5.3 Record site set out work activities according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to complete work records
Oral communication	<ul style="list-style-type: none"> Use clear language and industry standard terminology to report tool and equipment unserviceability
Numeracy	<ul style="list-style-type: none"> Use and interpret scale rulers, read leveling instruments, take and read measurements and calculate differences between levels Set out geometric shapes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC311 Set out site for construction works	AHCLSC301 Set out site for construction works	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC311 Set out site for construction works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has set out a site for construction works on at least one occasion and has:

- interpreted site plans and specifications
- identified and reported workplace health and safety hazards
- selected, used and maintained tools and equipment required for setting out construction works
- used mathematical and geometrical principles to mark out a site for construction work
- established a benchmark on site in relation to reduced levels on plans and specifications
- set out site to reduced levels indicated on plan in relation to benchmark
- used at least three types of surveying instruments
- taken and verified site levels compared to site plan
- reported unserviceable tools and equipment and recorded work activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of site set out for landscape works, including:
 - how other plans may be referred to in assisting setting out a site
 - how to determine if other plans may be referred when setting out a site
 - mathematical and geometrical principals relevant to marking out sites
 - tools, equipment and survey instruments relevant to setting out site for sites construction works and their use
- workplace requirements applicable to health and safety in the workplace for setting out site for construction works.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - tools and equipment, and survey instruments applicable to setting out sites for construction work
 - other plans applicable to setting out sites for construction work
- specifications:
 - workplace requirements applicable to health and safety in the workplace for setting out site for construction works
 - site plans and specifications applicable to setting out sites for construction work
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC312 Construct brick and block structures and features

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to construct brick structures and features or block structures and features, or both as a component of landscape project works, including preparing for work, setting out and preparing site, constructing structure or feature, checking and cleaning up site.

The unit applies to individuals who construct brick and block structures and features under broad direction, and take responsibility for their own work and for the quality of the work of others.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

AHCLSC317 Construct landscape features using concrete

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare work	1.1 Interpret site plans and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Check the quantity and quality of materials

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Select tools, equipment and machinery required for construction work and check for safe operation</p> <p>1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task</p> <p>1.6 Implement suitable control strategies for environmental problems relating to brick and block construction work</p>
2. Set out and prepare the site	<p>2.1 Determine, locate and mark out services from site plan where applicable</p> <p>2.2 Mark out position of structure or feature according to site plans</p> <p>2.3 Establish profiles to conform to nominated tolerances</p>
3. Construct structure or feature	<p>3.1 Mix mortar to determined ratio and add bonding, colouring agents and other appropriate admixes if required in accordance with specifications</p> <p>3.2 Lay damp proofing if required</p> <p>3.3 Establish base course of brick or block work to achieve final level heights</p> <p>3.4 Lay courses of brick or block work using designated bonds in a manner that will ensure viability and stability of structure</p> <p>3.5 Cut bricks or blocks using mechanical and hand cut method</p> <p>3.6 Apply finishes to brick or block work</p> <p>3.7 Apply waterproofing according to site plans and specifications</p> <p>3.8 Install drainage systems according to site plans and specifications</p>
4. Check quality of work and clean-up site	<p>4.1 Inspect quality of finished works to ensure standard of finished structure or feature has been achieved</p> <p>4.2 Clean down brick or block work surfaces in an environmentally safe and sensitive manner</p> <p>4.3 Clean, maintain and store tools and equipment</p> <p>4.4 Identify and report unserviceable tools and equipment according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and industry standard terminology to report tool and equipment unserviceability
Numeracy	<ul style="list-style-type: none"> Calculate quantities of material, take measurements, read and use tape measures and scale rulers Set out right angles using 3:4:5 method

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC312 Construct brick and block structures and features	AHCLSC303 Construct brick and block structures and features	Minor changes to application Added prerequisite unit Minor changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC312 Construct brick and block structures and features

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has constructed brick and block structures and features, using two different construction methods and has:

- interpreted site plans and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools and equipment required for constructing brick and block structures and features
- setup profiles for brick and block structures and features
- measured and constructed profiles using mathematical techniques
- established levels using levelling equipment
- gauged brickworks to maintain correct spacing
- applied bonding techniques
- cut bricks or blocks
- applied joint treatment
- checked quality of work and cleaned up site
- cleaned brick or block
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of brick and block construction, including:
 - components of mortar, including bonding and colouring agents and ratios, and their importance
 - site plans and specifications

- structural integrity of brick and block structures and features
- Australian standards and codes relevant to constructing brick and block structures and features
- local and State/Territory regulations and legislation applicable to constructing brick and block structures and features
- types of bricks and blocks and their dimensions, tolerances and applications
- types of brick and block structures and features, including single, double and cavity filled walls
- types of brick and block patterns, joint finishing, frogs and holes, and their purpose
- brick and block mechanical and hand cut methods
- types of drainage applicable to brick and block structures and features
- types of waterproofing
- purpose of damp courses
- types of jointing applicable to brick and block structures and features
- types of concrete footings, reinforcement and core filling applicable to brick and block structures and features
- post-construction finishes and applications
- environmental impacts of bricks and block construction works
- workplace requirements applicable to health and safety in the workplace for constructing brick and block structures and features, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
- a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to constructing brick and block structures and features
 - materials, tools and equipment applicable to constructing brick and block structures and features
 - PPE applicable to constructing brick and block structures and features
- specifications:
 - workplace requirements applicable to health and safety in the workplace for constructing brick and block structures and features
 - site plans and specifications applicable to constructing brick and block structures and features
 - local and State/Territory regulations and legislation applicable to constructing brick and block structures and features
 - Australian standards and codes applicable to constructing brick and block structures and features

- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC313 Construct stone structures and features, and install stone cladding

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency covers the skills and knowledge required to construct stone structures and features, and installing stone cladding as a component of landscape project works, including preparing for work, setting out and preparing site, preparing stone for installation, constructing structure or feature, installing stone cladding, checking quality of the work and site clean-up.

The unit applies to individuals who construct stone structures and features under broad direction, and take responsibility for their own work and for the quality of the work of others.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare work	1.1 Interpret site plans and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Check quantity and quality of materials to ensure conformance to design drawings and specifications 1.4 Identify and select stone according to design specifications 1.5 Select tools and equipment required for construction work and check for safe operation 1.6 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task 1.7 Identify and report environmental impacts of erecting stone structures
2. Set out and prepare the site	2.1 Locate and mark out services from site plans and site investigations 2.2 Set out position and levels of stone structure or feature according to plans and specifications 2.3 Carry out excavations for footings or base layer 2.4 Install drainage system components and feed lines according to design drawings and specifications 2.5 Prepare footings, substrate or base material according to industry standards in preparation for stone structure or feature
3. Prepare stone for installation	3.1 Select tools and equipment for work, ensuring all environmental controls are in place 3.2 Carry out stone cutting, shaping or surface finishing to meet plans, specifications and safety requirements 3.3 Store prepared stone in a safe and practical space ready for installation
4. Construct stone structure or feature	4.1 Prepare mortar, adhesives and other admixes as required according to specifications 4.2 Construct stone structure according to plans and specifications 4.3 Install waterproofing and drainage according to plans and specifications 4.4 Carry out cleaning and sealing of stone according to plans and specifications
5. Install stone cladding	5.1 Prepare mortar, adhesives and other admixes as required according to specifications 5.2 Place and fix prepared stone cladding according to plans and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	specifications 5.3 Fit stone cladding accurately to fill gaps in the pattern within tolerances nominated in site plan and specifications 5.4 Finish gaps between stone cladding with mortar 5.5 Carry out cleaning and sealing of stone cladding according to plans and specifications
6. Check quality of work and clean-up site	6.1 Inspect finished works to ensure standard of finished structure or feature is in accordance with design drawings and specifications 6.2 Clean-up site, remove and dispose of waste in an environmentally safe and sensitive manner according to specifications 6.3 Clean, maintain and store tools and equipment 6.4 Identify and report unserviceable tools and equipment according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and industry standard terminology to report tool and equipment unserviceability
Numeracy	<ul style="list-style-type: none"> Calculate quantities of material, take measurements, read and use tape measures and scale rulers Set out right angles using 3:4:5 method

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC313 Construct stone	AHCLSC305 Construct stone	Title change	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
structures and features, and install stone cladding	structures and features	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC313 Construct stone structures and features, and install stone cladding

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has constructed stone structures and features using two different construction techniques, and installed stone cladding on at least one occasion and has:

- interpreted site plans, design drawings and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools and equipment required for constructing stone structures and features, and installing stone cladding
- set out and prepared the site and installed drainage systems
- used and repositioned hand and power tools relevant to constructing stone structures and features, and installing stone cladding
- shaped and cut stone for installation
- constructed stone structures and features, and installed stone cladding according to plans and specifications
- checked structures features, and cladding according to plans and specifications
- cleaned up site
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for constructing stone structures and features, and installing stone cladding, including:
 - environmental implications associated with the construction of stone structures and features, and installing stone cladding
 - drainage system preparation and installation

- stone types, selection, profiles and surface finishes
- stone construction and cladding installation hand and power tool use
- types of construction techniques, including dry stack, solid wall and veneer
- types of stone cladding and construction techniques
- adhesive, bonding and colouring agents and other admix components of mortar used in the construction of stone structures and features, and installation of stone cladding
- types of stone structures and features
- workplace requirements applicable to health and safety in the workplace for constructing stone structures and features, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to constructing stone structures and features, and installing stone cladding
 - materials, tools and equipment applicable to constructing stone structures and features, and installing stone cladding
 - PPE applicable to constructing stone structures and features, and installing stone cladding
- specifications:
 - workplace requirements applicable to health and safety in the workplace for constructing stone structures and features, and installing stone cladding
 - site plans, design drawings and specifications applicable to constructing stone structures and features, and installing stone cladding
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC314 Implement a tree transplanting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to implement a tree transplanting program, including preparing and implementing tree transplantation, maintaining transplanted tree health, checking and cleaning up site.

The unit applies to individuals who implement a tree transplanting program under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for tree transplantation	1.1 Interpret site plans and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Liaise with local authorities and information services to determine location of services and utilities, local by-laws and regulations governing transplanting and transportation of trees

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Inspect tree to ensure appropriate transplanting operations are implemented</p> <p>1.5 Select tools, equipment and machinery required to implement tree transplanting and check for safe operation</p> <p>1.6 Select, fit use and maintain personal protective equipment (PPE) applicable to the task</p> <p>1.7 Select, prepare and use root ball and crown treatments according to requirements of species to ensure tree remains viable throughout transplanting process</p> <p>1.8 Notify local residents and authorities where necessary as part of preparing site for transplanting activities</p> <p>1.9 Confirm assets, property and vegetation related to work zone activities are protected, relocated, or secured from potential damage during transplanting</p>
2. Implement transplanting operations	<p>2.1 Excavate soil around root zone and undercut root ball with minimum stress to plant</p> <p>2.2 Prune roots where required to meet the appropriate Australian standard</p> <p>2.3 Stabilise tree as root system is undercut and apply anti-transpirants as a root soak or foliar spray to maintain viability of the plant</p> <p>2.4 Bind root ball with appropriate material to ensure adequate soil is retained and keep moist prior to transportation and installation</p> <p>2.5 Lift tree and secure for potential storage or transportation using safe lifting techniques</p> <p>2.6 Prepare and handle tree or shrub to minimise damage during transportation</p> <p>2.7 Implement appropriate drainage and soil improvements</p> <p>2.8 Re-install and stabilise the tree</p>
3. Maintain health and viability of transplanted tree	<p>3.1 Apply water to transplanted tree over a sustained period to minimise leaf loss and promote new growth</p> <p>3.2 Apply anti-transpirants and provide nutritional requirements of species</p> <p>3.3 Install tree protection devices to provide adequate support and protection</p> <p>3.4 Monitor tree condition and site to ensure plant remains healthy</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Check quality of work and clean-up site	4.1 Clean, maintain and store tools, equipment and machinery 4.2 Identify and report unserviceable tools, equipment and machinery according to workplace procedures 4.3 Record completed transplanting program and report to management or the client

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and industry standard terminology to report tool, equipment and machinery unserviceability

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC314 Implement a tree transplanting program	AHCLSC310 Implement a tree transplanting program	Major changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC314 Implement a tree transplanting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a tree transplanting program on at least one occasion and has:

- interpreted site plans and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- liaised with local authorities and information services to determine location of services and utilities, local by-laws and regulations governing the transplanting and transportation of trees
- selected, used and maintained tools, equipment and machinery required for implementing a tree transplanting program
- prepared tree and new site for tree transplanting
- bound and wrapped root balls and crowns
- lifted, reinstalled and stabilised a tree
- checked quality of work and cleaned up site
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of tree transplanting, including:
 - causes of stress in trees resulting from transplanting, storage and transportation
 - tree drainage and soil improvements
 - principles and methods of operating tree moving equipment
 - problems and methods relating to the aftercare of trees during their establishment period

- requirements for securing and signage when transporting trees on road vehicles
- Australian standards and codes of practice relevant to tree transplanting
- local by-laws and regulations governing the transplanting and transportation of trees
- tree anatomy and physiology as it relates to transplanting trees
- tree transplanting techniques
- workplace requirements applicable to health and safety in the workplace for implementing a tree transplanting program, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to implementing a tree transplanting program
 - materials, tools, equipment and machinery applicable to implementing a tree transplanting program
 - trees for transplanting
 - PPE applicable to implementing a tree transplanting program
- specifications:
 - workplace requirements applicable to health and safety in the workplace for implementing a tree transplanting program
 - site plans and specifications applicable to implementing a tree transplanting program
 - Australian standards and codes of practice applicable to implementing a tree transplanting program
 - local by-laws and regulations governing the transplanting and transportation of trees
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC315 Implement an outdoor tiling project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to install and construct a paved surface, including preparing for tiling project, setting out and preparing site, implementing the tiling project, checking and cleaning up site.

The unit applies to individuals who implement an outdoor tiling project under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for tiling project	1.1 Interpret site plans and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Select materials, tools and equipment required to implement an outdoor tiling project and check for safe operation 1.4 Identify environmental impacts of proposed works and implement

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>controls if required</p> <p>1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task</p> <p>1.6 Organise delivery of materials to site according to workplace priorities</p>
2. Set out and prepare the site	<p>2.1 Erect site bunting, control pedestrian access and place safety signage</p> <p>2.2 Assess existing base material where applicable</p> <p>2.3 Set out tiles to determine tiling pattern and identify cutting requirements according to site plans and specifications</p> <p>2.4 Create template to form accurate curves and edges for tiled surfaces around walls and structures</p>
3. Implement tiling project	<p>3.1 Identify location of first tile</p> <p>3.2 Prepare mortar and adhesive according to manufacturer specifications</p> <p>3.3 Lay first tile</p> <p>3.4 Lay tiles according to tiling pattern, with perimeter tiles marked and cut to fit template requirements</p> <p>3.5 Fix tiles to specified grade, flush and square</p> <p>3.6 Mix grout and apply to joints according to specifications, to provide flush and smooth finish</p> <p>3.7 Polish or clean tiled surface according to manufacturer specifications</p>
4. Check quality of work and clean-up site	<p>4.1 Inspect the quality of finished works to ensure standard of finished tiling project is in accordance with site plans and specifications</p> <p>4.2 Clean work-site and dispose of or recycle waste material from site</p> <p>4.3 Clean, maintain and store tools and equipment</p> <p>4.4 Identify and report unserviceable tools and equipment according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and industry standard terminology to report tool and equipment unserviceability
Numeracy	<ul style="list-style-type: none"> Calculate quantities of material, take measurements, interpret and use scale, interpret and calculate levels Set out geometric shapes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC315 Implement an outdoor tiling project	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC315 Implement an outdoor tiling project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a tiling project on at least one occasion and has:

- interpreted site plans and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools and equipment required for implementing a tiling project
- calculated material and resource requirements
- used tiling set out techniques
- applied tiling patterns and templating methods
- checked quality of work and cleaned up site
- cleaned up, stored and maintained tools and equipment
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of tiling, including:
 - Australian standards relevant to outdoor tiling
 - environmental impacts applicable to outdoor tiling projects
 - tiling tools and equipment
 - tiling materials, including tiles, adhesives, mortar, grouting and substrates, their qualities, characteristics, preparation, applications, limitations and finishing
 - techniques for setting out and fixing tiles to outdoor surfaces
 - tiling set out techniques

- tiling patterns and templating methods
- workplace requirements applicable to health and safety in the workplace for implementing a tiling project, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to implementing a tiling project
 - materials, tools and equipment applicable to implementing a tiling project
 - tiles
 - PPE applicable to implementing a tiling project
- specifications:
 - workplace requirements applicable to health and safety in the workplace for implementing a tiling project
 - site plans and specifications applicable to implementing a tiling project
 - Australian standards applicable to outdoor tiling project
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC316 Implement a paving project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to install and construct a paved surface, including preparing for paving project, setting out and preparing site, implementing the paving project, installing stone paving, checking and cleaning up site.

The unit applies to individuals who implement a paving project under broad direction, and take responsibility for their own work and for the quality of the work of others.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for paving project	1.1 Interpret site plans and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Select tools, equipment and machinery required to implement a paving project and check for safe operation 1.4 Identify and ameliorate environmental impacts of proposed works

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task</p> <p>1.6 Organise delivery of materials to site according to workplace priorities</p>
2. Set out and prepare the site	<p>2.1 Erect site bunting, control pedestrian access and place safety signage</p> <p>2.2 Determine, locate and mark out services from site plan</p> <p>2.3 Make provision for irrigation lines to cross paved areas</p> <p>2.4 Mark out paving pattern according to plans and specifications</p> <p>2.5 Place and compact sub-base material to required finished levels</p> <p>2.6 Incorporate surface drainage as specified</p>
3. Implement paving project	<p>3.1 Construct paving according to plans and specification</p> <p>3.2 Install appropriate drainage as required</p> <p>3.3 Use tools, equipment and machinery safety in accordance with workplace safe operating procedures and workplace health and safety requirements</p>
4. Install stone paving	<p>4.1 Set out and prepare area to be paved according to site plan</p> <p>4.2 Excavate area to shape, depth and dimensions to sub-base level</p> <p>4.3 Trim the sub-base to designated level and falls and place and compact base material to finished level</p> <p>4.4 Spread bedding material over area and level to designated level and falls</p> <p>4.5 Treat, place and fit stone accurately and fill gaps in the pattern within tolerances nominated in site plan and specifications</p> <p>4.6 Install edge constraints as required by site plan</p>
5. Check quality of work and clean-up site	<p>5.1 Inspect quality of finished works to ensure standard of finished paving project is in accordance with design drawings and specifications</p> <p>5.2 Clean work-site and dispose of or recycle waste material from site</p> <p>5.3 Clean, maintain and store tools, equipment and machinery</p> <p>5.4 Identify and report unserviceable tools, equipment and machinery according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and industry standard terminology to report tool, equipment and machinery unserviceability
Numeracy	<ul style="list-style-type: none"> Calculate quantities of material, take measurements, interpret and use scale, interpret and calculate levels Set out geometric shapes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC316 Implement a paving project	AHCLSC306 Implement a paving project	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC316 Implement a paving project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a paving project of at least ten square metres on solid and flexible bases using straight and curved edges, individually or as part of a team on at least one occasion and has:

- interpreted site plans and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools, equipment and machinery required for implementing a paving project
- measured and cut pavers to specified tolerances
- installed edge restraints and drainage if required
- set out and excavated area, and installed stone paving according to site plan
- installed base, bedding material, jointing sand or grout, and pavers according to site plans and specifications
- checked quality of work and cleaned up site
- cleaned up, stored and maintained tools, machinery and equipment
- reported unserviceable tools, equipment and machinery.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of paving, including:
 - landscape paving materials
 - methods and practices for maintaining and repairing paved areas
 - methods of work schedule programming
 - set-out techniques

- paving patterns and techniques, including formal and random
- techniques for laying rigid and flexible paving
- techniques for laying stone paving
- the range and use of required materials, equipment and machinery
- workplace requirements applicable to health and safety in the workplace for implementing a paving project, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to implementing a paving project
 - materials, tools, equipment and machinery applicable to implementing a paving project
 - PPE applicable to implementing a paving project
- specifications:
 - workplace requirements applicable to health and safety in the workplace for implementing a paving project
 - site plans, design drawings and specifications applicable to implementing a paving project
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC317 Construct landscape features using concrete

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to construct concrete structures and features as a component of landscape project works, including preparing for work, setting out and preparing site, mixing pouring and finishing concrete, checking and cleaning up site.

The unit applies to individuals who construct landscape features using concrete under broad direction, and take responsibility for their own work and for the quality of the work of others.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare work	1.1 Interpret site plans and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Check quantity and quality of materials 1.4 Select tools, equipment and machinery required for construction

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>work and check for safe operation</p> <p>1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task</p> <p>1.6 Identify and minimise environmental impacts of proposed concrete works</p>
2. Set out and prepare the site	<p>2.1 Determine, locate and mark out services from site plan</p> <p>2.2 Mark out position of structure or feature according to site plan</p> <p>2.3 Establish profiles to conform to nominated tolerances</p> <p>2.4 Excavate site according to site plan</p> <p>2.5 Prepare subsoil by removing all debris, vegetable matter and topsoil to provide a solid foundation for concrete</p> <p>2.6 Install drainage systems according to plans and specifications</p> <p>2.7 Install form work on site in a manner that will ensure it remains rigid during concrete pouring operations and allow for ease of dismantling without damage to concrete</p> <p>2.8 Place and compact sub-base material to required finished levels</p> <p>2.9 Complete preparation of site according to type of structure or feature to be constructed</p> <p>2.10 Place expansion joints and reinforcement steel according to site plan and specifications</p>
3. Mix and pour concrete	<p>3.1 Determine proportions for concrete mix according to strength requirements of project</p> <p>3.2 Determine volume of dry materials necessary to produce final concrete mix</p> <p>3.3 Mix together all dry ingredients and required additives to ensure a thorough blending of all materials is achieved</p> <p>3.4 Introduce sufficient water to produce a concrete mix to required consistency</p> <p>3.5 Perform concrete slump test</p> <p>3.6 Pour concrete to designated levels in a manner to avoid segregation of materials</p> <p>3.7 Consolidate concrete using an approved vibration method</p>
4. Finish concrete	4.1 Screed concrete to desired finished level

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.2 Apply appropriate trowelling techniques 4.3 Finish concrete off according to site plan and specifications 4.4 Install control joints according to site plan and specifications
5. Check quality of work and clean-up site	5.1 Inspect quality of finished works to ensure required standard has been achieved 5.2 Remove and clean form work to allow reuse 5.3 Ensure all clean-up works minimise impact to environment 5.4 Clean, maintain and store tools and equipment 5.5 Identify and report unserviceable tools and equipment according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and standard industry terminology to report tool and equipment unserviceability
Numeracy	<ul style="list-style-type: none"> Calculate quantities of material, take measurements, read and use scale rulers Calculate concrete mix proportions Set out geometric shapes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC317 construct landscape features using	AHCLSC302 construct landscape features using	Minor changes to application Minor changes to	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
concrete	concrete	performance criteria Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC317 Construct landscape features using concrete

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has constructed landscape features applying two concrete finishes and has:

- interpreted site plans and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools and equipment required for constructing landscape features using concrete
- set out and prepared a site for concrete
- measured and constructed profiles
- established levels using levelling equipment
- installed expansion joints and placed steel reinforcement
- performed concrete slump test
- poured and finished concrete, including consolidation and trowelling techniques
- checked quality of work and cleaned up site
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of constructing concrete landscape features, including:
 - Australian standards and codes relevant to reinforcing and consolidating concrete
 - Megapascal (MPa) testing theory and what affects MPa specifications in a concrete mix
 - industry standard terminology relevant to constructing landscape features using concrete

- sub-base and sub-grade materials and preparation
- expansion joints and steel reinforcement purpose and installation techniques
- slump testing procedures
- concrete pigments and additives use and preparation
- concrete applications and placement techniques
- concrete curing processes and finishing techniques
- the comparative environmental implications associated with soil removal and the placement of concrete
- workplace requirements applicable to health and safety in the workplace for constructing landscape features using concrete, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
 - assessment of this competency can be conducted as part of a team working on a large group project
- resources, equipment and materials:
 - workplace procedures applicable to constructing landscape features using concrete
 - materials, tools and equipment applicable to constructing landscape features using concrete
 - concrete slump test equipment
 - PPE applicable to constructing landscape features using concrete
- specifications:
 - workplace requirements applicable to health and safety in the workplace for constructing landscape features using concrete
 - site plans and specifications applicable to constructing landscape features using concrete
 - Australian standards and codes applicable to constructing landscape features using concrete
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC318 Erect timber structures and features

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to erect timber structures and features as a component of landscape project works, including preparing for work, setting out and preparing site, preparing and cutting timber components, assembling and erecting structure, checking and cleaning up site.

The unit applies to individuals who erect timber structures and features under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare work	1.1 Interpret site plan and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Check quantity and quality of materials 1.4 Select tools and equipment required for construction work and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	check for safe operation 1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to task
2. Set out the site and prepare the profile and footings	2.1 Determine, locate and mark out services from site plan 2.2 Mark out position of structure or feature according to design drawings and specifications 2.3 Establish profiles to conform to nominated tolerances 2.4 Excavate and prepare footings according to type of structure to be erected
3. Prepare and cut timber components	3.1 Identify and select timber according to site plan and specifications 3.2 Prepare components for assembly 3.3 Mark out length of components and positions of cuts and joints 3.4 Cut, check and accurately drill components using hand or power tools as required
4. Assemble and erect structure	4.1 Identify and select hardware 4.2 Determine if protective coating is required and, if so, select and apply 4.3 Fix, join or assemble timber components into position and fix into place 4.4 Install bracing according to site plan and specifications 4.5 Finish off structure to ensure all components are secure and complete 4.6 Apply protective treatments according to site plan and specifications
5. Check quality of work and clean-up site	5.1 Inspect quality of finished works according to site plan and specifications 5.2 Clean debris from structure and site 5.3 Dispose of or recycle waste material from site 5.4 Clean, maintain and store tools and equipment 5.5 Identify and report unserviceable tools and equipment according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and standard industry terminology to report tool and equipment unserviceability
Numeracy	<ul style="list-style-type: none"> Calculate quantities of material, take measurements, read and use tape measures and scale rulers Set out right angles using 3:4:5 method

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC318 Erect timber structures and features	AHCLSC304 Erect timber structures and features	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC318 Erect timber structures and features

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has erected timber structures and features on at least two occasions and has:

- interpreted site plans, design drawings and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools and equipment required for erecting timber structures and features
- set out and prepared site for timber structures and features
- marked out a site for timber structures and features according to site plans, design drawings and specifications
- established levels and prepared footings where required
- used levelling equipment
- excavated footings
- identified and selected timber according to site plans and specifications
- measured and marked out timber
- selected and used hand and power tools relevant to timber structures and features
- selected hardware according to site plans and specifications
- fixed, joined or assembled timbers
- applied protective treatments
- checked quality of work and cleaned up site
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for erecting timber structures and features, including:
 - Australian standards and codes relevant to timber structures and features
 - industry standard terminology relevant to timber structures and features
 - levelling principles and techniques
 - footings for timber structures and their construction methods
 - timber fixing and joining methods and hardware products
 - timber properties, characteristics and defects
 - use of hand and power tools relevant to timber structures and features
 - protective treatments
- workplace requirements applicable to health and safety in the workplace for erecting timber structures and features, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
 - assessment of this competency can be conducted as part of a team working on a large group project
- resources, equipment and materials:
 - workplace procedures applicable to erecting timber structures and features
 - materials, tools and equipment applicable to erecting timber structures and features
 - PPE applicable to erecting timber structures and features
- specifications:
 - workplace requirements applicable to health and safety in the workplace for erecting timber structures and features
 - site plans, design drawings and specifications applicable to erecting timber structures and features
 - Australian standards and codes relevant to timber structures and features
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC319 Implement a retaining wall project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to install and construct a retaining wall, including preparing for work, marking out and constructing retaining wall, and checking and cleaning up site.

The unit applies to individuals who implement a retaining wall project under broad direction, and take responsibility for their own work and for the quality of the work of others.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for retaining wall project	1.1 Interpret plans and specifications 1.2 Check if council permits or permissions are required 1.3 Identify potential hazards and risks, and implement safe working practices to manage risks 1.4 Identify equipment and material resource requirements according to scope of construction work

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.5 Select tools and equipment required to implement a retaining wall project and check for safe operation</p> <p>1.6 Identify environmental impacts of proposed works and implement appropriate controls if required</p> <p>1.7 Select, fit, use and maintain personal protective equipment (PPE) applicable to task</p> <p>1.8 Organise delivery of materials to site according to workplace priorities</p>
2. Set out and prepare the site	<p>2.1 Erect site bunting and place safety signage</p> <p>2.2 Determine, locate and mark out services from site plan</p> <p>2.3 Mark out position of the retaining wall</p> <p>2.4 Establish survey benchmarks</p> <p>2.5 Determine location and depth of excavations from construction plans</p> <p>2.6 Establish profiles to conform to designated tolerances</p>
3. Construct retaining wall	<p>3.1 Check relevant tool and equipment specifications to ensure they are used safely</p> <p>3.2 Assemble or install retaining wall components according to plans and specifications</p> <p>3.3 Install appropriate drainage in accordance with plans and specifications</p>
4. Check quality of work and clean-up site	<p>4.1 Inspect quality of finished works to ensure standard of finished retaining wall is in accordance with design drawings and specifications</p> <p>4.2 Clean up site, removed unused material and dispose of or recycle waste material from site</p> <p>4.3 Clean, maintain and store tools and equipment</p> <p>4.4 Identify and report unserviceable tools and equipment according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and industry standard terminology to report tool and equipment unserviceability
Numeracy	<ul style="list-style-type: none"> Calculate quantities of material, take measurements, interpret and use scale, interpret and calculate levels Set out geometric shapes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC319 Implement a retaining wall project	AHCLSC307 Implement a retaining wall project	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC319 Implement a retaining wall project

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a retaining wall project on at least one occasion and has:

- interpreted site plans and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools and equipment required for implementing a retaining wall project
- calculated material and resource requirements
- established survey benchmarks
- excavated to specified soil levels
- used tools and equipment to construct retaining wall projects
- checked quality of work and cleaned up site
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for implementing retaining wall projects, including:
 - environmental impacts of landscape works
 - landscape retaining wall materials and construction techniques
 - legislative requirements and codes of practice relevant to implementing a retaining wall project
 - local council permit requirements relevant to implementing a retaining wall project
 - materials, equipment and machinery that may be required for the project
 - methods and practices for maintaining and repairing retaining walls

- set out techniques
- workplace requirements applicable to health and safety in the workplace for implementing a retaining wall project, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to implementing a retaining wall project
 - materials, tools and equipment applicable to implementing a retaining wall project
 - PPE applicable to implementing a retaining wall project
- specifications:
 - workplace requirements applicable to health and safety in the workplace for implementing a retaining wall project
 - tool and equipment specifications
 - site plans, design drawings and specifications applicable to implementing a retaining wall project
 - legislative requirements and codes of practice applicable to implementing a retaining wall project
 - local council permit requirements applicable to implementing a retaining wall project
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC320 Install water features

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to install water features, including preparing for work, setting out and preparing site, installing water feature and accessories, checking and cleaning up site. Water features may include waterfalls, ponds, waterways and fountains. They may be prefabricated as supplied by irrigation suppliers and garden centres or formed on site.

The unit applies to individuals who install water features under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare work	1.1 Interpret site plans and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Check quantity and quality of materials

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Select tools and equipment required for installation work and check for serviceability</p> <p>1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task</p> <p>1.6 Identify environmental implications of constructing water features</p>
2. Set out and prepare the site	<p>2.1 Determine, locate and mark out services from site plan</p> <p>2.2 Determine exact location and depth of excavations and mark out accordingly</p> <p>2.3 Excavate site to shape, depth and dimensions as marked out</p> <p>2.4 Construct drainage systems as specified</p> <p>2.5 Place and compact bedding material to required finished levels</p> <p>2.6 Sort and stockpile soil and waste material ready for removal, reuse or recycling</p>
3. Install water feature and accessories	<p>3.1 Install waterproof membrane, prefabricated shell or formed 'in situ' feature as specified</p> <p>3.2 Install all accessories to feature as specified with consideration to safety issues</p> <p>3.3 Fill feature with water, test for leaks and repair accordingly</p> <p>3.4 Treat water to remove or neutralise contaminants resulting from excavation and installation work</p>
4. Check quality of work and clean-up site	<p>4.1 Check any mechanical features and adjust to ensure correct operation</p> <p>4.2 Inspect quality of finished works to ensure required standard has been achieved</p> <p>4.3 Clean debris from structure and site</p> <p>4.4 Dispose of or recycle soil and waste material from site</p> <p>4.5 Clean, maintain and store tools and equipment</p> <p>4.6 Identify and report unserviceable tools and equipment according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and industry standard terminology to report tool and equipment unserviceability
Numeracy	<ul style="list-style-type: none"> Measure and calculate area, depth and volume of water feature, read and use tape measures and scale rulers
Reading	<ul style="list-style-type: none"> Read and interpret manufacturer installation instructions for water features and/ or accessories

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC320 Install water features	AHCLSC309 Install water features	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC320 Install water features

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has installed water features on at least two occasions and has:

- interpreted site plans and specifications
- planned set out and prepared a water feature site using site plans and specifications
- applied workplace health and safety requirements, included fitted and used personal protective equipment (PPE)
- selected, used and maintained tools and equipment required for installation of water features
- marked out a site for water features according to design drawing and specifications
- used surveying instruments
- measured and calculated area, depth and volume
- used tools and equipment to excavate and construct a water feature
- checked quality of work and cleaned up the site
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of water feature installation, including:
 - interpretation of site plans, design drawings and specifications relevant to water feature installation
 - pipe sizes, types and applications
 - pumping systems and accessories associated with water features
 - set-out techniques, including use of survey instruments relevant to installing water features
 - use of hand and power tools relevant to installing water features

- water treatment methods
- workplace requirements applicable to health and safety in the workplace for installation of water features, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to installing water features
 - materials, tools and equipment applicable to installing water features
 - PPE applicable to installing water features
- specifications:
 - workplace requirements applicable to health and safety in the workplace for installing water features
 - site plans, design drawings and specifications applicable to installing water features
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC321 Install metal structures and features

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to install metal structures and features as a component of landscape project works, including preparing for work, setting out site, preparing and cutting metal components, assembling and erecting structure, checking and cleaning up site.

The unit applies to individuals who install metal structures and features under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare work	1.1 Interpret site plans and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Check quantity and quality of materials 1.4 Select tools and equipment required for installation work and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>check for serviceability</p> <p>1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task</p>
2. Set out the site for the structure	<p>2.1 Determine, locate and mark out services from site plan</p> <p>2.2 Mark out position of structure or feature</p> <p>2.3 Establish profiles to conform to nominated tolerances</p> <p>2.4 Excavate and prepare footings according to type of structure to be erected</p>
3. Prepare and cut metal components	<p>3.1 Lay components out for assembly</p> <p>3.2 Mark the length of components and positions of joins</p> <p>3.3 Cut, check and join components in preparation for joining and assembly</p>
4. Assemble and erect structure	<p>4.1 Fix, join or assemble metal components into position and fix into place</p> <p>4.2 Install remaining components and fix into position</p> <p>4.3 Finish off structure to ensure all components are secure and complete</p> <p>4.4 Apply coatings</p>
5. Check quality of work and clean-up site	<p>5.1 Inspect quality of finished works to ensure required standard has been achieved</p> <p>5.2 Clean debris from structure and site</p> <p>5.3 Dispose of or recycle waste material from site</p> <p>5.4 Store unused metal components for future re-use</p> <p>5.5 Clean, maintain and store tools and equipment</p> <p>5.6 Identify and report unserviceable tools and equipment according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	Use clear language and industry standard terminology to report tool and equipment unserviceability

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC321 Install metal structures and features	AHCLSC308 Install metal structures and features	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC321 Install metal structures and features

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has installed metal structures or features on at least two occasions and has:

- interpreted site plans and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- estimated quantities
- selected, used and maintained tools and equipment required for installation of metal structures and features
- planned and prepared metal structures and features using site plans and specifications
- marked out a site for metal structures and features according to design drawings and specifications
- used surveying instruments
- established levels and prepare footings
- excavated footings
- measured and marked lengths of metal components
- used power tools efficiently and safely
- fixed, joined or assembled metal components
- applied surface finishes
- checked quality of work and cleaned up site
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of installing metal structures and features, including:

- levelling principles and techniques
- footings for metal structures and their construction methods
- metal structure and component fixing, cutting, joining and assembly methods and hardware products
- use of hand and power tools relevant to metal structures and features
- surface finishes
- workplace requirements applicable to health and safety in the workplace for installation of metal structures and features, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to installing metal structures and features
 - materials, tools and equipment applicable to installing metal structures and features
 - PPE applicable to installing metal structures and features
- specifications:
 - workplace requirements applicable to health and safety in the workplace for installing metal structures and features
 - site plans, design drawings and specifications applicable to installing metal structures and features
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC401 Supervise landscape project works

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to supervise landscape project works.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify scope of landscape project works	1.1 Identify the nature of the landscape project work and extent of responsibilities and check against landscape documentation 1.2 Identify personnel and other resources required to undertake landscape works according to scope of project 1.3 Develop a work program to ensure that project outcomes are

Element	Performance criteria
	<p>reached within designated time lines</p> <p>1.4 Identify workplace health and safety hazards, assess risks and implement controls</p> <p>1.5 Identify environmental impact of proposed landscape project works</p> <p>1.6 Select and use personal protective equipment (PPE)</p>
2. Coordinate the supply of materials and equipment	<p>2.1 Calculate material quantities and equipment requirements to ensure an ongoing work program is maintained</p> <p>2.2 Order material and equipment, check for quantity and quality and store as required</p> <p>2.3 Convey and confirm any specific delivery instructions with suppliers to ensure materials are delivered according to work program</p> <p>2.4 Send any rejected material back to supplier and re-order</p>
3. Monitor project works	<p>3.1 Monitor work program and adjust to ensure the site is developed and that project outcomes are reached within designated timelines</p> <p>3.2 Identify, record and report variations to the work program, issues likely to cause delays, and contingencies beyond the scope of the project</p> <p>3.3 Monitor the work site to ensure it remains in a clean, tidy and safe condition throughout and on completion of works</p>
4. Complete site works	<p>4.1 Inspect site prior to practical completion to ensure all works have been undertaken according to client needs and relevant documentation</p> <p>4.2 Note any works not complying and rectify</p> <p>4.3 Produce a completed landscape project works report for client</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSC401A Supervise landscape project works.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC401 Supervise landscape project works

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify scope of landscape project work
- identify personnel and other resource requirements
- develop a project plan
- calculate materials and equipment
- control the quality of supplied materials
- monitor, record and report on progress of a works program
- complete a landscape works report
- liaise with clients

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of supervising landscape works
- causes of disruption to work programs and their effect on quality and time schedules
- environmental impacts of landscape works
- hazard identification, assessment and control
- how to conduct site assessment and work site establishment
- issuing of instructions, variations and requests for information
- format, frequency and documentation for job reporting requirements
- legislative requirements and legal responsibilities
- contracts, plans and specifications for project documentation
- supervision techniques of staff and sub-contractors

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC402 Apply building codes and standards to the construction process for Class 10 buildings

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to access, interpret and apply relevant building codes and standards applicable to the National Construction Code (NCC) Class 10 buildings, to a maximum of one storey. It includes knowledge of the structure of the NCC, as well as the ability to access relevant information from the code as applicable to various NCC Class 10 building projects.

The unit applies to individuals who apply specialist skills and knowledge to ensure compliance with building codes and standards for Class 10 buildings. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Classify building	1.1 Determine nature of building, its use and arrangement from construction plans and specifications 1.2 Access, read and interpret Australian Standards and codes relevant NCC Class 10 construction projects 1.3 Define NCC building classification 1.4 Identify and interpret NCC multiple classifications
2. Determine construction compliance requirements	2.1 Identify NCC performance requirements relevant to Class 10, up to one storeys, landscape construction projects 2.2 Determine range of criteria to ensure construction methods comply with NCC performance requirements 2.3 Identify and document non-conforming construction methods against NCC performance requirements 2.4 Discuss performance solution with design and building construction professionals 2.5 Analyse and apply assessment methods to determine compliance with performance solution or Deem-to-Satisfy solution (DTS) 2.6 Meet the evidence of suitability requirements for building materials and products stated in the NCC 2.7 Complete documentation according to NCC requirements
3. Determine fire protection requirements	3.1 Identify NCC and other legislative requirements for passive and active fire control elements in buildings 3.2 Determine level of fire resistance required for the construction of various Class 10 buildings 3.3 Check existing buildings for compliance with passive and active fire protection requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none">Identify and interpret information regarding requirements for NCC Class 10 construction projects
Oral communication	<ul style="list-style-type: none">Initiate discussions with design and building construction professionals, using clear language and standard industry terminology to propose actions to rectify faults and problems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC402 Apply building codes and standards to the construction process for Class 10 buildings	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC402 Apply building codes and standards to the construction process for Class 10 buildings

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has applied codes and standards to the construction process of one Class 10 building project, to a maximum of one storeys, and has:

- determined type of construction and use of building from construction plans and specifications and class of building using National Construction Code (NCC) classifications
- identified current building and construction codes and Australian Standards relevant to the landscape construction projects
- applied NCC performance requirements in relation to the design and construction of the building, including:
 - energy efficiency
 - damp and weatherproofing
 - fire safety
 - health and amenity
 - structure
 - safe movement and access
 - ancillary provisions
- applied performance solutions to ensure construction complies with NCC performance requirements
- identified faults and problems and propose actions to rectify
- completed documentation
- inspected building to determine fire protection compliance with NCC and other legislative requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace policies and procedures, quality systems, best practice approaches, and safety requirements
- processes, procedures and techniques of construction
- basic building design principles and the behaviour of structures under stress, strain, compression, bending or combined actions
- project plans, specifications, working drawings and structural details
- construction terminology
- NCC:
 - performance requirements and general requirements
 - performance solutions and assessment methods
 - performance hierarchy
 - evidence of suitability for building materials and products
 - classes of building and types of construction
- current building and construction codes and Australian Standards relevant to Class 10 building construction
- causes and implications of building defects related to failure of applying building codes and standards to residential and commercial buildings
- extent of remedial work required for various defects caused by inadequate design and incorrect application of building codes and practices
- properties, characteristics and limitations of specified building materials and components.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - construction drawings, site plans and specifications
 - software and hardware to source and document information
- specifications:
 - NCC Volume 2
 - current building and construction codes and Australian Standards relevant to Class 10 building construction projects
 - workplace policies and procedures, and quality procedures relevant to Class 10 building construction projects
- relationships:
 - design and building construction professionals

- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC403 Apply structural principles to Class 10 buildings

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to apply structural principles to the construction of National Construction Code (NCC) Class 10 buildings.

The unit applies to individuals who apply specialist skills and knowledge to apply structural principles to the demolition or construction of Class 10 buildings. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

AHCLSC402 Apply building codes and standards to the construction process for Class 10 buildings

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Analyse the structural integrity of building project	1.1 Determine class of building, intended use and climate zone from the NCC 1.2 Analyse project compliance with NCC bushfire, high wind,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>earthquake and alpine environment requirements</p> <p>1.3 Analyse building design and structural integrity from plans and specifications, building construction codes and Australian Standards</p> <p>1.4 Determine the effect of section properties on various materials</p> <p>1.5 Determine if structural performance meets NCC general requirements and performance requirements</p> <p>1.6 Confirm analysis with industry design and building construction professionals</p> <p>1.7 Conduct pre-commencement site inspection to confirm analysis</p> <p>1.8 Assess new and emerging building technologies for application to the construction process and compliance with NCC requirements and Australian Standards</p>
2. Plan, coordinate and manage the laying of footings	<p>2.1 Identify earthworks and footing or slab configuration from project plans and specifications</p> <p>2.2 Establish cut and fill, excavation and compaction compliance with geotechnical report</p> <p>2.3 Assess performance or reinforcement, concrete and other elements that contribute to structural integrity of specified footings</p> <p>2.4 Determine compliance with building and construction regulations, standards and codes</p> <p>2.5 Set out footings according to project plans and specifications</p>
3. Plan, coordinate and manage the building of wall systems	<p>3.1 Identify and analyse structural and non-structural wall systems used in the planning of the building and construction project</p> <p>3.2 Determine materials used for timber and steel framing and structural steel members compliance with NCC performance requirements, and timber framing compliance with Australian Standards</p> <p>3.3 Identify, implement and check processes for erecting structural and non-structural wall systems comply with manufacturer specifications and building and construction codes and Australian Standards</p> <p>3.4 Plan, implement and check requirements for application of bracing, tie-downs, tolerances, allowances, and fixing and installation of wall frame components compliance with Australian Standards, codes and manufacturer specifications</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.5 Manage processes to ensure quality of the frame, whether factory pre-cut and pre-nailed, factory pre-cut and assembled on site, or cut and assembled on site</p> <p>3.6 Identify and implement allowances for services to be installed</p> <p>3.7 Check compliance of windows and doors installation with building and construction codes, Australian Standards and manufacturer specifications</p>
4. Plan, coordinate and manage the building of structural roof systems	<p>4.1 Identify type of structural roof system and components and determine compliance with NCC performance requirements</p> <p>4.2 Plan, implement and check erection of structural roof, roof trusses or hand cut roof members compliance with building and construction codes, Australian Standards and accepted industry construction practices</p> <p>4.3 Plan, implement and check installation of roof sarking and cladding, skylights, roof ventilators and service penetrations compliance with building and construction codes, Australian Standards and manufacturer specifications</p> <p>4.4 Manage processes to ensure quality and finish of roof systems</p>
5. Plan, coordinate and manage wall cladding	<p>5.1 Assess structural performance of cladding to be used for bracing in the frame construction for compliance with building and construction codes, Australian Standards and manufacturer specifications</p> <p>5.2 Determine cladding, vapour permeable sarking or waterproof membrane and components meet NCC performance requirements</p> <p>5.3 Supervise and check installation of specified cladding compliance with building and construction codes, Australian Standards and accepted industry practices</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with design and building construction

Skill	Description
	professionals, using clear language and standard industry terminology to confirm analysis of project structural integrity

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC403 Apply structural principles to Class 10 buildings	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC403 Apply structural principles to Class 10 buildings

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has applied structural principles to the construction of one National Construction Code (NCC) Class 10 building project, and has:

- assessed the structural integrity of the construction project
- applied technical construction principles and concepts to the selection, integration and building of construction elements and components
- planned and documented the structural principles of the building
- coordinated, planned, implemented and checked construction.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- NCC:
 - performance requirements and general requirements
 - performance solutions and assessment methods
 - performance hierarchy
 - evidence of suitability for building materials and products
 - classes of building and types of construction
- project documentation:
 - approval project plans and specifications
 - structural designs and specifications
 - engineer's footing design and specifications
 - registered plans
 - contour site plan
 - geotechnical report

- underpinning, rock anchors and shoring design and specifications
- retaining wall and tanking design and specifications
- structural, floor, wall and roof systems
- causes and implications of structural defects related to failure of applying structural principles to class 10 buildings
- extent of remedial work required for various defects cause by inadequate design and application of structural principles
- current building and construction codes and Australian Standards relevant to Class 10 building construction
- standards and codes for timber framing
- footing systems:
 - bored pier footings
 - columns or stumps
 - concrete slab floors
 - reinforced piers and beams
 - drilled and driven piles
 - mass concrete piers
 - screw piles
 - waffle pod slabs
 - brick bases
- floor system and components:
 - slab on ground concrete floors
 - engineered floor joists
 - platform floor construction
 - fitted (cut-in) floors
 - compressed sheet wet area flooring
 - sheet flooring
 - autoclaved aerated concrete (AAC) panel systems
- AAC floor and wall systems
- structural principles:
 - behaviour of structural materials
 - dead, live and wind loads
 - section properties
 - solution of force systems
 - wind bracing
- structural wall systems:
 - composite walls featuring tilt-up slab, engineered timber products and lightweight AAC
 - framed walls incorporating timber, engineered timber products and lightweight section steel
 - masonry walls incorporating cavity brick, single-leaf masonry and AAC

- workplace policies and procedures, quality systems, best practice approaches, and safety requirements
- workplace quality documentation:
 - policies and procedures
 - workplace procedures, workplace safety and environmental requirements
 - various construction contracts
- structural roof systems:
 - timber and metal pre-fabricated trusses
 - hand cut timber
- roof types:
 - box gable
 - dual pitch
 - Dutch gable and Dutch hip
 - gable end
 - hip and valley
 - north light
 - skillion
 - rafter and purlin
- accepted industry practices
- roof cladding:
 - concrete, clay and metal tiles
 - shakes and shingles
 - short and long run, various profile and metal sheeting
- wall cladding:
 - weather boards
 - coatings over base materials
 - corrugated metal sheeting
 - fibre cement and compressed wood panelling
 - tilt-up slab
 - unfired and fired AAC masonry.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - construction drawings, site plans and specifications
 - software and hardware to source and document information

- specifications:
 - NCC Volume 2
 - current building and construction codes and Australian Standards relevant to Class 10 building construction
 - workplace policies and procedures, and quality procedures relevant to class 10 building construction
 - construction material manufacturer specifications
- relationships:
 - design and building construction professionals
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC404 Supervise landscape project works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to plan, coordinate and supervise landscape project works.

The unit applies to individuals who apply specialist skills and knowledge to supervising landscape project works. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify scope of landscape project works	1.1 Review and relate landscape documentation to worksite 1.2 Determine personnel and resources required to undertake landscape works according to scope of project

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Develop work program to ensure project outcomes are reached within designated timelines</p> <p>1.4 Identify hazards and assess risks in workplace, and implement control measures to manage risks according to workplace health and safety procedures</p> <p>1.5 Consider environmental impact of landscape project works</p> <p>1.6 Select, fit, use, and maintain personal protective equipment (PPE) applicable to task</p>
2. Coordinate the supply of materials and equipment	<p>2.1 Calculate material quantities and equipment requirements to ensure ongoing work program is maintained</p> <p>2.2 Order material and equipment, check for quantity and quality and store as required</p> <p>2.3 Convey and confirm any specific delivery instructions with suppliers to ensure materials are delivered according to work program</p> <p>2.4 Identify and document rejected material, send back to supplier and re-order</p>
3. Supervise and monitor project works	<p>3.1 Provide instructions and allocate tasks to staff and sub-contractors</p> <p>3.2 Monitor work program and adjust to ensure site is developed and project outcomes are reached within designated timelines</p> <p>3.3 Identify, record and report variations to work program, issues likely to cause delays, and contingencies beyond scope of project</p> <p>3.4 Monitor work site and work practices and ensure compliance with legislation and safe work practices</p>
4. Complete site works	<p>4.1 Inspect site prior to practical completion to ensure all works have been undertaken according to client needs and relevant documentation</p> <p>4.2 Note any works not complying and rectify</p> <p>4.3 Produce a completed landscape project works report for client</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for landscape project works
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff and sub-contractors, using clear language and standard industry terminology to communicate landscape project works requirements, outcomes, timelines and work program
Numeracy	<ul style="list-style-type: none"> Calculate quantities of material and equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC404 Supervise landscape project works	AHCLSC401 Supervise landscape project works	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC404 Supervise landscape project works

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supervised landscape project works on at least one occasion, and has:

- identified scope of landscape project work
- identified personnel and resource requirements
- developed and documented a project work program that identifies project outcomes, timelines, labour, materials and equipment
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- fitted, used and maintained personal protective equipment (PPE)
- calculated materials and equipment
- controlled the quality of supplied materials
- supervised and communicated with staff and sub-contractors
- monitored, recorded and reported on progress of a works program
- liaised with clients
- completed a landscape works report.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of supervising landscape works, including:
 - causes of disruption to work programs and their effect on quality and time schedules
 - how to conduct site assessment and work site establishment
 - issuing of instructions, variations and requests for information
 - format, frequency and documentation for job reporting requirements
 - legislative requirements and legal responsibilities relevant to landscape project works

- contracts, plans and specifications for project documentation
- supervision techniques of staff and sub-contractors
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to supervising landscape project works.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - landscape documentation including scope of works
 - PPE applicable to supervising landscape project works
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to supervising landscape project works
 - legislative requirements and legal responsibilities relevant to landscape project works
- relationships:
 - clients, staff and sub-contractors
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC504 Survey and establish site levels

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to undertake site surveys, map levels and issues of levels in gardens, and record site details.

The unit applies to individuals who apply specialist skills and knowledge to surveying and establishing site levels, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Undertake site survey	1.1 Test survey equipment calibration and maintain survey equipment 1.2 Determine survey items from existing plan or client brief and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	prepare sketch plan 1.3 Survey items and relevant landscape features and take heights 1.4 Record and check measurements
2. Record site details	2.1 Draw plan to scale 2.2 Orientate north point 2.3 Reduce levels and record on plan 2.4 Analyse and record issues of levels on site plan

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding survey items and requirements
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client, using clear language and standard industry terminology to discuss survey items and sketch plan

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC504 Survey and establish site levels	AHCLSC501 Survey and establish site levels	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC504 Survey and establish site levels

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has surveyed and established site levels on at least one occasion on two different sites, and has:

- performed survey equipment test
- maintained survey equipment and material
- interpreted existing plans and client brief
- produced scale drawings for designs
- liaised with clients
- used survey equipment on a sloping site, including a change point
- recorded levels of survey items and site features
- read maps and plans
- orientated a landscape site
- mapped orientation and levels and issues of levels to scale on a site plan
- analysed surveying and levelling results
- booked and logged results.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of establishing site levels, including:
 - survey equipment testing, calibration and maintenance procedures
 - techniques for surveying differing and unusual garden shapes
 - map and plan reading, and map orientation
 - difference between magnetic and true north
- tools, equipment, and surveying instruments relevant to surveying and establishing site levels for landscape projects and their use.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - tools and equipment, and survey instruments applicable to surveying and establishing site levels for landscape projects
- specifications:
 - site plans, maps and client brief applicable to surveying and establishing site levels for landscape projects
- relationships:
 - clients
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC505 Manage landscape projects

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to manage landscape projects, including identifying project issues, maintaining effective client liaison, developing work schedules, managing contractors and submitting works for handover.

The unit applies to individuals who apply specialist skills and knowledge to managing landscape projects, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify issues relating to landscape project	1.1 Discuss and clarify client goals and project objectives 1.2 Analyse landscape documentation to determine nature and scope

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>of project</p> <p>1.3 Identify potential constraints to success of the project</p> <p>1.4 Identify and minimise environmental impact of proposed landscape project works according to environmental and biosecurity legislation, regulations and workplace procedures</p> <p>1.5 Identify hazards and assess risks associated with work activities, and implement control measures according to workplace health and safety procedures</p>
2. Maintain effective client liaison	<p>2.1 Clarify responsibilities of all parties involved in project according to contract</p> <p>2.2 Clarify procedures to vary contract and satisfy all stakeholders</p> <p>2.3 Identify site emergency procedures according to contract terms and conditions</p> <p>2.4 Establish communication obligations in respect of work program according to contractual obligations and sound business principles</p>
3. Develop work schedule	<p>3.1 Identify and document work schedules and timelines of operations</p> <p>3.2 Identify resources required for landscape project according to contract and landscape design</p> <p>3.3 Identify and document quantity, quality, timing and cost of supply of each input and service</p> <p>3.4 Establish key performance outcomes and indicators to measure performance of all operations and personnel</p>
4. Manage contractors	<p>4.1 Prepare standard contracts for specific works in line with landscape design and contract</p> <p>4.2 Monitor progress of works against contract according to industry standards</p> <p>4.3 Identify and solve project, staff and contractor issues as required</p> <p>4.4 Identify, negotiate, implement and record variations</p> <p>4.5 Identify, rectify and record non-conforming elements of contract</p> <p>4.6 Initiate progress payments and final payments according to contract terms</p>
5. Submit works for hand over	5.1 Undertake site inspection with relevant personnel at completion of works and prior to hand over

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.2 Note, record and rectify all items below specification 5.3 Document hand over report, and present to client

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding goals, objectives and requirements for landscape project
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client and sub-contractors, using clear language and standard industry terminology to discuss landscape project work requirements, goals, objectives, timelines, work program and negotiate contracts
Numeracy	<ul style="list-style-type: none"> Calculate and budget for costs of material, machinery, equipment resources and sub-contractors

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC505 Manage landscape projects	AHCLSC502 Manage landscape projects	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC505 Manage landscape projects

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed landscape projects on at least one occasion and has:

- liaised with clients
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- identified, negotiated and implemented variations to contracts
- identified, organised and managed works program, works team and sub-contracted work
- prepared landscape project documentation
- developed a schedule of works and sub-contracts
- developed a project budget and costed a bill of quantities
- identified and rectified non-conforming elements of contracts
- completed hand over report and presented to client.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of managing landscape projects, including:
 - project management principles
 - project budgeting and costing techniques
 - landscape project documentation and contracting techniques
 - public liability, regulations and legal responsibilities relevant to landscape projects
 - types of landscape machinery and equipment
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to managing landscape projects.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - client landscape project documentation
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to managing landscape project
 - public liability, regulations and legal responsibilities relevant to managing landscape projects
- relationships:
 - clients, staff and sub-contractors
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSC506 Manage a tree transplanting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to manage a tree transplanting program, including assessing sites and trees, determining transplanting requirements, and documenting tree transplant program.

The unit applies to individuals who apply specialist skills and knowledge to managing tree transplanting programs, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess the sites and trees	1.1 Undertake site assessments to identify conditions which may impact on transplanting activities at lifting and transplant site

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Identify hazards and assess risks associated with work activities, and implement control measures according to workplace health and safety procedures</p> <p>1.3 Liaise with authorities and information services to determine location of services and utilities, and regulations governing transplanting and transportation of trees</p> <p>1.4 Assess trees for viability for transplanting to ensure best time and conditions are chosen according to tree species characteristics</p>
2. Determine transplanting requirements	<p>2.1 Identify tools, equipment, machinery and specialist contractors</p> <p>2.2 Identify tree species to be transplanted</p> <p>2.3 Determine excavation methods and root ball preparation according to species characteristics</p> <p>2.4 Determine crown reduction and protection tasks according to species characteristics and Australian standards</p> <p>2.5 Calculate root ball and tree mass to determine appropriate lifting and transport requirements</p> <p>2.6 Coordinate labour requirements to ensure trees are prepared, lifted, transported and re-installed with minimum stress to the trees, according to workplace health and safety procedures and environmental and biosecurity legislation, regulations and workplace procedures</p> <p>2.7 Identify a transport route for size and shape of tree and road transport vehicle requirements</p> <p>2.8 Determine and document an aftercare plan outlining monitoring frequency and methods to maintain the health and viability of the transplanted trees in the program</p>
3. Document a tree transplanting program	<p>3.1 Document transplanting program</p> <p>3.2 Calculate and document resources and costing details</p> <p>3.3 Communicate transplanting program for implementation</p> <p>3.4 Assess completed tree transplanting program according to identified program and budget guidelines</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Calculate and budget for costs of material, machinery and equipment

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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC506 Manage a tree transplanting program	AHCLSC503 Manage a tree transplanting program	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC506 Manage a tree transplanting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed a tree transplanting program on at least one occasion and has:

- determined transplant and transportation requirements and removal methods
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- assessed and controlled risks
- liaised with authorities and information services regarding transplanting and transporting trees
- developed transport plan
- assessed tree viability for transplantation
- assessed crown and root reduction requirements
- calculated root ball and tree mass and size
- documented and communicated transplanting program, contingency planning and after-care plan
- calculated project resources and costs
- developed a budget.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of tree transplanting management, including:
 - causes of stress in trees resulting from resulting from transplanting, storage and transportation
 - current practices and techniques in tree preparation, lifting, transportation and replanting

- local government tree protection and preservation regulations relevant to tree transplanting
- methods of managing tree moving operations
- planning considerations and environmental impacts of transplanting activities
- requirements for securing and signing trees for road transportation
- Australian standards and codes of practice relevant to tree transplanting
- tree anatomy, physiology and biochemistry as it relates to transplanting trees
- tree transplanting techniques appropriate to the specific requirements of the species
- aftercare management
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to managing a tree transplanting program.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to managing a tree transplanting program
 - Australian standards and codes of practice relevant to managing a tree transplanting program
 - local government tree protection and preservation regulations a tree transplanting program
- relationships:
 - authorities, staff and specialist sub-contractors
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK219 Carry out birthing duties

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to assist animals and their newborn at birthing, including preparing for birthing, assisting with birthing process and providing post-birthing assistance.

The unit applies to individuals who carry out birthing duties under general supervision with limited autonomy or accountability.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for birthing	1.1 Read animal records and confirm anticipated birthing date with supervisor 1.2 Check and monitor condition and health status of pregnant animal prior to birthing 1.3 Prepare and use equipment, resources and materials according to supervisor instructions and safe working practices 1.4 Provide shelter access for birthing females to ensure animal welfare needs are met 1.5 Identify workplace health and safety hazards and report to supervisor 1.6 Select, fit, use and maintain personal protective equipment (PPE) applicable to task 1.7 Check and report faulty or unsafe equipment, resources, materials or PPE to supervisor 1.8 Check for presence of predators and implement control measures where necessary and report to supervisor
2. Assist at the birthing process	2.1 Monitor environment and animals to assess whether birth is progressing normally 2.2 Handle animals calmly with minimal disruption to birthing process according to workplace animal welfare and hygiene practices 2.3 Identify animals experiencing birthing difficulties and intervene as appropriate 2.4 Seek supervisor or veterinary advice if birth complications cannot be resolved
3. Provide post-birthing assistance	3.1 Check and clear newborns airways where required 3.2 Clean mother and newborn where required 3.3 Monitor post-birthing health, suckling and bonding of female and newborn 3.4 Administer antibiotics or other medicine as directed 3.5 Clean and maintain birthing environment, facilities and equipment according to workplace procedures 3.6 Complete birth records according to workplace procedures 3.7 Report malfunctions, faults, wear or damage of facilities, equipment and resources to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to complete birth records
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults wear or damage to facilities, equipment and resources Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK219 Carry out birthing duties	AHCLSK203 Carry out birthing duties	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK219 Carry out birthing duties

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has carried out birthing duties on at least three separate occasions, and has:

- recognised signs of imminent birthing of animals
- monitored animal condition and recognised abnormal behaviour
- prepared environment, materials and resources to industry standards
- followed relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- maintained a safe and secure environment
- provided due care and handled animals humanely according to workplace animal welfare and hygiene practices
- provided a non-threatening environment and access to appropriate feed and water
- implemented predator control measures
- monitored birthing and provided assistance if required or referred on if birthing difficulties require veterinary assistance
- carried out animal husbandry procedures associated with birthing
- recognised abnormalities in newborn animals
- reported and maintained animal birth records
- selected equipment and materials and checked for safe operation.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for carrying out birthing duties, including appropriate use of personal protective equipment (PPE)

- environment and biosecurity legislation and regulations and workplace practices relevant to carrying out birthing duties
- principles and practices of animal birthing duties, including:
 - relevant animal behaviour, basic health and nutritional requirements of animals and newborn
 - birthing environment requirements for animals
 - equipment and materials, their components and functions
 - birthing intervention and non-intervention strategies
 - effects of adverse weather conditions on birthing process and newborn animals
 - workplace policies with regard to treating animals, recording and reporting routines
 - relevant livestock gestation and appropriate birthing and husbandry procedures
 - problems associated with birthing and remedial treatment
 - use of antibiotics and other medicine after birthing, including dosage, delivery routes and contraindications
 - procedures for cleaning and maintaining treatment equipment and materials
 - predator behaviour and control measures
 - animal welfare legislation, codes of practice and procedures and hygiene practices relevant to carrying out birthing duties.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to carrying out birthing duties
 - materials, equipment, and resources applicable to carrying out birthing duties for the animal species
 - pregnant livestock
 - PPE applicable to carrying out birthing duties
- specifications:
 - workplace requirements applicable to health and safety in the workplace for carrying out birthing duties
 - environment and biosecurity legislation and regulations and workplace practices applicable to carrying out birthing duties
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to carrying out birthing duties
 - hygiene practices applicable to carrying out birthing duties
- relationships:
 - supervisor
- timeframes:

- according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK220 Monitor livestock to parturition

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to monitor animal health, wellbeing and welfare to parturition, including checking animal health status, and identifying and feeding pregnant animals.

The unit applies to individuals who carry out birthing duties under general supervision with limited autonomy or accountability.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Check health status of	1.1 Identify workplace health and safety hazards and risks and report

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
animals	<p>to supervisor</p> <p>1.2 Select, fit, use and maintain personal protective equipment applicable to the task</p> <p>1.3 Check condition and health status of animals and confirm according to workplace health strategies and records</p> <p>1.4 Recognise signs of poor health and condition or abnormal behaviour and report to supervisor</p> <p>1.5 Administer preventative health treatments as instructed</p> <p>1.6 Identify environmental implications associated with production and report to supervisor</p>
2. Identify pregnant animals	<p>2.1 Identify animals and separate on basis of pregnancy status where applicable</p> <p>2.2 Report identified dry animals according to property management plan</p> <p>2.3 Report additional assistance required for assessing pregnancy status to supervisor</p>
3. Feed pregnant animals	<p>3.1 Identify nutritional needs of pregnant animals and confirm against feeding plan</p> <p>3.2 Identify animals with special feeding needs and give them preferential feeding and record</p> <p>3.3 Implement and record supplementary feeding as required</p> <p>3.4 Maintain a safe and secure environment for pregnant animals</p> <p>3.5 Handle animals with minimum stress and discomfort according to workplace animal welfare procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to complete feeding records

Skill	Description
Oral communication	<ul style="list-style-type: none"> Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK220 Monitor livestock to parturition	AHCLSK208 Monitor livestock to parturition	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK220 Monitor livestock to parturition

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has monitored livestock throughout pregnancy to parturition, and has:

- followed relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- followed relevant animal welfare policies and practices
- observed livestock health and wellbeing from joining
- recognised and reported abnormalities for remedial action
- administered preventative health treatments under instruction
- provided a safe and secure environment for the promotion of the welfare and wellbeing of pregnant animals through to birthing
- maintained appropriate nutritional and environmental requirements
- calculated animal numbers, measured feed, assessed rate and frequency of feeding, and calculated animal gestation
- handled pregnant animals with due care.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for monitoring livestock to parturition
- environment and biosecurity legislation and regulations and workplace practices relevant to monitoring livestock to parturition
- principles and practices of monitoring livestock parturition, including:
 - effects of adverse weather conditions and inadequate nutrition on pregnant animals and their newborn

- effect of local climatic conditions on the timing of separating and transporting pregnant animals
- environment codes of practice applicable to animal production
- correct livestock handling techniques for dry and pregnant animals
- health and nutritional requirements for pregnant animals
- livestock identification methods
- pregnant animal behaviour and abnormalities
- pregnancy checking and confirmation procedures, including scanning
- livestock health treatments, procedures and methods
- animal welfare legislation, codes of practice and procedures relevant to monitoring livestock to parturition.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to monitoring livestock to parturition
 - materials, equipment, and resources applicable to monitoring livestock to parturition
 - pregnant livestock
 - personal protective equipment applicable to monitoring livestock to parturition
- specifications:
 - workplace requirements applicable to health and safety in the workplace for monitoring livestock to parturition
 - environment and biosecurity legislation and regulations and workplace practices applicable to monitoring livestock to parturition
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to monitoring livestock to parturition
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK330 Implement procedures for calving

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare for calving, observe and support cows at calving and monitor after calf is born.

The unit applies to individuals who implement procedures for calving under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements in particular the risks associated with Q fever, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for calving	1.1 Identify potential hazards and risks, and implement safe working practices to address risks and biosecurity hazards 1.2 Assess and monitor condition and health status of cow prior to calving 1.3 Select required calving equipment, resources and materials and check for safe operation 1.4 Select, fit, use and maintain personal protective equipment applicable to task 1.5 Graze cows at risk of calving difficulty in an area where intervention can be carried out with as little disruption as possible 1.6 Check mating records and confirm anticipated calving date
2. Observe the calving	2.1 Monitor cows for signs of approaching parturition and throughout calving 2.2 Note signs of calf malpresentation or dystocia from the rate of progress in giving birth and initial orientation of the feet and head
3. Support calving	3.1 Handle calving cows calmly and put in a secure environment according to workplace animal welfare practices 3.2 Clean calving equipment according to workplace hygiene procedures 3.3 Use calving ropes and calf pulling equipment where required, without causing undue harm to female and unborn calf 3.4 Seek specialist veterinary support where normal assistance procedures are not adequate to assist the calving
4. Carry out monitoring after calf has been born	4.1 Check that calves have clear airways and commence breathing, and clear airways where required 4.2 Allow cow to rest and encourage cow to lick the calf as an initial bonding 4.3 Leave the placenta for cow to ingest after calving 4.4 Maintain personal safety when monitoring calves and cows 4.5 Clean and maintain the calving environment and facilities using appropriate hygiene procedures 4.6 Clean and return equipment, resources and materials to required location 4.7 Identify and report unserviceable equipment and resources

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	according to workplace procedures 4.8 Complete calving records according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about calving activities
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare calving records
Oral communication	<ul style="list-style-type: none"> Use clear language with specialist veterinary support to provide information on calving assistance requirements Use clear language to report equipment and resources unserviceability

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK330 Implement procedures for calving	AHCLSK329 Implement procedures for calving	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK330 Implement procedures for calving

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has successfully implemented procedures for calving on at least two occasions and has:

- prepared calving environment, materials and resources to industry standards
- identified risks and applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures, including Q fever
- carried out cow husbandry procedures and recognised signs of imminent calving
- monitored cow condition and recognised abnormal behaviour and presentations
- applied workplace animal welfare practices
- applied contingency measures for calving in the event of difficulties
- applied calving ropes and chains and used suitable calf pulling equipment
- recognised when normal assistance procedures are not adequate to assist the calving and sought specialist veterinary support is required
- recognised abnormalities and progress of calf immediately after birth
- maintained a safe and secure post calving environment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for implementing procedures for calving, including Q fever and appropriate use of personal protective equipment (PPE)
- environment and biosecurity legislation and regulations and workplace practices relevant to implementing procedures for calving
- principles and practices of implementing procedures for calving, including:
 - pre and post calving health of cow, including clinical and sub-clinical health

- calving behaviour and basic health and nutritional requirements as directed
- calving equipment and materials, their components and functions
- calving intervention and non-intervention strategies
- normal calf presentation, and abnormal presentation that may need assistance
- problems associated with calving and intervention
- workplace policies with regard to calving down, recording and reporting routines
- procedures for cleaning and maintaining treatment equipment and materials
- animal welfare legislation, codes of practice and procedures relevant to calving.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to implementing procedures for calving
 - pregnant cows
 - materials, tools and equipment applicable to implementing procedures for calving
 - PPE applicable to implementing procedures for calving
- specifications:
 - workplace requirements applicable to health and safety in the workplace for implementing procedures for calving, including Q fever
 - environment and biosecurity legislation and regulations and workplace practices applicable to implementing procedures for calving
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to implementing procedures for calving
- relationships:
 - specialist veterinary support
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK338 Conduct dropped ovary technique procedures for spaying cattle

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to plan, prepare and conduct Dropped Ovary Technique (DOT) procedures and post DOT procedures for controlling fertility in females in extensive beef herds.

The unit applies to individuals who conduct DOT procedures for spaying cattle under broad direction, and take responsibility for their own work.

It is essential that individuals who undertake this unit have worked with cattle for at least one year prior to commencing this unit.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

Regulatory requirements apply in some jurisdictions restricting the conduct of the DOT procedure to registered veterinarians. Users are advised to check with the relevant State or Territory regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Conduct pre-DOT evaluations	1.1 Identify and comply with relevant State or Territory legislation, regulations, codes of practice and animal welfare requirements 1.2 Discuss alternatives to ovariectomy with cattle manager and carefully consider them prior to undertaking DOT procedure 1.3 Confirm pre-operative evaluation of cattle submitted for ovary dropping with cattle manager 1.4 Identify and discuss risks associated with DOT procedure with cattle manager
2. Prepare for DOT operations	2.1 Monitor and determine optimal weather conditions for operation 2.2 Select time of day for operation to minimise animal stress 2.3 Engage adequate numbers of skilled workers 2.4 Select appropriate holding yards, forcing yards, race and settling yards 2.5 Follow low-stress stock mustering, movement and handling procedures 2.6 Allow cattle to settle and cool after yarding
3. Select, maintain and use appropriate equipment	3.1 Select required DOT equipment and check for safe operation, cleanliness and hygienic condition to reduce the risk of infection and cross-infection 3.2 Check cattle crush used for procedure is maintained in good working order and operated to ensure minimal risk to the operator and animal 3.3 Prepare wash-down, soaking and disinfecting containers and position ready for use 3.4 Prepare disinfectant solution according to label and safety data sheet directions 3.5 Sharpen ovariator regularly and disinfect before use and between each procedure 3.6 Clean, disinfect and store all equipment at the end of operations to minimise contamination
4. Conduct DOT procedures	4.1 Conduct procedures according to workplace health and safety, biosecurity and animal welfare requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.2 Maintain facilities, hands, handling and equipment hygiene throughout the procedures</p> <p>4.3 Handle cattle quietly in the holding yards, forcing yards and race so that they are relatively calm when they reach the crush</p> <p>4.4 Identify common DOT procedural impediments and plan remedial actions</p> <p>4.5 Provide pain management according to legislative requirements</p> <p>4.6 Perform DOT procedures according to industry best practice standards and processing rates</p> <p>4.7 Apply identification earmarks or ear tags to cattle upon completion of procedures, according to relevant State or Territory legislative requirements</p> <p>4.8 Release and allow ovariectomised animals to settle on to feed and water in the settling yards for several hours, before moving them quietly to pasture</p>
5. Carry out post DOT procedures	<p>5.1 Record cattle identity and date of the procedure, with details of significant observations where required</p> <p>5.2 Inspect cattle regularly with minimal disturbance for signs of post-operative complications during the healing process and take appropriate action where required</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about DOT procedures activities
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare DOT records
Oral communication	<ul style="list-style-type: none"> Use clear language with cattle manager to provide information on DOT procedure, discuss alternatives and risks, and confirm pre-operative evaluation

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK338 Conduct dropped ovary technique procedures for spaying cattle	AHCLSK335 Conduct dropped ovary technique procedures for spaying cattle	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK338 Conduct dropped ovary technique procedures for spaying cattle

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has successfully conducted dropped ovary technique (DOT) procedures for spaying cattle on at least ten animals, and has:

- conducted pre-operative evaluation of cattle submitted for ovary dropping and risk assessment in consultation with cattle manager
- complied with relevant State or Territory veterinary surgeons or practitioner's legislation, regulations and codes of conduct
- applied workplace animal welfare practices and procedures
- assessed alternative strategies and confirmed key indicators for the use of DOT procedures in consultation with cattle manager
- communicated post-spay management requirements to cattle manager
- identified optimal conditions for carrying out DOT procedures
- followed low-stress stock mustering, movement and handling procedures
- prepared appropriate sites, facilities and equipment according to infection control and hygiene requirements
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- carried out DOT procedures according to industry recognised best practice DOT procedure and processing rates, and implemented remedial actions
- prepared and applied pain management according to legislative requirements
- maintained DOT records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for conducting DOT procedures for spaying cattle

- environment and biosecurity legislation and regulations and workplace practices relevant to conducting DOT procedures for spaying cattle
- principles and practices of conducting DOT procedures for spaying cattle, including:
 - alternative options available to control fertility in cattle
 - animal welfare practices and procedures for the use of DOT in cattle
 - anatomy and reproductive features of cattle
 - body condition scoring of cattle
 - cattle nutrition and husbandry requirements for the specific cattle management system
 - industry recognised best practice DOT procedure and processing rates
 - use of, and regulatory considerations for the use of disinfectants
 - health and animal welfare implications of post-operative complications of the use of DOT in cattle
 - animal welfare legislation, codes of practice and procedures relevant to DOT
 - State or Territory veterinary surgeons or practitioner's legislation, regulations and codes of conduct relevant to DOT.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to conducting DOT procedures for spaying cattle
 - female cattle
 - materials, tools and equipment applicable to conducting DOT procedures for spaying cattle
- specifications:
 - workplace requirements applicable to health and safety in the workplace for conducting DOT procedures for spaying cattle
 - environment and biosecurity legislation and regulations and workplace practices applicable to conducting DOT procedures for spaying cattle
 - industry standards, codes of practice and procedures for animal welfare and conducting DOT procedures for spaying cattle
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to conducting DOT procedures for spaying cattle
 - State or Territory veterinary surgeons or practitioner's legislation, regulations and codes of conduct relevant to conducting DOT procedures for spaying cattle
- relationships:
 - cattle manager, veterinary surgeon
- timeframes:

- industry processing rates.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK339 Pregnancy test livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare for pregnancy testing, arrange pregnancy testing support, carry out pregnancy testing, and post testing procedures in livestock.

The unit applies to individuals who pregnancy test livestock by rectal palpation or ultrasound under broad direction, and take responsibility for their own work.

This unit is not to be used for pregnancy testing of horses.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

Regulatory requirements apply in some jurisdictions. Users are advised to check with the relevant State or Territory regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for pregnancy testing	1.1 Prepare physical resources, human resources and relevant documentation for pregnancy testing 1.2 Muster, yard and safely restrain livestock according to workplace health and safety procedures, and workplace animal welfare practices 1.3 Draft livestock to be tested according to breeding or management program requirements
2. Arrange support for pregnancy testing	2.1 Assemble pregnancy testing supplies and equipment for operators 2.2 Separate and restrain individual animals for veterinary treatment or examination 2.3 Handle and test livestock according to animal welfare practices 2.4 Record and report pregnancy testing operations and outcomes according to workplace procedures
3. Carry out pregnancy testing procedures	3.1 Identify hazards and assess risks in the workplace, and implement control measures to address risks while working with livestock according to workplace health and safety procedures 3.2 Select, fit, use and maintain personal protective equipment applicable to task 3.3 restrain individual animals for testing and check individual breeding records 3.4 Clean rectal area of animal prior to examination where applicable 3.5 Carry out ultrasound or rectal examination and palpation to establish pregnancy or non-pregnancy 3.6 Determine the number of foetuses where possible 3.7 Implement strict workplace hygiene procedures between pregnancy testing individual animals according to workplace animal welfare practices and biosecurity procedures 3.8 Record identities and relevant details of livestock tested 3.9 Observe and record other indicators of animal health for input to herd health management
4. Carry out post pregnancy testing procedures	4.1 Accurately identify livestock diagnosed as pregnant or not pregnant 4.2 Consign all animals to their destination or return them to paddocks or pens according to workplace requirements 4.3 Dispose of waste, debris and veterinary medicine waste according

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	to workplace procedures and environment and biosecurity requirements 4.4 Carry out regular monitoring of animal's post pregnancy testing to detect post testing complications

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about animal pregnancy testing operations
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare pregnancy testing records

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK339 Pregnancy test livestock	AHCLSK408 Pregnancy test animals	Title change Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK339 Pregnancy test livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has successfully pregnancy tested livestock during different stages of gestation using ultrasound or manual pregnancy testing techniques on a minimum of twenty animals with an accuracy of 95%, and has:

- planned and prepared for pregnancy testing
- applied workplace animal welfare practices
- identified risks and applied relevant workplace health and safety and environmental and biosecurity legislation, regulations, and workplace procedures
- drafted livestock and sourced information on joining to assist in pregnancy testing
- coordinated and arranged support for pregnancy testing
- restrained livestock for pregnancy testing using humane methods and facilities
- carried out ultrasound or manual pregnancy testing procedures according to animal welfare practices
- maintain records of pregnancy testing and litter size where applicable
- monitored livestock after pregnancy testing.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for pregnancy testing livestock, including appropriate use of personal protective equipment (PPE)
- environment and biosecurity legislation and regulations and workplace practices relevant to pregnancy testing livestock
- principles and practices of animal pregnancy testing, including:
 - animal welfare legislation, codes of practice and procedures relevant to pregnancy testing livestock

- anatomy and physiology of the animal species
- reproductive physiology and pregnancy development of the animal species
- husbandry and management strategies for pregnant and non-pregnant livestock
- ultrasound and manual pregnancy testing methods
- recording and reporting systems used in conjunction with pregnancy testing and animal breeding programs.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to pregnancy testing livestock
 - live animals at varying stages of gestation
 - materials, tools and equipment applicable to pregnancy testing livestock
 - ultrasound equipment
 - PPE applicable to pregnancy testing livestock
- specifications:
 - workplace requirements applicable to health and safety in the workplace for pregnancy testing livestock
 - environment and biosecurity legislation and regulations and workplace practices applicable to pregnancy testing livestock
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to pregnancy testing livestock
- relationships:
 - veterinarian
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK340 Mate and monitor reproduction of alpacas

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to mate and monitor the reproduction of alpacas.

The unit applies to individuals who mate alpacas and monitor hembra performance under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare animals for	1.1 Select male and female animals to be mated from the studs' mating

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
mating	<p>plan</p> <p>1.2 Identify potential hazards and risks, and implement safe working practices to address risks</p> <p>1.3 Select, fit, use and maintain personal protective equipment applicable to task</p> <p>1.4 Determine and record condition of animals selected for mating according to industry practices</p> <p>1.5 Adjust nutritional program where required and monitor to produce optimum condition for mating</p> <p>1.6 Prepare over-fleeced females to ensure that tail and vulva area are clean and free of fleece</p> <p>1.7 Check animals for signs of infection or other reason not to proceed with planned mating and take remedial action as appropriate</p>
2. Facilitate mating	<p>2.1 Identify receptive females</p> <p>2.2 Ensure paddock or pen mating areas are secure and provide access for handlers during joining</p> <p>2.3 Use mating procedures and handling techniques that minimise stress and discomfort to animals according to workplace health and safety requirements and animal welfare practices</p> <p>2.4 Supervise pen mating and intervene when required to maximise conception rates</p>
3. Complete mating procedures	<p>3.1 Undertake or commission pregnancy test and identify pregnancy status of animals and take suitable action as required</p> <p>3.2 Complete required mating records</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare mating records

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK340 Mate and monitor reproduction of alpacas	AHCLSK302 Mate and monitor reproduction of alpacas	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK340 Mate and monitor reproduction of alpacas

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has mated and monitored reproduction of alpacas on at least one occasion and has:

- scored alpaca condition
- monitored the condition of female and male alpacas
- recognised ovulation in females
- supervised alpaca mating and assisted as appropriate
- conducted a spit off
- conducted and commissioned pregnancy tests
- identified and implemented action required as a result of pregnancy tests
- applied relevant workplace health and safety, environmental and biosecurity legislation, regulations, and workplace procedures
- followed workplace animal welfare practices and identified hazards and risks.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for mating and monitoring alpacas, including appropriate use of personal protective equipment (PPE)
- environment and biosecurity legislation and regulations and workplace practices relevant to mating and monitoring alpacas
- principles and practices of mating and monitoring alpacas, including:
 - alpaca handling and assisted joining techniques
 - alpaca health and abnormalities
 - alpaca movement and behavioural characteristics
 - workplace and industry identification system for alpaca

- workplace and industry policies regarding recording and reporting routines for mating
- management of female and male body conditions core through nutrition programs
- Johne's disease status mating procedures
- mobile mating procedures
- pregnancy testing techniques, including detection of ovulation
- animal welfare legislation, codes of practice and procedures relevant to mating and monitoring alpacas.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to mating and monitoring alpacas
 - live alpacas
 - materials, tools and equipment applicable to mating and monitoring alpacas
 - PPE applicable to mating and monitoring alpacas
- specifications:
 - workplace requirements applicable to health and safety in the workplace for mating and monitoring alpacas
 - environment and biosecurity legislation and regulations and workplace practices applicable to mating and monitoring alpacas
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to mating and monitoring alpacas
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK341 Coordinate artificial insemination and fertility management of livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to coordinate artificial insemination (AI) and fertility management of livestock, including preparing for and facilitating AI, and carrying out post AI procedures.

The unit applies to individuals who coordinate AI and fertility management of livestock under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

Accreditation requirements apply in some jurisdictions to performing commercial AI. Users are advised to check with the relevant State or Territory regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare animals for artificial insemination	1.1 Identify potential hazards and risks, and implement safe working practices to address risks and biosecurity hazards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Select, fit, use and maintain personal protective equipment applicable to task 1.3 Assess average body condition of female livestock 1.4 Provide advice on nutritional requirements to facilitate optimum condition at the time of artificial insemination as required 1.5 Confirm females are not pregnant before commencing the artificial insemination program
2. Facilitate artificial insemination	2.1 Carry out oestrus inducement and detection procedures according to animal welfare procedures and industry standards 2.2 Prepare artificial insemination equipment and facilities, including artificial insemination tank and semen 2.3 Use handling techniques that minimise stress and discomfort to livestock according to workplace health and safety and animal welfare practices 2.4 Apply hygiene procedures to minimise risk of infection
3. Carry out post artificial insemination procedures	3.1 Maintain female livestock on appropriate nutrition and husbandry management 3.2 Monitor female livestock for signs of early abortion or return to oestrus 3.3 Apply pregnancy detection techniques and identify pregnancy status of animals 3.4 Complete required artificial insemination and pregnancy status records

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare AI and pregnancy status records

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK341 Coordinate artificial insemination and fertility management of livestock	AHCLSK312 Coordinate artificial insemination and fertility management of livestock	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

- <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK341 Coordinate artificial insemination and fertility management of livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has coordinated artificial insemination and fertility management of livestock on at least two occasions and has:

- prepared females for insemination
- followed relevant workplace health and safety and environmental and biosecurity legislation, regulations, and workplace procedures
- followed workplace animal welfare practices
- cleaned equipment and prepared hygienic worksite prior to insemination procedures
- monitored livestock post insemination
- detected signs of early abortion or return to oestrus
- coordinated and recorded the results of pregnancy testing.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for coordinating artificial insemination and fertility management of livestock, including appropriate use of personal protective equipment (PPE)
- environment and biosecurity legislation and regulations and workplace practices relevant to coordinating artificial insemination and fertility management of livestock
- principles and practices of artificial insemination and fertility management of livestock, including:
 - body condition scoring
 - husbandry and management practices for pregnant and non-pregnant female livestock
 - anatomy and physiology of female livestock
 - reproductive physiology and pregnancy development of female livestock

- requirements and procedures of artificial insemination
- reproductive diseases and complications in female livestock
- animal welfare legislation, codes of practice and procedures relevant to artificial insemination of livestock.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to coordinating artificial insemination and fertility management of livestock
 - female livestock
 - materials, tools and equipment applicable to coordinating artificial insemination and fertility management of livestock
 - PPE applicable to coordinating artificial insemination and fertility management of livestock
- specifications:
 - workplace requirements applicable to health and safety in the workplace for coordinating AI and fertility management of livestock
 - environment and biosecurity legislation and regulations and workplace practices applicable to coordinating artificial insemination and fertility management of livestock
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to coordinating artificial insemination and fertility management of livestock
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK342 Prepare animals for parturition

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to feed and care for animals through the latter stages of pregnancy to birthing.

The unit applies to individuals who prepare animals for parturition under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements in particular the risks associated with Q fever, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify and provide	1.1 Identify and confirm nutritional needs of pregnant animals

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
animal nutritional needs	<p>according to feeding plan</p> <p>1.2 Provide feed supplements as required</p> <p>1.3 Implement procedures to minimise feed wastage and spillage, and dispose and recycle feed waste</p> <p>1.4 Identify potential hazards and risks, and implement safe working practices to address risks and biosecurity hazards</p>
2. Monitor feeding process	<p>2.1 Monitor feeding and supplementary feeding to ensure animals are maintained in required condition</p> <p>2.2 Record and report feeding abnormalities</p>
3. Maintain a secure environment for animals	<p>3.1 Monitor and maintain condition and security of paddocks, shelter or housing according to workplace procedures</p> <p>3.2 Carry out basic repair work where required</p> <p>3.3 Assess and report risk of predators to newborn animals according to workplace procedures</p> <p>3.4 Implement measures to eradicate or control identified predators according to workplace procedures and environmental practices</p>
4. Carry out animal husbandry procedures	<p>4.1 Prepare animals for birthing according to workplace procedures</p> <p>4.2 Provide protection for newborn animals prior to birth</p> <p>4.3 Handle livestock and perform husbandry activities according to workplace animal welfare practices</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about feeding and care activities
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare feeding records

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report feeding abnormalities and predator risks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK342 Prepare animals for parturition	AHCLSK314 Prepare animals for parturition	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK342 Prepare animals for parturition

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared animals for parturition on at least two occasions and has:

- matched supply of feed, grazing or predetermined rations to nutritional requirements for pregnant animals
- read and interpreted relevant manufacturers specifications, work and feeding plans, and safety data sheets
- assessed and calculated herd or flock numbers, measured feed, assessed rate and frequency of feeding, and calculated animal gestation
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures, including Q fever
- employed safe and environmentally responsible systems and procedures for the handling of animals, feed, hazardous substances and predator control strategies
- monitored animal health and condition and recognised abnormalities
- carried out basic repair work where required
- carried out animal husbandry procedures, provided due care and handled animals humanely according to workplace animal welfare practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for preparing animals for parturition, including Q fever
- environment and biosecurity legislation and regulations and workplace practices relevant to preparing animals for parturition
- principles and practices for preparing animals for parturition, including:
 - physiological and behavioural signs of impending birth

- animal behaviour and nutritional requirements of pregnant animals
- feed, pasture and animal grazing management
- feed and feed supplements for pregnant animals and when to provide them
- effects of weather conditions, and inadequate nutrition on pregnant animals and their newborn
- animal husbandry procedures
- environmental impact of animals on ground cover and minimisation measures
- State or Territory legislation, regulations and codes of practice regarding poisons
- predators and behaviour patterns and control and eradication measures
- relevant firearms licensing and permit requirements
- workplace policies regarding recording and reporting birthing animals
- animal welfare legislation, codes of practice and procedures relevant to handling animals and preparing animals for parturition.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to preparing animals for parturition
 - pregnant animals
 - materials, tools and equipment applicable to preparing animals for parturition
- specifications:
 - workplace requirements applicable to health and safety in the workplace for preparing animals for parturition, including Q fever
 - environment and biosecurity legislation and regulations and workplace practices applicable to preparing animals for parturition
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to handling animals and preparing animals for parturition
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK343 Prepare for and implement natural mating of livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare for and implement natural mating of livestock.

The unit applies to individuals who prepare for and implement natural mating of livestock under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare paddocks or yards	1.1 Identify and confirm livestock mating plan with supervisor 1.2 Select paddocks, yards or stock 1.3 Implement predator control program where applicable 1.4 Identify potential hazards and risks, and implement safe working practices to address risks and biosecurity hazards 1.5 Select, fit, use and maintain personal protective equipment applicable to task
2. Prepare females for joining	2.1 Monitor live weight of females through weighing or condition scoring 2.2 Adjust nutrition levels to achieve targeted joining weights or condition scores 2.3 Implement female health and husbandry operations according to workplace procedures and animal welfare practices 2.4 Draft livestock for joining
3. Prepare sires for joining	3.1 Carry out physical examination of sires prior to joining 3.2 Seek veterinary advice where appropriate 3.3 Determine mating ratios 3.4 Select replacement sires in time to allow adjustment to new environment 3.5 Carry out sire health, handling and husbandry operations according to individual requirements and workplace animal welfare practices 3.6 Monitor sires environment for optimum mating performance
4. Join sires to female groups	4.1 Select dates for joining according to mating plan 4.2 Introduce sires to female groups to ensure good contact 4.3 Remove sires from female groups at scheduled time
5. Monitor mating activity	5.1 Observe livestock mating, complete mating records and take remedial action if required 5.2 Observe distribution of sires within each female group

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about livestock feeding, care and mating activities
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare mating records
Oral communication	<ul style="list-style-type: none"> Use clear language with veterinarian to seek advice

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK343 Prepare for and implement natural mating of livestock	AHCLSK315 Prepare for and implement natural mating of livestock	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK343 Prepare for and implement natural mating of livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared for and implemented natural mating of livestock on at least one occasion and has:

- prepared joining paddocks
- identified risks and hazards and applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- prepared female livestock and sires for joining
- appraised breeding soundness in animals
- estimated live weights and condition scores
- ensured females are above minimum body weights to exhibit oestrus
- applied workplace animal welfare practices
- used sufficient males for the number of females to be mated in the group
- used back up sires where single sire mating is practised
- managed female livestock and sires during joining
- monitored joining activity
- maintained mating records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for preparing for and implementing natural mating of livestock, including appropriate use of personal protective equipment (PPE)
- environment and biosecurity legislation and regulations and workplace practices relevant to preparing for and implementing natural mating of livestock

- principles and practices for preparing for and implementing natural mating of livestock, including:
 - mating behaviour of sires and female livestock
 - optimum live weights and condition for mating
 - physical abnormalities and mating problems in males and females
 - environmental influences on joining
 - animal welfare legislation, codes of practice and procedures relevant to preparing for and implement natural mating of livestock.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to preparing for and implementing natural mating of livestock
 - female livestock and sires
 - materials, tools and equipment applicable to preparing for and implementing natural mating of livestock
 - PPE applicable to preparing for and implementing natural mating of livestock
- specifications:
 - workplace requirements applicable to health and safety in the workplace for preparing for and implementing natural mating of livestock
 - environment and biosecurity legislation and regulations and workplace practices applicable to preparing for and implementing natural mating of livestock
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to preparing for and implementing natural mating of livestock
- relationships:
 - veterinarian
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK411 Supervise natural mating of livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to supervise the natural mating of livestock.

This unit applies to livestock producers and those with supervisory responsibilities within pastoral production enterprises.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare animals for breeding	1.1 Access and confirm requirements of enterprise breeding program and relevant animal data 1.2 Identify work health and safety hazards, assess risks, and implement, monitor and review risk controls in line with enterprise policies 1.3 Identify and prepare joining areas using a range of selection factors 1.4 Handle animals safely and humanely to minimise stress and discomfort and in line with industry and enterprise animal welfare requirements 1.5 Draft animals according to mating plan and in appropriate ratios to encourage optimum mating 1.6 Determine and meet sire requirements in advance of mating 1.7 Prepare and examine animals for mating
2. Implement breeding program and monitor mating	2.1 Access veterinary advice according to animal's needs, enterprise requirements and industry practice 2.2 Identify and schedule dates and timing of breeding 2.3 Carry out physical examination of animals to evaluate health and welfare status of animals 2.4 Observe behaviour of animals during joining to identify necessity of intervention and assistance 2.5 Provide assistance as required
3. Complete breeding program	3.1 Remove sires from herd, mob or flock where required 3.2 Monitor mating activity to ensure successful joinings have occurred, to identify problems and to effect remedial action as required 3.3 Arrange for pregnancy testing to determine the effectiveness of joining 3.4 Record and document data to develop history of mating performance and outcomes 3.5 Research industry information of emerging and prevailing practices and compare with enterprise practice to recommend future improvements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK411A Supervise natural mating of livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK411 Supervise natural mating of livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards, assess risks and implement and monitor of safe operating procedures
- carry out physical examination of sires and females for health and breeding soundness
- prepare animals for joining
- monitor joining activity and returns to oestrus
- access, interpret and record data associated with mating program
- implement relevant animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- mating behaviour
- anatomy and physiology of the reproductive organs and reproductive process in animals
- required live weights and conditions for mating
- environmental influences and their effects on joining
- ovulation stimulation and synchronisation
- enterprise's breeding programs and selection criteria (EBV & ASBV)
- pregnancy testing/ scanning procedures
- animal health and abnormalities
- relevant State/Territory legislation, regulations and Codes of Practice with regard to work health and safety and animal welfare
- enterprise and industry policies with regard to recording and reporting requirements
- identification of veterinary and non-veterinary procedures

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK416 Identify and select animals for breeding

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to identify and select animals for breeding.

This unit applies to supervisors and managers on livestock farms.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Identify breeding selection criteria	1.1 Reference enterprise production records and reaffirm enterprise production goals in the breeding program 1.2 Source the heritability of the desired performance characteristics and identify the potential for genetic improvement 1.3 Determine criteria for selection and record them in the production plan
2. Select animals for breeding	2.1 Assess accurately animals against selection criteria 2.2 Determine and organise culling and replacement practices to improve the performance of the enterprise breeding program 2.3 Check and monitor selected livestock to ensure maintenance of condition and welfare status in accordance with breeding program requirements 2.4 Conduct or organise tests using recognised industry methods and evaluate within appropriate breeding program parameters

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK416A Identify and select animals for breeding

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK416 Identify and select animals for breeding

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop selection criteria for a breeding program
- select animals that have defects in conformation and /or productivity
- select animals that display characteristics associated with desirable genetic traits
- select animals according to a breeding program's selection criteria
- assess and record performance information

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles of genetic selection for multi traits
- structural abnormalities and their potential impact on production
- correlated traits
- market requirements and related physical and measurable traits
- enterprise animal selection criteria
- strategies for animal selection -including individual traits, measured performance, Estimated Breeding Value (EBVs & ASBVs), and indexes
- use of breeding value percentile tables

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK420 Provide advice on livestock products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify customer needs and provide advice on livestock products.

The unit applies to individuals who apply specialist skills and knowledge to providing advice on livestock products, including industry equipment, animal handling systems and stock feeds. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, animal welfare legislation, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish customer needs	1.1 Use interpersonal skills to engage customer and identify needs 1.2 Handle customer enquiries courteously and promptly according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures and legislative requirements 1.3 Match available products to customer needs and ecological considerations
2. Research and provide product advice	2.1 Research and update knowledge and understanding of livestock products and related products from authoritative sources 2.2 Research local workplace and district requirements for livestock and related products 2.3 Provide advice to customer in a timely and professional manner according to workplace procedures and legislative requirements 2.4 Exhibit or demonstrate products safely to customer according to workplace procedures, workplace health and safety requirements and legislative requirements 2.5 Address customer concerns and questions and suggest alternative or additional products to meet requirements for recommended products

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about livestock and related product range, and legislative requirements
Oral communication	<ul style="list-style-type: none"> Use clear language with customers to gather information and match products to customer needs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK420 Provide advice on livestock products	AHCMER405 Provide advice on livestock products	Unit code and sector changed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK420 Provide advice on livestock products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has provided advice on livestock products and related products on at least three occasions, and has:

- engaged with and advised customer on the range of livestock products available for the customer's purpose, application and environment
- complied with relevant legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- represented the workplace in a professional manner when dealing with customers
- applied workplace procedures for providing advice on livestock products and related products
- complied with animal welfare legislation and relevant components of state or territory Acts relating to livestock products
- advised customers on risks to worker safety or animal welfare from use of the product
- applied workplace health and safety, sustainability and biosecurity procedures for the safe handling of livestock products.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- livestock product requirements of local or specific customers
- legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- livestock products, including:
 - industry equipment
 - animal handling systems
 - stock feeds

- animal health products
- workplace procedures for providing advice on livestock products and related products
- animal welfare legislation and relevant components of state or territory Acts relating to livestock products
- workplace health and safety, sustainability and biosecurity procedures for the safe handling of livestock products.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - livestock products, including industry equipment, animal handling systems and stock feeds
- specifications:
 - legislative requirements relevant to sales environments, including fair trading, trade practices and sale of goods legislation and public liability
 - workplace procedures relevant to providing advice on livestock products and related products
 - components of state or territory Acts relevant to livestock products
 - animal welfare legislation and relevant components of state or territory Acts relating to livestock products
 - workplace health and safety, sustainability and biosecurity procedures for the safe handling of livestock products
- relationships:
 - customers.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK421 Supervise natural mating of livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, implement and supervise the natural mating of livestock.

The unit applies to individuals who apply specialist skills and knowledge to supervise natural mating of livestock. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare animals for	1.1 Access and confirm workplace breeding program requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
breeding	and relevant animal data 1.2 Determine sire fertility status prior to joining where applicable 1.3 Identify hazards and assess risks in the workplace, and implement control measures to manage risks while working with livestock according to workplace health and safety procedures 1.4 Identify and prepare joining areas using a range of selection factors 1.5 Handle animals safely and humanely to minimise stress and discomfort according to industry and workplace animal welfare practices 1.6 Draft animals according to mating plan and in appropriate ratios to encourage optimum mating 1.7 Determine and meet sire requirements in advance of mating 1.8 Prepare and examine animals for mating
2. Implement breeding program and monitor mating	2.1 Access veterinary advice according to animal needs, workplace requirements and industry practice 2.2 Identify and schedule dates and timing of breeding 2.3 Carry out physical examination of animals to evaluate health and welfare status of animals 2.4 Observe behaviour of animals during joining to identify necessity of intervention and assistance 2.5 Provide assistance as required
3. Complete breeding program	3.1 Remove sires from herd, mob or flock where required 3.2 Arrange for pregnancy testing to determine the effectiveness of joining 3.3 Record and document data to develop history of mating performance and outcomes 3.4 Research industry information of emerging and prevailing practices and compare with workplace practice to recommend future improvements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about livestock care and mating activities and research emerging and prevailing practices
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare mating record data and documents
Oral communication	<ul style="list-style-type: none"> Use clear language with veterinarian to seek advice

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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK421 Supervise natural mating of livestock	AHCLSK411 Supervise natural mating of livestock	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK421 Supervise natural mating of livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supervised natural mating of livestock to successful pregnancy and has:

- prepared animals for joining
- accessed, interpreted and recorded data associated with mating program
- monitored livestock for breeding soundness and fertility
- checked animal fertility
- implemented relevant workplace health and safety and environmental and biosecurity legislation, regulations, and workplace procedures
- implemented relevant animal welfare policies and practices
- monitored joining activity and animal cycles.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for supervising natural mating of livestock
- environment and biosecurity legislation and regulations and workplace practices relevant to supervising natural mating of livestock
- principles and practices for supervising natural mating of livestock, including:
 - mating behaviour
 - anatomy and physiology of the reproductive organs and reproductive process in animals
 - required live weights and conditions for mating
 - environmental influences and their effects on joining
 - ovulation stimulation and synchronisation relevant to animal type

- workplace breeding programs and selection criteria, including relevant breeding values
- pregnancy testing and scanning procedures
- animal health and abnormalities
- animal welfare industry standards, legislation, codes of practice and procedures relevant to supervising natural mating of livestock
- workplace and industry policies regarding mating recording and reporting requirements
- identification of veterinary and non-veterinary procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to supervising natural mating of livestock
 - livestock sires and females
 - materials, tools and equipment applicable to supervising natural mating of livestock
- specifications:
 - workplace requirements applicable to health and safety in the workplace for supervising natural mating of livestock
 - environment and biosecurity legislation and regulations and workplace practices applicable to supervising natural mating of livestock
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to supervising natural mating of livestock
- relationships:
 - veterinarian
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK422 Identify and select animals for breeding

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to identify and select animals for breeding.

The unit applies to individuals who apply specialist skills and knowledge to identify and select animals for breeding. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify breeding selection criteria	1.1 Access workplace production records and document production goals in breeding program 1.2 Source the desired performance characteristics and the potential

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	for genetic improvement 1.3 Determine and record selection criteria in production plan
2. Select animals for breeding	2.1 Assess animals against selection criteria 2.2 Determine and organise culling and replacement practices to improve performance of workplace breeding program 2.3 Check and monitor selected livestock to ensure maintenance of condition and welfare status according to breeding program requirements 2.4 Evaluate animals according to breeding program parameters 2.5 Assess and record performance of breeding program

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about production records and goals for breeding program
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare breeding program documents

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK422 Identify and select animals for breeding	AHCLSK416 Identify and select animals for breeding	Minor changes to application Minor changes to performance criteria	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK422 Identify and select animals for breeding

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has identified and selected animals for breeding on at least one occasion and has:

- documented a breeding program
- developed selection criteria for a breeding program
- identified animals that have defects in conformation or inadequate productivity
- selected animals that display characteristics associated with desirable genetic traits
- selected animals according to breeding program selection criteria
- assessed and recorded performance information.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for identifying and selecting animals for breeding, including:
 - genetic selection for targeted multi traits
 - structural abnormalities and their potential impact on production
 - market requirements and related physical and measurable traits
 - workplace animal selection criteria
 - strategies for animal selection, including individual traits, measured performance, relevant breeding values, and indexes
 - use of breeding value percentile tables.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to identifying and selecting animals for breeding
- specifications:
 - workplace production records and production goals relevant to identifying and selecting animals for breeding
 - industry standards, codes of practice and procedures for identifying and selecting animals for breeding
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK503 Develop and implement a breeding strategy

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to assess breeding requirements, select livestock for breeding, and monitor and evaluate the breeding program.

The unit applies to managers of livestock properties who are responsible for breeding programs and use of resources appropriate to meet property breeding aims. They take responsibility and exercise autonomy in undertaking complex work analysing, designing and communicating solutions to sometimes complex problems.

No occupational licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan breeding program	<p>1.1 Assess and clarify breeding requirements to meet property or organisational aims</p> <p>1.2 Identify and arrange resources to support breeding requirements</p> <p>1.3 Select breeding options to optimise results and consistency</p> <p>1.4 Undertake economic assessments to establish the feasibility of the breeding objectives</p> <p>1.5 Formulate breeding program to meet organisation objectives, and ensure sufficient flexibility to accommodate contingencies</p>
2. Select livestock for breeding	<p>2.1 Determine selection criteria for the visual and objective methods of selecting livestock based on heritability and economic returns for the property</p> <p>2.2 Establish culling and replacement practices to maintain or improve appropriate herd size, animal ratios and grade of livestock</p> <p>2.3 Assess genetic gain potential to determine and justify herd or flock structure</p> <p>2.4 Source genetic material to optimise genetic gain within the herd or flock from suitable sources</p> <p>2.5 Check and monitor selected livestock to ensure condition and welfare status meets breeding program requirements</p> <p>2.6 Carry out measurements of production and genetic characteristics, and evaluate results within appropriate breeding program requirements</p>
3. Monitor breeding program	<p>3.1 Supervise implementation of the breeding program for efficiency and effectiveness</p> <p>3.2 Prioritise and implement changes necessary to achieve breeding aims according to breeding program requirements</p> <p>3.3 Examine and control allocated resources within organisation budgetary constraints</p> <p>3.4 Maintain safe workplace and environmentally responsible practices in line with industry and organisation work health and safety and environment sustainability requirements</p> <p>3.5 Observe and comply with relevant legislative requirements associated with livestock production, such as animal welfare and biosecurity requirements</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Evaluate breeding program	4.1 Review breeding program processes and outcomes against organisation objectives 4.2 Assess performance of facilities, resources and equipment for effectiveness and efficiency 4.3 Assess effectiveness of selection criteria for contribution to achievement of breeding aims and organisation profitability 4.4 Document relevant information for continual assessment to inform future practice

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse documentation from a variety of sources to identify specific criteria, and consolidate information to determine requirements for breeding program and livestock production
Writing	<ul style="list-style-type: none"> Consolidate and logically structure relevant information to produce clear and concise documentation relevant to purpose and audience
Numeracy	<ul style="list-style-type: none"> Use mathematical concepts to calculate, compare and estimate numerical and financial data required for planning and forecasting livestock production and breeding activities
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility to ensure organisational policies, procedures and regulatory requirements relevant to livestock breeding program are being met
Interact with others	<ul style="list-style-type: none"> Select and uses appropriate conventions and protocols when communicating with others in a range of work contexts
Get the work done	<ul style="list-style-type: none"> Monitor progress of plans and schedules, and review and change to meet new demands and priorities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK503 Develop and implement a breeding strategy Release 2	AHCLSK503 Develop and implement a breeding strategy Release 1	Minor changes to clarify intent of element 1 Safety requirements and foundation skills descriptions added	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK503 Develop and implement a breeding strategy

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has developed and implemented a minimum of one breeding strategy for an operation or property, including:

- identifying genetic information for existing and potential livestock through breed data
- using industry programs to benchmark and identify sources of genetic material
- developing a breeding objective
- implementing selection strategies for livestock
- implementing animal welfare strategies to handle livestock safely and humanely
- monitoring progress in a breeding program and undertaking reviews
- evaluating breeding program
- documenting and reviewing data derived from the breeding strategy
- maintaining a safe and hazard-free workplace environment
- monitoring and minimising impacts to the environment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- difference between genotype and phenotype, the heritability of genetic traits and the basic genetic theory related to genetic correlation of traits
- relevance of generation interval in relation to commercial improvement
- relevance of estimated breeding values in the development of a multi-trait selection strategy
- economic impact of production characteristics

- features of and measurement of production and genetic characteristics used in breeding programs
- relevant work health and safety and biosecurity requirements, and animal welfare and environment sustainability practices
- key requirements of regulations and codes of practice relevant to developing and implementing a breeding strategy, including:
 - work health and safety
 - animal welfare
 - biosecurity
 - sustainability practices.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- specifications:
 - work instructions and workplace procedures relevant to developing and implementing a breeding strategy
 - organisational documentation relating to breeding information and financial arrangements required to develop a breeding strategy.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK505 Develop production plans for livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop production plans for livestock.

This unit applies to managers of intensive or extensive livestock production systems.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They analyse design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Determine feasibility of livestock enterprise	1.1 Assess farm environment parameters for their suitability for a range of livestock species 1.2 Assess potential livestock enterprises for their market potential and gross margin returns 1.3 Identify resource requirements 1.4 Identify production risks and strategies to address them 1.5 Select livestock species and breeds/ genetics to suit the production system and the market
2. Identify and define determinants of livestock profitability	2.1 Define production objectives 2.2 Establish strategies for herd/flock sourcing and improvement and determine breeding program as appropriate 2.3 Determine feed requirements for each age/sex/category of herds/flocks 2.4 Determine feeding strategy including grazing management, where appropriate, and develop feeding programs for each livestock category 2.5 Develop health management program to manage/prevent disease in each herd/flock 2.6 Establish environmental controls as required
3. Establish livestock production targets and prepare production plan	3.1 Define performance indicators for the livestock enterprise 3.2 Develop product quality specifications and set production targets 3.3 Establish livestock cash flow budget 3.4 Prepare production plan incorporating a calendar of operations for the enterprise production cycle
4. Review production plans to determine input and service requirement	4.1 Plan logistical arrangements related to harvesting, transportation and marketing and other key operations for the production cycle 4.2 Establish schedules for the purchase of inputs and services used in production 4.3 Establish appropriate physical and financial record keeping system to provide data for the analysis of livestock production performance 4.4 Review production plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK505A Develop production plans for livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK505 Develop production plans for livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine feasibility of livestock enterprise
- identify and define determinants of livestock profitability
- establish livestock production targets
- prepare production plans
- review production plans to determine input and service requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- livestock husbandry, production and management practices
- livestock selection, health and grazing strategies
- financial analysis techniques
- livestock marketing
- sustainable land use principles and practices applicable in the region
- environmental controls and codes of practice applicable to the enterprise
- whole farm planning processes

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK508 Plan, monitor and evaluate strategies to improve livestock through genetics

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to improve livestock through genetics, including determining breeding goals, assessing current performance, selecting livestock for genetic improvement, implementing and monitoring breeding program and evaluating the program against breeding goals.

The unit applies to individuals who apply specialist skills and knowledge to planning, monitoring and evaluating strategies to improve livestock through genetics, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan breeding goals	<p>1.1 Select product specification suited to breeding enterprise</p> <p>1.2 Determine the breeding goals and strategy to meet market specifications</p> <p>1.3 Analyse traits affecting profit in a livestock breeding enterprise to optimise production through an improved breeding program</p> <p>1.4 Assess workplace environment and select a breed and breeding program to match the environment</p>
2. Assess current performance of the breeding program	<p>2.1 Collect and analyse data on traits currently used in breeding program</p> <p>2.2 Collect and analyse data on current market performance, using customer feedback</p>
3. Assess and select livestock for genetic improvement	<p>3.1 Assess the current breeding livestock for traits required for production and marketing</p> <p>3.2 Analyse existing livestock subjective and objective information and select replacements from existing livestock</p> <p>3.3 Evaluate the costs and benefits of natural mating, Artificial Insemination (AI) and Embryo Transfer (ET) to achieve genetic improvement</p> <p>3.4 Check if livestock genetic improvement is required, and if so, select and purchase livestock</p>
4. Carry out a breeding program	<p>4.1 Develop and monitor workplace health and safety procedures to be followed while implementing animal breeding program</p> <p>4.2 Conduct program according to relevant State or Territory legislative requirements and environmental, biosecurity and animal welfare requirements</p> <p>4.3 Assess and improve facilities on the property for drafting and pregnancy testing, and insemination where applicable</p> <p>4.4 Apply practices to improve joining and conception rates of a breeding program</p> <p>4.5 Assist genetic selection by using equipment to aid in data collection and analysis</p> <p>4.6 Collect feedback to improve production and market performance</p>
5. Evaluate the breeding program against the breeding goals	<p>5.1 Assess compliance of the livestock to market specifications using information including feedback sheets and test results</p> <p>5.2 Assess the livestock produced against breeding goals</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about livestock improvement strategies
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare workplace health and safety procedures
Numeracy	<ul style="list-style-type: none"> Use mathematical concepts to compare, analyse and evaluate numerical and financial data required for planning and evaluating livestock improvements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK508 Plan, monitor and evaluate strategies to improve livestock through genetics	AHCLSK507 Plan, monitor and evaluate strategies to improve livestock through genetics	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK508 Plan, monitor and evaluate strategies to improve livestock through genetics

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned, monitored and evaluated strategies to improve livestock through genetics on at least one occasion and has:

- selected suitable market specifications for the livestock enterprise
- used relevant breeding values
- analysed profit for the breeding program
- developed selection criteria for a breeding program
- selected livestock for a breeding program on phenotype and genotype
- arranged Artificial Insemination (AI) and Embryo Transfer (ET) programs where applicable
- developed workplace health and safety procedures relevant to the breeding program
- implemented the breeding program
- applied relevant environment and biosecurity legislation, regulations and workplace procedures
- applied relevant workplace animal welfare legislation, codes of practice and procedures
- assessed farm facilities to carry out a breeding program
- kept breeding and production records
- interpreted feedback information.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for planning, monitoring and evaluating strategies to improve livestock through genetics
- environment and biosecurity legislation and regulations and workplace practices relevant to planning, monitoring and evaluating strategies to improve livestock through genetics

- principles and practices for planning, monitoring and evaluating strategies to improve livestock through genetics, including:
 - heritability estimates for the selected characteristics
 - recording and understanding breed pedigrees where applicable
 - dominant genetic traits and genetic correlations
 - accuracy of the genetic potential of the selected breeding trait for the program
 - genetic defects
 - value of hybrid vigour and line breeding in a breeding program
 - impact of generation interval on genetic gain
 - selection criteria
 - market specifications targeted by the breeding program
 - long term breeding aims
 - pregnancy testing procedure
 - sources for genetic information, up to date program design and implementation procedures
 - animal welfare legislation codes of practice and procedures relevant to planning, monitoring and evaluating strategies to improve livestock through genetics

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - workplace requirements applicable to health and safety in the workplace for planning, monitoring and evaluating strategies to improve livestock through genetics
 - environment and biosecurity legislation and regulations and workplace practices applicable to planning, monitoring and evaluating strategies to improve livestock through genetics
 - suitable equipment applicable to work being undertaken on hand for assessment
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to planning, monitoring and evaluating strategies to improve livestock through genetics
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK509 Develop and implement a breeding strategy

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to assess breeding requirements, select livestock for breeding, and monitor and evaluate the breeding program.

The unit applies to individuals who apply specialist skills and knowledge to develop and implement a breeding strategy, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan breeding program	1.1 Assess and clarify breeding requirements to meet workplace production goals

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Identify and arrange resources to support breeding requirements 1.3 Select breeding options to optimise results and consistency 1.4 Undertake economic assessment to establish the feasibility of the breeding objectives 1.5 Formulate breeding program to meet workplace objectives, and ensure sufficient flexibility to accommodate contingencies
2. Select livestock for breeding	2.1 Determine selection criteria for the visual and objective methods of selecting livestock based on heritability and economic returns for the workplace 2.2 Establish culling and replacement practices to maintain or improve herd or flock size, animal ratios and grade of livestock 2.3 Assess genetic gain potential to determine and justify herd or flock structure 2.4 Source suitable genetic material to optimise genetic gain within the herd or flock 2.5 Check and monitor selected livestock to ensure condition and welfare status meets breeding program requirements 2.6 Carry out measurements of production and genetic characteristics, and evaluate results within appropriate breeding program requirements
3. Monitor breeding program	3.1 Supervise implementation of the breeding program for efficiency and effectiveness 3.2 Prioritise and implement changes necessary to achieve breeding aims according to breeding program requirements 3.3 Examine and control allocated resources within workplace budgetary constraints 3.4 Maintain safe workplace and environmentally responsible practices according to workplace health and safety procedures and environmental and biosecurity legislation, regulations and workplace procedures 3.5 Observe and comply with animal welfare industry standards, legislation and codes of practice and procedures relevant to livestock production
4. Evaluate breeding program	4.1 Review breeding program processes and outcomes against organisation objectives 4.2 Assess performance of facilities, resources and equipment for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>effectiveness and efficiency</p> <p>4.3 Assess effectiveness of selection criteria for contribution to achievement of breeding aims and workplace profitability</p> <p>4.4 Document relevant information for continual assessment and to inform future practice</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse documentation from a range of sources to identify specific criteria, and consolidate information to determine requirements for breeding program and livestock production
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare breeding strategy documentation
Numeracy	<ul style="list-style-type: none"> Use mathematical concepts to calculate, compare and estimate numerical and financial data required for planning and forecasting livestock production and breeding activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK509 Develop and implement a breeding strategy	AHCLSK503 Develop and implement a breeding strategy	<p>Minor changes to application</p> <p>minor changes to performance criteria</p> <p>foundation skills updated</p> <p>assessment requirements updated</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK509 Develop and implement a breeding strategy

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed and implemented a breeding strategy on at least one occasion and has:

- used industry programs to benchmark and identify sources of genetic material
- developed breeding objectives
- implemented selection strategies for livestock
- identified genetic information for existing and potential livestock through breed data
- monitored progress in a breeding program and undertaken reviews
- applied relevant workplace health and safety and environmental and biosecurity legislation regulations and workplace procedures
- implemented animal welfare strategies to handle livestock safely and humanely
- applied animal welfare industry standards, legislation and codes of practice and procedures relevant to livestock production
- evaluated breeding program
- documented and reviewed data derived from the breeding strategy.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for developing and implementing a breeding strategy
- environment and biosecurity legislation and regulations and workplace practices relevant to developing and implementing a breeding strategy
- animal welfare industry standards, legislation and codes of practice and procedures relevant to livestock production
- principles and practices for developing and implementing a breeding strategy, including:

- difference between genotype and phenotype, the heritability of genetic traits and the basic genetic theory related to genetic correlation of traits
- relevance of generation interval in relation to commercial improvement
- relevance of estimated breeding values in the development of a multi-trait selection strategy
- economic impact of production characteristics
- features and measurement of production and genetic characteristics used in breeding programs.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to developing and implementing a breeding strategy
- specifications:
 - workplace documentation relating to breeding information and financial arrangements required to develop a breeding strategy
 - workplace requirements applicable to health and safety in the workplace for developing and implementing a breeding strategy
 - environment and biosecurity legislation and regulations and workplace practices applicable to developing and implementing a breeding strategy
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to livestock production.
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK510 Develop production plans for livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to establish production targets and develop and review production plans for livestock.

The unit applies to individuals who apply specialist skills and knowledge to develop production plans for livestock, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine feasibility of livestock enterprise	1.1 Assess environment parameters and available infrastructure and their suitability for selected livestock species 1.2 Assess the suitability of livestock enterprise for their market

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>potential and gross margin returns</p> <p>1.3 Identify capital and human resource requirements</p> <p>1.4 Identify production risks and strategies to address them</p> <p>1.5 Select livestock species, breeds and genetics to suit the production system, environment and market</p>
2. Identify and define determinants of livestock profitability	<p>2.1 Define production goals</p> <p>2.2 Establish strategies for livestock sourcing and improvement to determine breeding program</p> <p>2.3 Determine nutritional requirements for each age, sex and category of livestock</p> <p>2.4 Determine feeding strategy including grazing management, where appropriate, and develop feeding programs for each livestock category</p> <p>2.5 Develop health management program to manage and prevent disease in each livestock class or category</p>
3. Establish livestock production targets and prepare production plan	<p>3.1 Establish environmental controls as required</p> <p>3.2 Define performance indicators for livestock enterprise</p> <p>3.3 Develop product quality specifications and set production targets</p> <p>3.4 Establish livestock production plan budget</p> <p>3.5 Prepare production plan incorporating a calendar of operations for workplace production cycle</p>
4. Implement and review production plan	<p>4.1 Establish schedules for the purchase of inputs and services used in production</p> <p>4.2 Plan logistical arrangements related to livestock production, transport and marketing and other key operations of production cycle</p> <p>4.3 Maintain and monitor physical and financial record keeping system to provide data for analysis of livestock production performance</p> <p>4.4 Review production plans to determine input and service requirement</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare livestock production plan documentation
Numeracy	<ul style="list-style-type: none"> Use mathematical concepts to calculate, compare and estimate numerical and financial data required for planning and forecasting livestock production targets and budget

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK510 Develop production plans for livestock	AHCLSK505 Develop production plans for livestock	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK510 Develop production plans for livestock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed production plans for livestock on at least one occasion and has:

- determined feasibility of livestock enterprise
- identified and defined determinants of livestock profitability
- established livestock production targets
- established livestock production plan budget
- prepared production plans
- reviewed production plans to determine input and service requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environment and biosecurity legislation and regulations and workplace practices relevant to developing production plans for livestock
- workplace requirements applicable to health and safety in the workplace for developing production plans for livestock
- principles and practices for developing production plans for livestock, including:
 - livestock husbandry, production and management practices
 - livestock selection, health and grazing strategies where applicable
 - financial analysis techniques
 - livestock and livestock product marketing
 - sustainable land use principles and practices applicable to the region
 - whole farm planning processes.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - workplace requirements applicable to health and safety in the workplace for developing production plans for livestock
 - environment and biosecurity legislation and regulations and workplace practices applicable to developing production plans for livestock
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMAR301 Conduct a subtidal marine monitoring operation from a vessel or platform

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to conduct a subtidal marine monitoring operation from a vessel or platform associated with scientific research, baseline monitoring or inspection and assessment programs for marine areas. It does not involve diving for scientific purposes.

The unit applies to individuals who work in a marine conservation and management role under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Marine (MAR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan subtidal marine monitoring operations	1.1 Identify marine monitoring objectives from monitoring program, and confirm with supervisor and experts 1.2 Determine equipment and personnel required for marine

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	monitoring operations 1.3 Determine timing of monitoring program in consideration of environmental and logistical factors 1.4 Prepare a plan and timeline for a marine monitoring program
2. Prepare for subtidal marine monitoring operations	2.1 Confirm permission for marine monitoring program has been approved, and notify stakeholders 2.2 Assemble required marine monitoring, logistical and support equipment and materials 2.3 Check equipment for compliance with biosecurity requirements 2.4 Check operation of underwater equipment and integrity of waterproof seals 2.5 Lubricate, repair or replace components according to manufacturer instructions 2.6 Prepare equipment and materials for transport 2.7 Identify hazards, assess risks and implement controls according to workplace health and safety procedures 2.8 Review operating and emergency procedures for marine monitoring program, and brief personnel
3. Conduct subtidal marine monitoring operation	3.1 Transport equipment and materials to monitoring location 3.2 Prepare subtidal marine monitoring equipment for deployment according to operator instructions and biosecurity procedures 3.3 Deploy equipment and implement monitoring procedure 3.4 Record marine monitoring data 3.5 Monitor the program and make and record adjustments according to program requirements
4. Conduct post-monitoring operations	4.1 Secure and download recorded data 4.2 Clean, service and maintain marine monitoring equipment according to manufacturer instructions and biosecurity requirements 4.3 Organise repair or replacement of faulty equipment 4.4 Store marine monitoring equipment in line with manufacturer's instructions 4.5 Record incidents, and lead a debrief after marine monitoring operations

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately record monitoring information using industry specific language and workplace format and protocols
Oral communication	<ul style="list-style-type: none"> Interact supervisor using collaborative and inclusive techniques, including active listening and questioning and reading of non-verbal signals, to convey and clarify monitoring instructions and actions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMAR301 Conduct a subtidal marine monitoring operation from a vessel or platform	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC MAR301 Conduct a subtidal marine monitoring operation from a vessel or platform

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted at least two subtidal monitoring operations for benthic and fish communities using different techniques selected from the following:

- drop cameras
- baited remote underwater video stations (BRUVS)
- remotely piloted system.

There must also be evidence that the individual has:

- planned a subtidal marine monitoring operation from a vessel or platform for both benthic and fish communities
- obtained and assembled equipment and materials for subtidal marine monitoring operations
- checked the operation of underwater equipment, with particular attention to:
 - tethers, attachments, mounts and retrieval systems
 - seals and O-rings
 - soft pads
 - electrical connections/power supply
 - lenses and protective covers
- lubricated, cleaned, maintained and repaired underwater equipment
- briefed and de-briefed personnel on marine monitoring activity
- transported equipment and materials for subtidal marine monitoring to monitoring site
- stored equipment and consumables for subtidal marine monitoring
- implemented biosecurity measures
- secured and stored recorded data.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- interpreting forecasts for marine weather, tides and sea conditions
- basic physics of the underwater environment and the relationships between equipment/monitoring techniques and depth, pressure, flow and light penetration
- computer hardware and software systems that support marine monitoring work
- marine monitoring equipment, including underwater equipment and housings
- risks associated with monitoring equipment, including:
 - condensation
 - pressure
 - water flow
 - retrieval complications
 - maintenance – including age, contamination and corrosion
- planning subtidal marine operations
- drivers of local and regional ocean circulation and conditions, including:
 - ocean current systems
 - weather patterns
 - tides
 - seasonal changes, including freshwater inflows
 - extraordinary storms and temperature events
- maritime regulations and approvals for commercial survey work on vessels
- workplace health and safety assessment for conducting subtidal marine monitoring
- biosecurity measures for subtidal marine monitoring techniques and equipment
- operating and emergency procedures for subtidal marine monitoring work.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field and according to the conditions specified in the Performance Evidence
- resources, equipment and materials:
 - live marine life in situ
 - specific tools and equipment required for a monitoring program
 - specific items of personal protective equipment
 - materials and consumables
- specifications:
 - specific workplace procedures and processes for conducting monitoring programs

- manufacturer operating instructions for monitoring equipment
- workplace instructions for monitoring program
- relationships:
 - experts
 - supervisor
- timeframes:
 - according to timeframes specified in monitoring program.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC MAR302 Conduct intertidal marine monitoring

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to conduct an intertidal marine monitoring operation associated with scientific research, baseline monitoring or inspection and assessment programs for marine intertidal areas. It does not include diving for scientific purposes.

The unit applies to individuals who work in a marine conservation and management role under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Marine (MAR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for intertidal marine monitoring	1.1 Confirm intertidal monitoring methodologies and work plan with supervisor 1.2 Select equipment and materials required for intertidal marine monitoring

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify sources of expertise and advice 1.4 Identify hazards, assess risk and implement controls according to workplace health and safety procedures 1.5 Confirm location and timing for fieldwork 1.6 Identify and implement biosecurity procedures for equipment and material used for fieldwork
2. Monitor marine intertidal communities	2.1 Identify species using industry approved identification resources 2.2 Operate monitoring equipment according to workplace procedures and manufacturer instructions 2.3 Conduct fieldwork practices using minimal impact techniques according to industry ethical practices and biosecurity procedures 2.4 Record monitoring data according to workplace procedures and monitoring instructions
3. Complete intertidal marine monitoring, and update records	3.1 Complete workplace records and report outcomes of monitoring to supervisor 3.2 Check and file data and confirm identification with supervisor or other experts 3.3 Clean, maintain and store equipment used for intertidal marine monitoring according to workplace and biosecurity procedures 3.4 Dispose of waste materials according to workplace and environmental procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret guides and references to assist in the identification of marine species
Oral Communication	<ul style="list-style-type: none"> Interact using collaborative techniques, including active listening and questioning and reading of non-verbal signals, to clarify monitoring plan and methodologies

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMAR302 Conduct intertidal marine monitoring	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC MAR302 Conduct intertidal marine monitoring

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has demonstrated intertidal monitoring techniques that include at least two of the following ecological communities:

- mudflat
- intertidal seagrass
- intertidal reef
- mangrove beds
- salt marsh
- rocky shores.

There must also be evidence that the individual has:

- interpreted, confirmed and followed intertidal marine monitoring fieldwork requirements
- conducted a risk assessment
- selected, prepared and operated equipment and resources for intertidal marine monitoring
- identified marine species, and confirmed identification with supervisor or expert
- applied techniques to minimise impact and applied ethical practices during fieldwork
- recorded marine intertidal monitoring data according to workplace procedures and monitoring instructions
- cleaned, maintained and stored marine monitoring equipment
- implemented biosecurity measures and procedures
- checked and stored data
- updated operational and marine species records
- reported outcomes to supervisor
- disposed of waste materials according to environmental and workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- monitoring methodologies for marine intertidal fieldwork
- equipment and resources used for marine intertidal fieldwork, including:
 - cameras
 - tablets
 - identification resources
 - tape measures
 - quadrat frames
- operational parameters of intertidal areas that affect monitoring work, including:
 - tidal cycles and other inundation effects
 - seasonal variation
 - intertidal wildlife behaviour and life cycle
 - dangerous marine animals in the intertidal zone
- using and maintaining equipment in a saltwater environment
- workplace health and safety and risk assessment for tidal marine work
- impact of sediment mobility in the near shore environments on monitoring
- sources of expertise and advice for marine intertidal fieldwork
- minimising impact of monitoring techniques on the environment
- ethical practices for marine intertidal fieldwork
- biosecurity processes for marine intertidal fieldwork
- recording and storing collected data
- cleaning, maintenance and storage of equipment used for intertidal marine monitoring
- disposal of waste materials and impact on the environment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated under conditions specified in the Performance Evidence
- resources, equipment and materials:
 - fieldwork and monitoring equipment
 - specific items of personal protective equipment
- specifications:
 - workplace policies, procedures, processes, records for conducting fieldwork
 - manufacturer operating instructions for monitoring equipment
 - workplace instructions and work plan
 - codes of practice for ethical handling of marine life

- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC MAR303 Coordinate marine conservation activities on small vessels

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to coordinate marine activities involving small vessels of up to nine metres for conservation projects.

The unit applies to individuals who work in a marine conservation and management role under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Marine (MAR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for marine activities	1.1 Confirm objectives of marine activity with supervisor 1.2 Identify personnel and verify their certification, skills and experience for maritime activities 1.3 Identify vessel, equipment and material resource requirements and availability

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify operational constraints under marine regulations and workplace safety procedures</p> <p>1.5 Identify environmental constraints for marine activity</p> <p>1.6 Prepare a schedule of activities and time allocation in a marine operational plan, and present to supervisor for approval</p> <p>1.7 Identify and confirm operating procedures for vessel, equipment and planned operations</p> <p>1.8 Identify health, safety and environmental hazards, assess risks and implement controls according to workplace health, safety and environmental procedures</p>
2. Organise resources for marine work	<p>2.1 Procure and organise delivery of materials, equipment and machinery according to delegated level of authority</p> <p>2.2 Check materials, equipment and machinery comply with marine and transport regulations</p> <p>2.3 Organise an operational base for logistical and emergency support during the work</p> <p>2.4 Establish and implement a communication plan</p> <p>2.5 Notify search and rescue authorities of operational plan and key contacts</p> <p>2.6 Organise personnel and conduct a marine operations briefing and safety drill for vessel/s involved</p>
3. Coordinate vessel departure	<p>3.1 Conduct pre-departure checks and notifications</p> <p>3.2 Coordinate transport of vessel and equipment</p> <p>3.3 Coordinate loading, launching and/or departure of vessel</p> <p>3.4 Ensure compliance with operating procedures and workplace health and safety procedures</p>
4. Coordinate marine operation	<p>4.1 Direct crew and personnel for marine operation</p> <p>4.2 Monitor and document personnel, activities and compliance with marine operational plan</p> <p>4.3 Maintain communications throughout work according to workplace communications procedures</p> <p>4.4 Manage waste storage and disposal according to workplace and environmental procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.5 Record and notify supervisor of changes to operational plan 4.6 Identify contingency situations, report contingencies to supervisor and implement corrective actions according supervisor instructions 4.7 Coordinate landing, retrieval or mooring/docking of vessel 4.8 Coordinate unloading and vessel shutdown procedure
5. Finalise and report on marine activities	5.1 Finalise communication plan, notifications and operational arrangements for marine activity according to plan 5.2 Complete workplace records for marine operation and use of vessel 5.3 Clean and store vessel and equipment 5.4 Organise maintenance or replacement of faulty equipment 5.5 Complete incident reports 5.6 Report marine operation with outcomes and future recommendations according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately record and report marine operations using industry specific language and workplace format and protocols
Oral Communication	<ul style="list-style-type: none"> Interact with supervisor and crew using planned communications strategies and resources Use collaborative and inclusive techniques, including active listening and questioning and reading of non-verbal signals, to convey, clarify and report marine conservation activity

Unit Mapping Information

Code and title	Code and title	Comments	Equivalence status

current version	previous version		
AHCMAR303 Coordinate marine conservation activities on small vessels	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC MAR303 Coordinate marine conservation activities on small vessels

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has coordinated at least one marine conservation activity for a small vessel of no more than nine metres in length, and has:

- read, interpreted and completed documentation, including:
 - charts/maps
 - operating and emergency procedures
 - logs associated with vessel operation and marine activities
- interpreted marine regulations, identified operational constraints and planned for marine activities
- identified environmental constraints, including:
 - weather
 - sea conditions
 - tides
- identified and prepared vessels, equipment and materials for marine operations
- conducted a marine operations briefing and safety drill
- conducted vessel and safety checks
- coordinated vessel operations, including:
 - loading/unloading
 - launching/retrieving/mooring/docking
 - vessel shutdown
- monitored weather conditions while at sea
- operated two-way radio communications
- responded to contingency situations
- cleaned, maintained and stored vessel and equipment
- recorded marine activities
- performed a workplace health and safety risk assessment for marine operations

- managed waste storage and disposal for a marine operation according to workplace and environmental procedures, including:
 - human waste
 - general waste
 - recyclable waste.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- appropriate techniques and workplace procedures for launching, retrieving, mooring and docking vessels for conservation work
- workplace procedures and marine regulations that relate to marine conservation work
- vessel type, capability and performance for specified marine tasks
- personnel requirements and appropriate skills and experience
- marine weather, sea conditions and forecasting suited for marine conservation work
- logistical and technical requirements of marine conservation work
- the range of equipment used for marine conservation work
- trip planning
- communications and notification requirements specific to marine conservation work
- marine workplace health and safety, hazard identification and risk control measures
- communication equipment, operation and limitations
- cleaning and maintenance techniques for marine vessels and equipment
- storage arrangements for marine vessels and equipment
- marine operation emergency and contingency planning
- environmental waste storage and disposal methods for marine operations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a marine environment
- resources, equipment and materials:
 - vessel up to nine metres in length
 - specific tools and equipment for vessel operation and conservation activities
 - specific items of personal protective equipment for marine conservation work
- specifications:
 - workplace procedures and processes for marine conservation work and vessel operation
 - manufacturer operating instructions for vessel, equipment and machinery used in marine operations

-
- workplace instructions
 - relationships:
 - team member/s
 - supervisor/s.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMAR304 Identify and collect marine life

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify, collect, preserve and store small, macroscopic, marine life that is commonly encountered when undertaking marine monitoring activities, including marine macro-algae, invertebrates and fish.

The unit applies to individuals who work in a marine conservation and management role under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Marine (MAR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to identify and collect marine life	1.1 Select resources required for identifying collected marine life 1.2 Identify and select equipment and materials required for collection, transport, preservation and storage of marine life 1.3 Identify sources of expertise and advice

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Determine location/s and timing for collection and identification</p> <p>1.5 Identify and comply with licences and permits required for collecting marine wildlife</p> <p>1.6 Follow workplace procedure for identification, collection and storage of marine specimens</p> <p>1.7 Identify health, safety and environmental hazards, assess the risks and implement controls according to workplace procedures</p>
2. Identify, gather and preserve marine specimens	<p>2.1 Identify marine plants and animals using industry approved identification resources</p> <p>2.2 Record characteristics and identity of marine life according to workplace procedures</p> <p>2.3 Collect specimens for preservation, minimising environmental impact according to workplace procedures and ethical animal welfare practices</p> <p>2.4 Implement biosecurity procedures</p> <p>2.5 Transport small, neritic marine specimens according to workplace and ethical procedures</p> <p>2.6 Preserve small, neritic marine specimens according to workplace preservation procedures</p> <p>2.7 Confirm identification with supervisor or other expert</p>
3. Complete identification, store specimens and update records	<p>3.1 Update marine species records</p> <p>3.2 Store marine specimens for the short and/ or medium term, according to workplace procedures</p> <p>3.3 Clean and maintain equipment used for collection, transport, preservation and storage</p> <p>3.4 Dispose of waste materials according to workplace and environmental procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret instructions, licences and permits, and consolidate information to ensure understanding and compliance for marine activities
Writing	<ul style="list-style-type: none"> Record and update data accurately according to protocols for data collection

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMAR304 Identify and collect marine life	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC MAR304 Identify and collect marine life

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has collected, prepared, preserved and stored 10 marine life specimens, with representative samples from at least two of the following groups:

- marine algae
- marine invertebrates

There must be evidence that the individual has:

- fish identified and selected resources, equipment and materials required for identification, collection and storage of marine life
- identified sources of expertise and advice and followed workplace procedure for identification, collection and storage of marine specimens
- identified marine plants and animals using expertise, advice and workplace-provided resources
- used techniques for collecting and transporting marine life to minimise impact on the marine environment and specimens
- complied with animal ethical standards and biosecurity procedures
- handled preservation equipment and materials according to safety procedures
- applied preservation and storage techniques for small marine specimens according to workplace procedures
- cleaned, maintained and stored equipment and disposed of waste materials according to workplace procedures.
-

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- marine zonation and terminology, including:

- supratidal, intertidal and subtidal
- photic and aphotic
- littoral, benthic, neritic and pelagic
- major marine substrate types, including:
 - mud
 - sand
 - rock
 - coral
 - rubble
- identification resources for marine algae, invertebrates and fish, including computer software
- operational parameters of intertidal areas that affect monitoring work, including:
 - tidal cycles and other inundation effects
 - seasonal variation
 - intertidal wildlife behaviour and life cycle
 - dangerous marine animals in the intertidal zone
- equipment and materials required for collection and short-term to medium-term storage of small marine specimens
- simple techniques and processes for collection and short-term to medium-term storage of small marine specimens, including drying, freezing and ethanol
- minimal impact collection techniques for marine specimens
- ethical and animal welfare practices for collection of marine specimens
- biosecurity measures for collection and transport of marine specimens and collection/transport equipment
- permits and permissions required for collection for short-term to medium-term storage of small marine algae, invertebrates and fish
- sources of expertise and advice for identification of marine life
- workplace procedure for identification, collection and storage of marine specimens, and workplace biosecurity procedure
- workplace procedure and environmental procedures for disposal of waste materials
- workplace health and safety processes and procedures while collecting marine life.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field for the marine species specified in the Performance Evidence
- resources, equipment and materials:
 - live marine life in situ
 - tools and equipment for collecting specimens

- equipment and materials for preparing, preserving and storing marine specimens
- specific items of personal protective equipment required for safe collection
- specifications:
 - specific workplace procedures and processes for ethical collection, preparation and storage of marine specimens
 - manufacturer operating instructions for collection, preserving and storage equipment
 - safety data sheets for materials used in preserving specimens
 - workplace instructions
- relationships:
 - experts
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMAR305 Monitor ocean conditions and marine environmental quality

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to monitor ocean conditions using sensors, sampling and laboratory analysis, and to monitor biological markers in marine environments. It does not include diving for scientific purposes (see AHCLPW307 Perform restricted diving for scientific purposes).

The unit applies to individuals who work in a marine conservation and management role under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Marine (MAR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan marine water monitoring operations	1.1 Determine marine water and environment monitoring objectives and applicable operating procedures from monitoring plan 1.2 Determine sensors, sampling equipment, support equipment and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	materials required for monitoring operations 1.3 Identify personnel required for monitoring operations, and source of expert advice 1.4 Determine schedule for monitoring activities within operational constraints 1.5 Identify and resolve logistical issues for monitoring activity 1.6 Identify partner organisations and clarify requirements for transporting, processing and analysing samples 1.7 Prepare a plan and timeline for a marine water monitoring program
2. Prepare to monitor ocean conditions and marine environmental quality	2.1 Confirm permission for marine monitoring program has been approved and notify stakeholders 2.2 Assemble, check and test monitoring and support equipment prior to deployment 2.3 Maintain, repair or replace faulty equipment 2.4 Prepare equipment and materials for transport to sampling site 2.5 Identify and source consumables required for monitoring program 2.6 Identify hazards, assess risk and implement controls according to workplace health and safety procedures 2.7 Review operating and emergency procedures for the marine monitoring work plan, and brief personnel
3. Monitor ocean conditions and marine environmental quality	3.1 Transport equipment and consumables to monitoring location 3.2 Prepare marine water monitoring equipment for deployment according to workplace and biosecurity procedures 3.3 Deploy equipment and implement monitoring procedure 3.4 Record marine water monitoring data 3.5 Monitor program and implement and record adjustments according to program requirements
4. Conduct post-monitoring operations	4.1 Secure and download recorded data 4.2 Secure, label and store samples for transport 4.3 Clean, service and maintain marine water monitoring equipment according to workplace and biosecurity procedures 4.4 Organise repair or replacement of faulty equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.5 Store marine water monitoring equipment 4.6 Conduct a debrief session on performance of monitoring program 4.7 Maintain records and report activity and incidents according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately record monitoring data and information using industry specific language following workplace formatting
Numeracy	<ul style="list-style-type: none"> Use basic computations to determine scheduling and timing of ocean monitoring activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMAR305 Monitor ocean conditions and marine environmental quality	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC MAR305 Monitor ocean conditions and marine environmental quality

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, planned and implemented an ocean monitoring program for conditions and environmental quality using sensors, sampling and laboratory analysis according to workplace procedures.

There must also be evidence that the individual has:

- scheduled monitoring activity within operating constraints, including:
 - seasonal effects
 - prevailing weather conditions
 - tides and currents
 - human impact
- obtained and assembled equipment and consumables for monitoring ocean conditions and marine environmental quality
- assembled, checked and tested monitoring and support equipment
- conducted a risk assessment prior to monitoring activity
- monitored ocean water quality, including:
 - temperature
 - salinity
 - turbidity
 - contaminants
 - flow
- monitored biological indicators and markers in marine environments, which must include sediment quality and indicator species
- cleaned, maintained, repaired or replaced water monitoring equipment
- briefed and de-briefed personnel on monitoring ocean conditions and marine environmental quality

- transported equipment and consumables for monitoring ocean conditions and marine environmental quality
- stored equipment and consumables for monitoring ocean conditions and marine environmental quality
- recorded, secured and stored data
- secured, labelled and stored samples for transport according to partner organisation requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- drivers of local and regional ocean circulation and conditions, including:
 - ocean current systems
 - weather patterns
 - tides
 - seasonal changes, including freshwater inflows
 - extraordinary storms, temperature events and sources of marine pollution
- factors that impact on local and regional ocean conditions, including:
 - season
 - weather
 - tides
 - currents
 - human impact
- the basic physics of the underwater environment and the interplay of factors such as depth, pressure, temperature, water chemistry, flow and light penetration
- biological markers and indicators of marine system health
- equipment and techniques used for monitoring ocean conditions and marine environmental quality
- techniques and processes used for taking, storing, processing and transporting ocean water samples
- sampling risks associated with contamination and storage
- planning monitoring operations for ocean conditions and marine environmental quality
- computer hardware and software systems that support monitoring
- techniques for cleaning and maintaining marine water monitoring equipment
- maritime regulations for commercial survey work on vessels
- risk assessments and safety considerations for conducting marine monitoring
- biosecurity measures for marine monitoring techniques and equipment
- operating and emergency procedures for marine monitoring work
- types of contaminants affecting water quality, including:
 - hydrocarbons
 - plastics and microplastics.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an ocean environment
- resources, equipment and materials:
 - a vessel for transport to an ocean environment
 - tools and equipment for monitoring
 - personal protective equipment
- specifications:
 - workplace procedures and processes for monitoring in an ocean environment
 - manufacturer operating instructions for monitoring equipment
 - workplace instructions
- relationships:
 - team members
 - supervisor
- timeframes:
 - according to timeframes specified in monitoring program schedule.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC MAR306 Operate mobile underwater vehicles

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to operate mobile underwater equipment such as towed cameras (TC) and remotely operated underwater vehicles (ROUV).

The unit applies to individuals who work in a marine conservation and management role under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Marine (MAR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for mobile underwater vehicle operations	1.1 Clarify the aim/objective and precise location/s of the activity with supervisor 1.2 Identify personnel involved and confirm their skills and experience in underwater vehicle operations 1.3 Identify and prepare mobile underwater vehicle

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify and check associated equipment and support resources required</p> <p>1.5 Identify and interpret information relating to underwater location</p> <p>1.6 Identify operational constraints under marine regulations and workplace safety procedures</p> <p>1.7 Identify operational threats and contingencies, and mitigate threats to deployment of underwater vehicle</p> <p>1.8 Confirm compliance with operating procedures and ensure a workplace health and safety risk assessment is performed</p>
2. Operate mobile underwater vehicle	<p>2.1 Transport mobile underwater vehicle to location</p> <p>2.2 Assemble and conduct pre-dive checks on mobile underwater vehicle on location according to operator instructions and biosecurity procedures</p> <p>2.3 Deploy and operate mobile underwater vehicle safely according to operational plan and workplace procedures</p> <p>2.4 Monitor operational threats, adjust operating parameters and respond to contingency situations</p> <p>2.5 Retrieve and secure mobile underwater vehicle and associated equipment</p>
3. Complete underwater vehicle operations	<p>3.1 Clean, maintain and store underwater vehicle and equipment according to operator instructions and biosecurity procedures</p> <p>3.2 Retrieve data from mobile underwater vehicle and secure according to data management procedures</p> <p>3.3 Maintain records and report activity and incidents according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret charts, maps, weather reports and other documentation to determine operating conditions for mobile underwater vehicle at a specific location
Writing	<ul style="list-style-type: none"> Record monitoring information accurately using industry language, workplace format and protocols

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMAR306 Operate mobile underwater vehicles	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMAR306 Operate mobile underwater vehicles

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, prepared and operated a mobile underwater vehicle, and has:

- read, interpreted and completed documentation, including:
 - marine charts/maps
 - marine forecasts
 - operating and emergency procedures
 - logs associated with underwater vehicle operation
- identified and prepared mobile underwater vehicle and associated equipment
- transported mobile underwater vehicle to and from location
- assembled mobile underwater vehicle and conducted pre-dive checks on location, with particular attention to:
 - tethers, attachments, mounts and retrieval systems
 - seals and O-rings
 - soft pads
 - electrical connections/power supply
 - lenses and protective covers
- deployed and operated mobile underwater vehicle safely according to operational plan and workplace procedures
- monitored operational threats and adjusted operating parameters as required
- responded to contingency situations
- retrieved and secured mobile underwater vehicle and associated equipment
- cleaned, maintained and stored underwater vehicle and equipment
- retrieved records and data from vehicle/camera
- recorded underwater vehicle operations

- performed a workplace health and safety (WHS) risk assessment for underwater vehicle operations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- appropriate techniques and workplace procedures for the operation of mobile underwater vehicles for conservation work
- identification and names of types and parts of mobile underwater vehicles and associated equipment, including:
 - winches and cables
 - monitors
 - power supply
 - global positioning system (GPS) and sonar
- workplace procedures and marine regulations that relate to mobile underwater vehicles
- marine weather, sea conditions and forecasting
- interpreting marine charts and sonar maps/records
- logistical and technical requirements for operating mobile underwater vehicles
- the basic physics of the underwater environment and the relationships between equipment/monitoring techniques and depth, pressure, flow and light penetration
- computer hardware and software systems that support marine monitoring work
- equipment risks associated with operation of mobile underwater vehicles, including:
 - condensation
 - pressure
 - water flow
 - fouling and retrieval complications
 - maintenance – including age, contamination and corrosion
- biosecurity measures for operation of mobile underwater vehicles
- marine WHS, hazard identification and risk control measures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - mobile underwater vehicle and associated equipment
 - tools for assembling, dismantling and maintaining equipment
 - personal protective equipment

- specifications:
 - workplace procedures and processes for mobile underwater vehicle operations
 - manufacturer operating instructions for mobile underwater vehicle and equipment
 - workplace instructions
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMD201 Assist with propagation of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to provide assistance in propagating medicinal cannabis as part of cultivation processes. It requires the ability to prepare self, tools, equipment and materials for propagation tasks, assist with preparing propagation material, assist with monitoring the health of propagation material and environmental climate conditions, report abnormalities, record and report on propagation activities, and clean up on completion.

The unit applies to individuals who carry out a range of routine propagation tasks on a licensed medicinal cannabis production site under the direction of a supervisor.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for medicinal cannabis propagation tasks	1.1 Identify and confirm propagation tasks, workplace procedures and specifications with supervisor 1.2 Recognise health and safety hazards, and report safety concerns

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Collect required tools, equipment and materials for the task, and check for approval and functionality</p> <p>1.4 Fit and use personal protective equipment according to health and safety and hygiene requirements</p> <p>1.5 Apply personal hygiene and tools and equipment sanitation procedures</p> <p>1.6 Check propagation work area is clean and free of waste on entering secured area</p>
2. Assist with propagation of plant material	<p>2.1 Identify propagation material to be used, and confirm quantity and/or weights with supervisor</p> <p>2.2 Prepare media for the propagation process being undertaken according to supervisor instructions</p> <p>2.3 Assist with taking cuttings from mother plant, sowing seed or preparing tissue culture as required</p> <p>2.4 Place cuttings, seed or tissue into prepared media to required level as directed by supervisor</p> <p>2.5 Assist with labelling propagation material according to workplace procedures</p> <p>2.6 Place media in propagation growing system using safe practices</p> <p>2.7 Assist with water and nutrient requirements according to specifications</p> <p>2.8 Assist with temperature, lighting, carbon dioxide and humidity requirements according to specifications</p> <p>2.9 Record required data according to workplace quality procedures, reporting any deviations from quantity and weights</p>
3. Assist with monitoring propagation material health and environmental climate conditions	<p>3.1 Confirm quantity and weights of propagation material to be monitored with supervisor</p> <p>3.2 Assist with monitoring health of propagation material according to monitoring schedule, and report abnormalities</p> <p>3.3 Check for signs of disease or pests, and report presence or potential of disease or pests</p> <p>3.4 Assist with monitoring water and nutrient requirements, applying re-wetting techniques as required</p> <p>3.5 Assist with monitoring climate control levels according to specifications, and report levels that are out of acceptable range</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.6 Keep propagation growing system clean and free from propagation material waste at all times</p> <p>3.7 Maintain records according to workplace quality procedures, reporting any deviations from quantity and weights</p>
4. Clean up after propagation and monitoring activities	<p>4.1 Clean and sanitise propagation work area before safely leaving secured area</p> <p>4.2 Weigh, record and place propagation material waste in designated containers according to workplace and regulatory requirements</p> <p>4.3 Dispose of material waste safely according to workplace procedures</p> <p>4.4 Check, clean and sanitise and store tools and equipment, reporting identified repair requirements to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about specifications and workplace procedures
Writing	<ul style="list-style-type: none"> Use clear language and industry terminology to complete workplace records and labels
Oral communication	<ul style="list-style-type: none"> Use clear language and industry terminology to report abnormalities of propagation material health and environmental climate conditions, repair requirements, and any deviation from recorded quantities and weights
Numeracy	<ul style="list-style-type: none"> Conduct simple counts and weight calculations of propagation material Interpret numerical data from climate control gauges

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC201 Assist with propagation of medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMDC201 Assist with propagation of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assisted with propagation tasks of medicinal cannabis for at least two propagation cycles, including:

- prepared, cleaned and applied sanitation procedures to self, the required tools, equipment and materials, and work area
- applied propagation techniques for at least two of the following methods:
 - plant grown by seed
 - cuttings from mother plant
 - tissue culture
- performed regular counts and/or weight checks of propagation material
- checked and monitored health of propagation material and environmental climate conditions during the propagation cycle
- identified common propagation material health issues and signs of disease and pests
- maintained accurate labels and workplace records on propagation activities
- complied with security and waste disposal requirements
- communicated any safety concerns, abnormalities or deviations from quantities and counts.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- medicinal cannabis during the propagation cycle, including:
 - plant morphology
 - signs of common health issues, including nutrient deficiencies or excesses, environmental stress such as water, temperature and humidity stress, mould
 - signs of common diseases and pests

- common problems associated with performing propagation activities, and process for reporting these
- principles of Good Agricultural and Collection Practices (GACP) in relation to the propagation of medicinal cannabis plants, including:
 - hygiene and sanitation, including for tools, equipment and the work area, and personal hygiene
 - health and safety, including manual handling
 - quality controls
 - propagation techniques, including cuttings from mother plant, grafting, seed sowing and tissue culture
 - preparation of propagation media, including pre-wetting with appropriate nutrient solutions and draining to avoid excess moisture
 - water and nutrient requirements, including re-wetting techniques used when monitoring
 - environmental climate requirements in controlled growing systems, including ideal target lighting intensity, carbon dioxide, temperature and humidity levels for propagation method and growing media
 - monitoring plant health and environmental climate conditions
 - disposal and destruction of propagation material waste
 - identification and traceability
 - recording and reporting requirements
 - biosecurity measures
- workplace security requirements
- function and operation of tools and equipment used during the propagation of medicinal cannabis plants, including approval and operational checks
- function and operation of propagation growing systems, including their control systems.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - propagation growing system
 - personal protective equipment
 - cuttings, seeds or tissue culture for propagation
 - tools, equipment and materials required for propagation method
 - tools, equipment and materials for cleaning and sanitation
 - workplace recording and reporting system
- specifications:

- propagation specifications
- workplace procedures relating to the propagation of medicinal cannabis, including health and safety, hygiene and sanitation, recording and reporting, and security requirements
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC MDC202 Assist with care and maintenance of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to provide assistance in the care and maintenance of medicinal cannabis plants during vegetative and flowering stages. It includes the care and maintenance of mother plants that are kept in the vegetative stage. It requires the ability to prepare self, tools, equipment and materials for maintenance tasks, assist with trimming, training and repotting tasks, assist with monitoring plant health and environmental climate conditions and reporting abnormalities, record and report on care and maintenance data, and clean up on completion.

The unit applies to individuals who carry out a range of routine maintenance tasks on a licensed medicinal cannabis production site under the direction of a supervisor.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for medicinal cannabis care and	1.1 Identify and confirm plant care and maintenance tasks, workplace procedures and specifications with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
maintenance tasks	<p>1.2 Recognise health and safety hazards, and report safety concerns</p> <p>1.3 Collect required tools, equipment and materials for the task, and check for approval and functionality</p> <p>1.4 Fit and use personal protective equipment according to health and safety and hygiene requirements</p> <p>1.5 Apply personal hygiene and tool and equipment sanitation procedures</p> <p>1.6 Check cultivation work area is clean and free of waste on entering secured area</p>
2. Assist with maintaining plants	<p>2.1 Identify and inspect medicinal cannabis plants, including mother plants, to be maintained, and confirm quantity and weights with supervisor</p> <p>2.2 Assist with trimming and training tasks according to supervisor instructions</p> <p>2.3 Use tools and equipment safely and cautiously around growing systems while maintaining plants</p> <p>2.4 Assist with repotting tasks, using required techniques for growing media used</p> <p>2.5 Assist with water and nutrient requirements following trimming and repotting tasks</p> <p>2.6 Use safe practices to transfer pots between vegetative and flowering cultivation areas, ensuring areas are clear of waste before moving plants</p> <p>2.7 Record required data according to workplace quality procedures, reporting any deviations from quantity and weights</p>
3. Assist with monitoring plant health and climate conditions during vegetative and flowering stages	<p>3.1 Confirm quantity and weights of plants to be monitored with supervisor</p> <p>3.2 Assist with monitoring plant health according to monitoring schedule, and report abnormalities as required</p> <p>3.3 Check for signs of disease or pests, and report presence or potential of disease or pests as required</p> <p>3.4 Assist with monitoring water and nutrient and climate control levels according to specifications, and report levels that are out of acceptable range</p> <p>3.5 Assist with monitoring growth, health and climate conditions for</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>mother plants to ensure that they remain in a vegetative stage, and report abnormalities as required</p> <p>3.6 Keep growing system clean and free from plant waste at all times</p> <p>3.7 Record required data according to workplace quality procedures, reporting any deviations from quantity and weights</p>
4. Clean up after care and maintenance tasks	<p>4.1 Clean and sanitise cultivation work area before safely leaving secured area</p> <p>4.2 Weigh, record and place plant waste in designated containers according to workplace and regulatory requirements</p> <p>4.3 Dispose of material waste safely according to workplace procedures</p> <p>4.4 Check, clean and sanitise and store tools and equipment, reporting identified repair requirements to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about specifications, workplace procedures and regulatory requirements
Writing	<ul style="list-style-type: none"> Use clear language and industry terminology to complete workplace records and labels
Oral communication	<ul style="list-style-type: none"> Use clear language and terminology to report abnormalities of plant health and environmental climate conditions, repair requirements, and any deviation from recorded quantities and weights
Numeracy	<ul style="list-style-type: none"> Conduct simple counts and weight calculations of plant material Interpret numerical data from climate control gauges

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC202 Assist with care and maintenance of medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMDC202 Assist with care and maintenance of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assisted with medicinal cannabis care and maintenance tasks on at least two occasions for a vegetative cycle and at least two occasions for a flowering cycle, including:

- prepared, cleaned and applied sanitation procedures on self and the required tools, equipment and materials, and work area
- applied the required trimming and training techniques as instructed by supervisor
- repotted and safely transferred plants between vegetative and flowering areas
- performed regular counts and weight checks of plants
- checked and monitored plant health and environmental climate conditions during the vegetative and flowering cycle
- identified common plant health issues and signs of disease and pests
- complied with security and plant waste disposal regulatory requirements
- maintained accurate workplace records on care and maintenance activities
- communicated any safety concerns, abnormalities or deviations from quantities and counts.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- medicinal cannabis during the vegetative and flowering cycles, including:
- plant morphology
- signs of common plant health issues, including nutrient deficiencies or excesses, environmental stress such as water, temperature and humidity stress, mould
- signs of common diseases and pests
- common problems associated with performing maintenance activities, and process for reporting these

- principles of Good Agricultural and Collection Practices (GACP) in relation to the maintenance of medicinal cannabis plants during the vegetative and flowering cycles, including:
- hygiene and sanitation, including for tools, equipment and the work area and personal hygiene
- health and safety, including manual handling
- quality controls
- trimming and training techniques, including techniques used for preserving mother plants
- repotting techniques
- different water and nutrient requirements for vegetative cycles, including mother plants, and flowering cycles
- different climate requirements, including ideal target lighting intensity, carbon dioxide, temperature and humidity levels for vegetative cycles, including mother plants, and flowering cycles
- monitoring plant health and environmental climate conditions
- disposal and destruction of plant waste
- identification and traceability
- recording and reporting requirements
- biosecurity measures
- regulations and compliance related to the physical security of cannabis
- function and operation of tools and equipment used for maintaining medicinal cannabis plants, including approval and operational checks
- function and operation of growing systems, including their control systems.
-

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - growing system
 - personal protective equipment
 - plants during their vegetative and flowering stages
 - tools, equipment and materials required for care and maintenance tasks
 - tools, equipment and materials for cleaning and sanitation
 - workplace recording and reporting system
- specifications:
 - maintenance specifications and monitoring schedule

- workplace procedures relating to the maintenance of medicinal cannabis, including health and safety, hygiene and sanitation, recording and reporting and security requirements
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC/MDC203 Assist with harvest and pre-processing of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to provide assistance with harvest and pre-processing of medicinal cannabis as part of cultivation and production processes. It requires the ability to prepare tools, equipment and materials for harvest and pre-processing tasks, assist with cutting, trimming, drying and other production tasks, assist with monitoring environmental climate conditions, record and report on harvesting and pre-processing activities, and dispose of plant material waste after each production process.

The unit applies to individuals who carry out a range of routine harvest and pre-processing tasks on a licensed medicinal cannabis production site under the direction of a supervisor.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for medicinal cannabis harvest and pre-processing tasks	1.1 Identify and confirm harvest and pre-processing tasks, workplace procedures and specifications with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Recognise health and safety hazards, and report safety concerns</p> <p>1.3 Collect required tools, equipment and materials for tasks, and check for approval and functionality</p> <p>1.4 Fit and use personal protective equipment according to health and safety and hygiene requirements</p> <p>1.5 Apply personal hygiene and equipment sanitation procedures</p> <p>1.6 Check work area is clean and free of waste on entering secured area</p>
2. Assist with harvest tasks	<p>2.1 Identify and inspect medicinal plants to be harvested, including flowering stems to be cut, and confirm quantity and weights with supervisor</p> <p>2.2 Check plant health prior to commencing harvesting tasks, including signs of disease or pests, and report abnormalities or presence of disease or pests</p> <p>2.3 Check climate control, including temperature, humidity and airflow levels according to specifications, and report levels that are out of acceptable range</p> <p>2.4 Assist with cutting flowering stems and place in harvest containers according to supervisor instructions</p> <p>2.5 Handle harvested stems in a way that minimises damage to flower and avoids contact with growing media</p> <p>2.6 Confirm weight of harvested stems, and transfer to the drying room using safe practices and according to entry and exiting procedures</p> <p>2.7 Remove remaining plant material from growing media and dispose of according to workplace procedures</p> <p>2.8 Record required data according to workplace quality procedures, reporting any deviations from quantity and weights</p>
3. Assist with pre-processing tasks	<p>3.1 Comply with entry and exit procedures when moving in and out of the drying room according to workplace requirements</p> <p>3.2 Apply personal hygiene and equipment sanitation procedures</p> <p>3.3 Check climate control, including temperature, humidity and airflow levels according to specifications, and report levels that are out of acceptable range</p> <p>3.4 Assist with trimming harvested stems according to supervisor</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>instructions</p> <p>3.5 Assist with drying process according to supervisor instructions</p> <p>3.6 Assist with milling for extraction according to supervisor instructions as required</p> <p>3.7 Weigh, record, and remove and dispose of plant material waste according to workplace requirements</p> <p>3.8 Record required data according to workplace quality procedures, reporting any deviations from quantity and weights</p>
4. Assist with packing and storing medicinal cannabis product	<p>4.1 Assist with labelling and packing product according to supervisor instructions and specifications</p> <p>4.2 Transfer and place packaged product safely in secured storage area</p> <p>4.3 Record required data according to workplace quality procedures</p>
5. Clean up post harvest and pre-processing tasks	<p>5.1 Clean and sanitise work areas before safely leaving secured areas</p> <p>5.2 Dispose of material waste according to workplace requirements</p> <p>5.3 Check, clean and sanitise, and store tools and equipment, reporting identified repair requirements to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about specifications and workplace procedures
Writing	<ul style="list-style-type: none"> Use clear language and industry terminology to complete workplace records and labels
Oral communication	<ul style="list-style-type: none"> Use clear language and industry terminology to report abnormalities of plant health and environmental climate conditions, equipment repair requirements and any deviation from recorded quantities and weights

Skill	Description
Numeracy	<ul style="list-style-type: none"> Conduct simple counts and weight calculations of plants and pre-processed products Interpret numerical data from climate control gauges

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC203 Assist with harvest and pre-processing of medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>
[tps://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72](https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72)

Assessment Requirements for AHCMDC203 Assist with harvest and pre-processing of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assisted with medicinal cannabis harvest and pre-processing tasks for at least one harvest, including:

- prepared, cleaned and followed sanitation procedures on self, the required tools, equipment and materials, and work areas
- checked plant health and for signs of pest and disease prior to harvest
- identified common health issues and signs of disease and pests of plants to be harvested
- checked required climate conditions for each of the harvesting and pre-processing processes
- performed counts and weight checks during each stage of the harvesting and pre-processing process
- completed the following tasks as directed by supervisor:
 - cutting flower stems
 - trimming harvested stems
 - drying
 - packing and labelling
 - transferring packed product to secured storage area
- labelled pre-processed product with the required information and correct terminology
- complied with security and waste disposal requirements
- maintained accurate workplace records on harvesting and pre-processing activities
- communicated any safety concerns, abnormalities or deviations from quantities and counts.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- medicinal cannabis during harvest stage, including:
 - plant morphology
 - signs of common health issues, including mould
 - signs of common diseases and pests
- common problems associated with carrying out harvest and pre-processing tasks, and process for reporting these
- function and operation of tools and equipment used during the harvest and pre-processing operations, including approval and operational checks
- function and operation of climate systems
- workplace security requirements, including secured storage areas
- principles of Good Agricultural and Collection Practices (GACP) in relation to the harvest of medicinal cannabis, including:
 - harvest techniques
 - quality controls
 - health and safety, including manual handling
 - recording and reporting requirements
 - identification and traceability
 - biosecurity
- principles of Good Manufacturing Practices (GMP) in relation to pre-processing of medicinal cannabis, including:
 - ideal environmental climate conditions for each of harvesting, trimming, drying and milling activities
 - disposal and destruction of plant material waste
 - entering and exit procedures
 - hygiene and sanitation, including for tools, equipment and the work area and personal hygiene
 - trimming, drying and milling techniques
 - labelling and packaging requirements, including mandatory data
 - storage of medicinal cannabis material and product
- procedures for entering and exiting drying room.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment
 - plants ready for harvest
 - tools, equipment and materials required for harvest and pre-processing processes

- tools, equipment and materials for cleaning and sanitation
- drying room
- labelling and packaging material
- secured storage area
- workplace recording and reporting system
- specifications:
 - harvest and pre-processing plan and specifications
 - workplace procedures relating to harvest and pre-processing operations for medicinal cannabis, including security, health and safety, hygiene and sanitation, quality, recording and reporting requirements
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMDC301 Apply security regulatory requirements to work in the medicinal cannabis industry

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to apply security and safety requirements in the medicinal cannabis industry. It requires the ability to identify and comply with workplace and regulatory employment obligations, apply security and safety procedures, and respond to security incidents or emergencies on a medicinal cannabis site.

The unit applies to individuals who are employed to perform a range of routine tasks on a medicinal cannabis cultivation and production site under the direction of a supervisor.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Comply with employment obligations	1.1 Identify workplace policies and procedures and regulatory requirements in relation to own work responsibilities in medicinal cannabis production processes 1.2 Identify employee obligations and risks around diversion to illicit

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	use 1.3 Maintain suitability for employment according to workplace and regulatory requirements
2. Comply with security and safety procedures	2.1 Apply security procedures across all access controls in relation to work responsibilities according to workplace procedures and regulatory requirements 2.2 Comply with inspections and entry restrictions 2.3 Complete and maintain the sign in/sign out register according to workplace procedures and regulatory requirements 2.4 Maintain confidentiality of cannabis site and operations according to workplace policy and regulatory requirements
3. Respond to security incidents or emergencies	3.1 Report breaches of unauthorised access and intruder suspects according to workplace reporting procedures 3.2 Respond to incidents or emergencies according to training and drills used in preparation for intrusion or emergencies 3.3 Contact appropriate police, security and/or emergency services according to supervisor instructions and workplace procedures 3.4 Support police, security and/or emergency services as requested 3.5 Complete incident reporting requirements according to workplace procedures
4. Comply with cannabis disposal and destruction regulatory requirements	4.1 Weigh and store, dispose of or destroy any parts of cannabis that is not to be manufactured into a medicinal product according to workplace procedures and regulatory requirements 4.2 Clean and sanitise equipment that has been in contact with cannabis to ensure residual cannabis is removed to prevent the risk of diversion 4.3 Record and report completion of disposal and destruction activities, including any discrepancies in recorded cannabis weights, according to workplace procedures and regulatory requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none">Interpret textual information from a range of sources to identify relevant and key information about employment obligations, workplace procedures and regulatory requirements
Writing	<ul style="list-style-type: none">Use clear language and industry terminology to prepare simple records and reports in required format
Oral communication	<ul style="list-style-type: none">Use clear language and industry terminology to report security breaches, incidents or emergencies, and completion of activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC301 Apply security regulatory requirements to work in the medicinal cannabis industry	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMD301 Apply security regulatory requirements to work in the medicinal cannabis industry

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has complied with security regulatory requirements as an employee in the medicinal cannabis industry, including:

- identified and confirmed obligations as an employee of the medicinal cannabis organisation
- identified implications of diversion to illicit use
- entered and exited at least two site access points according to security procedures
- responded to at least two different simulated incidents or emergencies, including completing the required reports
- applied safe disposal or destruction procedures for cannabis waste on at least two occasions, including completing accurate records on disposal or destruction activities.
-

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- relevant government and local authorities with the responsibility for regulating the production of medicinal cannabis, and their purposes
- regulations and compliance with security of medicinal cannabis, including:
 - persons suitable for employment or engagement in a cannabis operation (Fit and Proper Person)
 - physical security of cannabis
 - reporting and dealing with loss or theft of cannabis
 - safe disposal or destruction of cannabis
- risk of diversion to illicit use

- employee responsibilities in maintaining personal safety, including cyber security
- security systems and procedures, and implications of divergence from procedures
- procedures for reporting and responding to security incidents or emergencies
- procedures for safe and secure disposal or destruction of any parts of cannabis not being manufactured into a medicinal product.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - sign in/sign out register
 - plant waste for disposal or destruction
 - equipment to be cleaned
- specifications:
 - employment obligations
 - workplace procedures relating to the security of medicinal cannabis, responding to security incidents or emergencies, and safe and secure disposal or destruction of cannabis.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMDC302 Apply regulatory and quality requirements to the production of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to ensure that medicinal cannabis production processes comply with regulatory requirements and the organisation's quality system and procedures.

The unit applies to individuals who carry out skilled work in medicinal cannabis production processes. They may not be directly responsible for developing procedures for compliance with regulation and quality systems; however, they are required to be aware of the existence of legislation and the Good Practices Standards framework, including the impact it has on the organisation's arrangements in place to ensure compliance and quality of the product.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify regulatory requirements for medicinal cannabis	1.1 Identify legislation, regulations and standards relevant to the production of medicinal cannabis

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
production	<p>1.2 Investigate purpose and intent of regulatory requirements</p> <p>1.3 Identify roles and responsibilities of authorities responsible for administering requirements</p> <p>1.4 Identify requirements of licensing for medicinal cannabis cultivators and manufacturers</p>
2. Apply regulatory requirements to work practices	<p>2.1 Identify workplace policies and procedures in relation to own work responsibilities in medicinal cannabis production processes</p> <p>2.2 Review work practices to ensure compliance with regulatory requirements</p> <p>2.3 Identify and report instances of non-compliance and potential problems according to workplace procedures</p>
3. Identify and apply quality practices for production of medicinal cannabis	<p>3.1 Identify quality requirements for the production of medicinal cannabis</p> <p>3.2 Determine critical control points for work area</p> <p>3.3 Conduct a safety hazard analysis and risk assessment</p> <p>3.4 Monitor work area, materials, processes and crop to ensure compliance with quality requirements, hygiene and health and safety procedures</p> <p>3.5 Identify and report instances of deviation and potential problems according to workplace procedures</p>
4. Complete records to comply with regulatory and quality requirements	<p>4.1 Record details of cannabis material received at site, stored on site and supplied from the site</p> <p>4.2 Record details of cultivation processes that trace plant batch as it moves through production processes</p> <p>4.3 Record hygiene and sanitation activities</p> <p>4.4 Record health and safety requirements, including incident reports</p> <p>4.5 Record details of plant, pest and disease monitoring, including test methods, results and control</p> <p>4.6 Record details of fertigation and climate, including environmental control data and inputs</p> <p>4.7 Identify and report instances of deviation and non-compliance in record-keeping according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none">Access legal and quality documentation from a variety of sources to determine compliance requirements
Writing	<ul style="list-style-type: none">Complete workplace documentation using accurate and legible data and appropriate terminology, and cross-check for errors
Numeracy	<ul style="list-style-type: none">Interpret numerical data from sampling results and control gauges

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC302 Apply regulatory and quality requirements to the production of medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC MDC302 Apply regulatory and quality requirements to the production of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively monitored the production of medicinal cannabis to ensure compliance with legislation and quality requirements, including:

- identified and applied legal and regulatory requirements and elements of quality standards that apply to production processes in own area of responsibility
- assessed own work area for critical control points, safety and risks
- completed accurate records for production processes in own area of responsibility, including records that cover all of the following on at least **three** occasions:
 - cultivation processes
 - traceability
 - hygiene and sanitation
 - health and safety
 - monitoring, sampling and control
- identified and reported instances of deviation, potential problems or non-compliance.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- national, state and territory legislation, regulations and standards relevant to the production of medicinal cannabis
- legislative and regulatory responsibilities required of licensed cultivators and manufacturers of medicinal cannabis
- roles and functions of commonwealth government authorities responsible for administering the legislation, including record requirements
- Good Practices Standards and organisation quality systems relevant to the production of medicinal cannabis, including:

- Good Agricultural and Collection Practices (GACP) in relation to cultivation and harvesting of plants, and quality and consistency of products
- Good Manufacturing Practices (GMP) in relation to pre-processing and quality of products
- principles of GACP and GMP in relation to:
 - cultivation and production processes
 - traceability, including validation of inputs
 - hygiene and sanitation
 - health and safety
 - monitoring, sampling and control
 - documentation processes
- organisational record-keeping requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - workplace quality system
 - workplace recording system
- specifications:
 - access to legislation and regulations related to the production of medicinal cannabis
 - workplace quality procedures
 - workplace procedures relating to the production of medicinal cannabis, including health and safety, hygiene and sanitation, recording and reporting requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMD303 Undertake propagation of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to undertake the propagation of medicinal cannabis according to the propagation plan. It requires the ability to prepare for propagation activities, apply common propagation techniques to establish cannabis plants, monitor and control health and environmental climate conditions of the propagation material, and carry out all recording and reporting requirements throughout the propagation cycle according to regulatory and quality requirements.

The unit applies to individuals who perform skilled propagation work on a licensed medicinal cannabis production site. They may work independently or as part of a team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for propagation of medicinal cannabis	1.1 Confirm propagation plan, specifications and monitoring schedule with supervisor 1.2 Identify health and safety hazards, assess risks and implement control measures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Prepare self and required approved tools, equipment and materials, including personal protective equipment, according to hygiene and sanitation and health and safety procedures</p> <p>1.4 Select media for propagation method being used and required quantity of plants</p> <p>1.5 Check propagation work area is clean and free of waste on entering secured area</p>
2. Prepare propagation material	<p>2.1 Identify, check and record type, quantity and/or weight of propagation material to be used against specifications</p> <p>2.2 Prepare propagation material according to propagation plan and method used</p> <p>2.3 Handle propagation material in a way that minimises damage</p> <p>2.4 Label propagation material according to identification requirements</p> <p>2.5 Check water and nutrient requirements according to specifications, and adjust manually or use control system to maintain to required levels</p> <p>2.6 Check temperature, lighting, carbon dioxide and humidity according to specifications, and use control system to adjust and maintain to required levels</p> <p>2.7 Record required data and observations according to workplace quality procedures, including any deviations in recorded quantities and weights</p>
3. Monitor health of propagation material	<p>3.1 Calculate and record quantity and/or weight of propagation material to be monitored</p> <p>3.2 Check propagation material health according to monitoring schedule, and adjust water and nutrients levels as required</p> <p>3.3 Check for signs of disease or pests, and if required, apply treatment according to workplace procedures</p> <p>3.4 Check climate control, including temperature, lighting, carbon dioxide and humidity levels, according to specification and adjust as required</p> <p>3.5 Monitor propagation growing system for safety, hygiene and waste to be removed</p> <p>3.6 Record required data and observations according to workplace quality procedures, including any deviations in recorded quantities and</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	weights
4. Complete post-propagation activities	<p>4.1 Check propagation system is clean before safely leaving secured area</p> <p>4.2 Check propagation material waste is weighed, recorded and placed in designated containers, and material waste is safely disposed of according to workplace and regulatory requirements</p> <p>4.3 Record and report on propagation activities, including any non-compliance or potential problems</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant information about propagation requirements, monitoring schedule, workplace procedures and regulatory requirements
Writing	<ul style="list-style-type: none"> Use clear language and industry terminology to complete labels, workplace records and reports
Oral communication	<ul style="list-style-type: none"> Use clear language and industry terminology to report on propagation activities
Numeracy	<ul style="list-style-type: none"> Interpret numerical data from sampling and growing system gauges, and make adjustments to fertigation and climate controls

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC303 Undertake propagation of medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMDC303 Undertake propagation of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has undertaken the propagation of medicinal cannabis to produce at least six plants for at least two propagation cycles, including:

- identified risks and applied control measures
- selected and prepared the required tools, equipment and materials for the propagation method and quality of required plants
- maintained safe, clean and sanitised work area
- applied at least two of following propagation methods:
 - plant grown by seed
 - cuttings from mother plant
 - tissue culture
- monitored and recorded counts and/or weight of propagation material, and checked for deviations
- labelled propagation material with the required information and correct terminology
- monitored health of propagation material by visual inspection and sampling
- applied required treatments and/or remedies to maintain health of propagation material and/or treat any identified common health issues, disease or pests
- monitored, controlled and made required adjustments to water and nutrient needs and environmental climate conditions during the propagation cycle based on specifications and propagation material requirements
- complied with security and waste disposal requirements
- maintained accurate records and reports on propagation data and activities, including any non-compliance and deviations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- organisational medicinal cannabis propagation plan and monitoring schedule
- process for conducting health and safety risk assessment, and control measures that may be used for propagation production processes
- medicinal cannabis during the propagation cycle, including:
 - plant morphology
 - signs of common health issues, including nutrient deficiencies or excesses, environmental stress such as water, temperature and humidity stress, and mould, and their remedies
 - signs of common diseases and pests and their control
- regulatory and workplace requirements related to the propagation of medicinal cannabis, including:
 - hygiene and sanitation
 - health and safety, including manual handling
 - physical security of cannabis
 - disposal and destruction of plant waste
 - recording and reporting requirements
 - identification and traceability
 - biosecurity
- principles of Good Agricultural and Collection Practices (GACP) in relation to the propagation of medicinal cannabis, including:
 - propagation techniques, including cuttings from mother plants, grafting, seed sowing and tissue culture
 - preparation of propagation media for method used
 - use of pre-treatments
 - water and nutrient and carbon dioxide requirements
 - climate requirements in controlled growing systems, including lighting, temperature and humidity
 - monitoring plant health and climate conditions
 - disease and pest control
 - quality controls
- function, operation and maintenance of tools and equipment used during the propagation of medicinal cannabis, including operational checks
- function and operation of propagation growing systems, including their control systems.
-

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - personal protective equipment
 - cuttings, seeds or tissue culture for propagation
 - tools, equipment and materials required for propagation method
 - tools, equipment and materials for cleaning and sanitation
 - sampling equipment
 - propagation system, including environmental growing climate controls
 - workplace recording and reporting system
- specifications:
 - propagation plan and specifications
 - monitoring schedule
 - workplace procedures relating to the propagation of medicinal cannabis, including security, health and safety, hygiene and sanitation, quality, recording and reporting requirements
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMD304 Undertake care and maintenance of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to care for and maintain medicinal cannabis plants during their vegetative and flowering cycles according to the care and maintenance plan. It includes the care and maintenance of mother plants that are kept in the vegetative stage. It requires the ability to prepare for care and maintenance activities, assess plant growth for care and maintenance requirements, apply trimming and training techniques to achieve best flower production, monitor and control plant health and environmental climate conditions, and carry out all recording and reporting requirements throughout the vegetative and flowering cycles according to regulatory and quality requirements.

The unit applies to individuals who perform skilled maintenance work on medicinal cannabis plants on a licensed medicinal cannabis production site. They may work independently or as part of a team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for care and maintenance of medicinal cannabis	1.1 Confirm maintenance plan and monitoring schedules with supervisor 1.2 Identify health and safety hazards, assess risks and implement control measures 1.3 Prepare self and required approved tools, equipment and materials, including personal protective equipment, according to hygiene and sanitation and health and safety procedures 1.4 Check cultivation work area is clean and free of waste on entering secured area
2. Maintain medicinal cannabis plants	2.1 Check and record quantity and weight of plants to be maintained, including mother plants, against specifications 2.2 Check plant growth to determine maintenance needs 2.3 Trim and shape plants to allow airflow, and set up framework for flowering 2.4 Use trimming and shaping techniques to preserve mother plants in the vegetative stage 2.5 Secure and train plants onto support structures 2.6 Use tools and equipment safely and cautiously around cultivation environment 2.7 Repot and transfer pots between vegetative and flowering areas using safe practices 2.8 Check water and nutrient requirements after pruning and potting, and adjust manually or use control systems to maintain to required levels 2.9 Record required data and observations according to workplace quality procedures, including any deviations in recorded quantities and weights
3. Monitor plant health and climate control during growing and flowering stages	3.1 Calculate and record quantity and weight of plants to be monitored 3.2 Check plant health according to monitoring schedule, and adjust water and nutrients levels as required 3.3 Check for signs of disease or pests, and if required, apply treatments according to workplace procedures 3.4 Check climate control systems, including temperature, lighting, carbon dioxide and humidity levels, according to specification and adjust as required

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.5 Monitor growing system for safety, hygiene and plant waste to be removed</p> <p>3.6 Record required data and observations according to workplace quality procedures, including any deviations in recorded quantities and weights</p>
4. Complete post care and maintenance activities	<p>4.1 Check cultivation work area is clean before safely leaving secured area</p> <p>4.2 Check plant waste is weighed, recorded and placed in designated containers, and material waste is safely disposed of according to workplace and regulatory requirements</p> <p>4.3 Record and report on care and maintenance activities, including any non-compliance or potential problems</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant information about maintenance requirements, monitoring schedule, workplace procedures and regulatory requirements
Writing	<ul style="list-style-type: none"> Use clear language and industry terminology to complete workplace records and reports
Oral communication	<ul style="list-style-type: none"> Use clear language and industry terminology to report on maintenance activities
Numeracy	<ul style="list-style-type: none"> Interpret numerical data from sampling and growing system gauges, and make adjustments to fertigation and climate controls

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCMDC304 Undertake care and maintenance of medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMDC304 Undertake care and maintenance of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has undertaken the care and maintenance of at least six medicinal cannabis plants on at least two occasions for a vegetative cycle and at least two occasions for a flowering cycle, including:

- identified risks and applied control measures
- maintained safe, clean and sanitised work area
- selected and prepared the required tools, equipment and materials
- applied the required hygiene and sanitation and health safety requirements for self and tools and equipment
- monitored and recorded counts and weight of plants, and checked for deviations
- applied trimming and shaping techniques that maintained right balance of growth and flower production and/or preserved mother plants
- applied required training techniques to support plants onto structures
- monitored plant health by visual inspection and sampling
- applied required treatments and/or remedies to maintain plant health and/or treat any identified common health issues, disease or pests
- monitored, controlled and made required adjustments to water and nutrient requirements and environmental climate conditions during the vegetative and flowering cycles based on specifications and plant needs
- complied with security and waste disposal requirements
- maintained accurate records and reports on maintenance data and activities, including any non-compliance and deviations.
-

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- organisational care and maintenance plan for medicinal cannabis
- process for conducting health and safety risk assessment, and control measures that may be used during plant maintenance processes
- medicinal cannabis during the vegetative and flowering cycles, including:
 - plant morphology
 - signs of common plant health issues, including nutrient deficiencies or excesses, environmental stress such as water, temperature and humidity stress, and mould, and their remedies
 - signs of common diseases and pests, and their control
- regulatory and workplace requirements related to the care and maintenance of medicinal cannabis plants, including:
 - hygiene and sanitation
 - health and safety, including manual handling
 - physical security of cannabis
 - disposal and destruction of plant waste
 - identification and traceability
 - recording and reporting requirements
 - biosecurity
- principles of Good Agricultural and Collection Practices (GACP) in relation to the care and maintenance of medicinal cannabis plants during vegetative and flowering cycles, including:
 - trimming, shaping and training techniques used for optimum flower production, reducing risk of disease and preserving mother plants
 - different water and nutrient requirements for vegetative cycles, including mother plants, and flowering cycles
 - different climate requirements, including ideal target lighting intensity, carbon dioxide, temperature and humidity levels for vegetative cycles, including mother plants, and flowering cycles
 - monitoring plant health and climate conditions
 - disease and pest control
 - quality controls
- function, operation and maintenance of tools and equipment used during the care and maintenance of medicinal cannabis plants, including approval and operational checks
- function and operation of growing systems, including their control systems.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - personal protective equipment
 - plants during their vegetative and flowering stages
 - tools, equipment and materials required for maintenance tasks
 - tools, equipment and materials for cleaning and sanitation
 - sampling equipment
 - workplace recording and reporting system
- specifications:
 - maintenance specifications
 - monitoring schedule
 - workplace procedures relating to the maintenance of medicinal cannabis, including health and safety, hygiene and sanitation, recording and reporting and security regulatory requirements
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC/MDC305 Undertake harvest and pre-processing of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to carry out harvest and pre-processing processes for medicinal cannabis according to the harvest and pre-processing plan. It requires the ability to prepare for harvesting and pre-processing activities, assess readiness of medicinal cannabis for harvest, monitor and adjust environmental climate conditions, dispose of plant material waste, and maintain recording and reporting requirements according to regulatory and quality requirements.

The unit applies to individuals who are skilled in carrying out harvest and pre-processing operations on a licensed medicinal cannabis production site. They may work independently or as part of a team.

No licensing, regulatory or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for harvest and pre-processing of	1.1 Confirm harvest and pre-processing plans and specifications with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
medicinal cannabis	<p>1.2 Identify health and safety hazards, assess risks and implement control measures</p> <p>1.3 Prepare self and required approved materials, tools and equipment, including personal protective equipment, according to hygiene and sanitation and health and safety procedures</p> <p>1.4 Check work area is clean and free of waste on entering secured area</p>
2. Harvest medicinal cannabis	<p>2.1 Check and record weights and quantities of plants to be harvested against specifications</p> <p>2.2 Check plant health prior to commencing harvesting tasks, including any signs of disease or pests, and report abnormalities or presence of disease or pests</p> <p>2.3 Check climate control, including temperature, humidity and airflow levels, according to specifications and adjust as required</p> <p>2.4 Cut flowering stems and place in harvest containers according to specifications and workplace procedures</p> <p>2.5 Handle harvested stems in a way that minimises damage to flower and avoids contact with growing media</p> <p>2.6 Calculate weight of harvest stems and transfer to the drying room using safe practices and according to entry and exiting procedures</p> <p>2.7 Remove remaining plant material from growing media and dispose of according to workplace and regulatory requirements</p> <p>2.8 Record required data and observations according to workplace quality procedures, including any deviations in recorded quantities and weights</p>
3. Pre-process medicinal cannabis	<p>3.1 Comply with entry and exit procedures when moving in and out of the drying room according to workplace and quality requirements</p> <p>3.2 Apply personal hygiene and equipment sanitation procedures</p> <p>3.3 Check climate control, including temperature, humidity and airflow levels, according to specifications and adjust as required</p> <p>3.4 De-stem flower using required equipment according to specifications and safe practices</p> <p>3.5 Dry remaining stems and flowers according to specifications and required climate conditions</p> <p>3.6 Apply milling process for extraction as required</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.7 Remove and dispose of plant material waste according to workplace and regulatory requirements</p> <p>3.8 Record required data and observations according to workplace quality procedures, including any deviations in recorded quantities and weights</p>
4. Pack and store medicinal cannabis product	<p>4.1 Label and pack product according to specifications and workplace and regulatory requirements</p> <p>4.2 Store product safely and securely in required climate conditions until ready for distribution</p> <p>4.3 Record required data and observations, including reports for compliance according to workplace procedures</p>
5. Complete post harvest and pre-processing activities	<p>5.1 Check work areas are clean and sanitised before safely leaving secured areas</p> <p>5.2 Check material waste is safely disposed of according to workplace and regulatory requirements</p> <p>5.3 Record and report on harvest and pre-processing activities, including any non-compliance or potential problems</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual and numerical information from a range of sources to identify relevant information about harvest and pre-processing requirements, workplace procedures and regulatory requirements
Writing	<ul style="list-style-type: none"> Use clear language and industry terminology to complete workplace records and reports and labels on products
Oral communication	<ul style="list-style-type: none"> Use clear language and industry terminology to report on harvest and pre-processing activities
Numeracy	<ul style="list-style-type: none"> Interpret numerical data from testing and climate control gauges, and make adjustments

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC305 Undertake harvest and pre-processing of medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMDC305 Undertake harvest and pre-processing of medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has undertaken harvesting and pre-processing operations for at least six medicinal plants for at least two harvest stages, including:

- selected and prepared the required tools, equipment and materials for both harvesting and pre-processing operations
- identified risks and applied control measures
- maintained safe, clean and sanitised work area
- checked plants for signs of health issues, disease and pests prior to harvest
- applied the required harvesting, trimming and drying techniques according to specifications
- packaged and labelled product with information and data required by regulations
- transferred and stored packaged product in secured area
- monitored and adjusted climate control against specifications for each process
- monitored and recorded counts and weight for each process, and checked for deviations
- complied with security and waste disposal requirements
- maintained accurate records and reports on harvesting and post-harvesting data and activities, including any non-compliance and deviations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- organisational medicinal cannabis harvest and pre-processing plan
- forms of medicinal cannabis product produced by organisation
- process for conducting health and safety risk assessment, and control measures relevant to harvest and pre-processing processes
- medicinal cannabis during harvest stage, including:

- plant morphology
- signs of common health issues, including mould, and their remedies
- signs of common diseases and pests, and their control
- function, operation and maintenance of tools and equipment used during the harvest and pre-processing operations, including approval and operational checks
- function and operation of climate systems, including their control systems
- regulatory and workplace requirements related to harvest and pre-processing processes for medicinal cannabis, including:
 - hygiene and sanitation
 - health and safety, including manual handling
 - physical security of cannabis, including secure storage areas
 - disposal and destruction of plant waste
 - recording and reporting requirements
 - identification and traceability
 - biosecurity
- principles of Good Agricultural and Collection Practices (GACP) in relation to the harvest of medicinal cannabis, including:
 - determining when to harvest for best quality and yield, by using visual and physical signs and/or testing
 - harvesting techniques
 - quality controls
- principles of Good Manufacturing Practices (GMP) in relation to pre-processing of medicinal cannabis, including:
 - climate conditions
 - disposal and destruction of plant material waste
 - entering and exit procedures
 - hygiene and sanitation
 - trimming, drying and milling techniques
 - labelling and packaging requirements, including mandatory data
 - secured storage areas for medicinal cannabis material and product
- procedures for entering and exiting drying room.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment

- plants for harvesting
- tools, equipment and materials required for harvest and pre-processing processes
- tools, equipment and materials for cleaning and sanitation
- drying room
- labelling and packaging material
- secured storage area
- workplace recording and reporting system
- specifications:
 - harvest and pre-processing plan and specifications
 - workplace procedures relating to harvest and pre-processing operations for medicinal cannabis, including security, health and safety, hygiene and sanitation, quality, recording and reporting requirements
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMD401 Apply security measures for medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to apply measures for the security of a controlled growing, licensed medicinal cannabis site.

The unit applies to individuals who are responsible for incorporating security measures in their own work and the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify security control measures	1.1 Identify and access organisation documents relating to security arrangements of medicinal cannabis site 1.2 Identify security threats to the organisation from documents and relevant legislation and regulations 1.3 Assess risks and identify control measures to minimise the risk of diversion
2. Apply security control	2.1 Apply control measures related to the physical security of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
measures	<p>cannabis, including transfer within site</p> <p>2.2 Apply control measures related to the immediate reporting of loss or theft of cannabis, including communication with emergency services, police and local government authorities</p> <p>2.3 Apply control measures related to the safe and secure disposal or destruction of cannabis</p> <p>2.4 Apply control measures related to the safety and security of the supply, delivery and transportation of cannabis</p> <p>2.5 Incorporate control measures into own work and the work of others of responsibility</p>
3. Maintain records related to security of medicinal cannabis	<p>3.1 Monitor records of supply and traceability of cannabis to ensure that they are completed and maintained according to workplace and regulatory requirements</p> <p>3.2 Check and retain site monitoring and surveillance data</p>
4. Monitor security procedural measures	<p>4.1 Monitor effectiveness of workplace policies and procedures in addressing physical security measures</p> <p>4.2 Train staff in workplace policies and procedures, and conduct regular drills in preparation for intrusion</p> <p>4.3 Monitor work duties of self and others to ensure workplace policies and procedures are applied appropriately</p> <p>4.4 Report issues and concerns with security to senior personnel according to workplace and regulatory requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret complex textual information from a range of sources to identify relevant and key information about regulatory requirements for security measures
Writing	<ul style="list-style-type: none"> Use spelling, grammar, clear language and industry terminology,

Skill	Description
	and logical structure to prepare reports
Oral communication	<ul style="list-style-type: none"> Use clear language and industry terminology when training staff and conducting drills

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMD401 Apply security measures for medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMDC401 Apply security measures for medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has applied security control measures for a medicinal cannabis site on at least one occasion, including:

- identified information from organisation and government on:
 - security threats to the organisation
 - control measures that can minimise the risk of diversion
- assessed risks and applied control measures in work routines for each of the following areas:
 - physical security of cannabis
 - reporting of loss or theft
 - disposal or destruction of cannabis
 - transportation of cannabis
- conducted an assessment on the maintenance of records and surveillance data
- monitored work of self and others for compliance with physical security measures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- regulations and compliance with meeting security standards required for the cultivation, production and manufacture of medicinal cannabis, including:
 - physical security of cannabis
 - reporting and dealing with loss or theft of cannabis
 - safe disposal or destruction of cannabis
 - safe and secure transportation of cannabis
- risk of diversion to illicit use

- processes for conducting a risk analysis
- record-keeping for traceability of cannabis and site monitoring and surveillance data
- processes for monitoring effectiveness of control measures
- process for reporting security concerns and issues.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - workplace records
 - site monitoring and surveillance data
 - government information and guidelines on the security of medicinal cannabis
- specifications:
 - workplace documentation related to security arrangements of a medicinal cannabis site
 - workplace procedures relating to the security of medicinal cannabis
 - legislation and regulations related to the security of medicinal cannabis
- relationships:
 - staff.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMD402 Monitor medicinal cannabis production for compliance and quality

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to monitor the production processes of a licensed medicinal cannabis site for compliance with regulatory, quality and record-keeping requirements.

The unit applies to individuals at the supervisory or managerial level and who are responsible for ensuring workplace operations comply with the regulatory and quality requirements of a controlled growing, licensed medicinal cannabis facility.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Monitor and review production processes for compliance with regulatory requirements	1.1 Identify and access current legislation, regulations, standards and regulatory body information relevant to licensed cultivators and manufacturers of medicinal cannabis 1.2 Identify consequences of non-compliance with legislation,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>regulations and standards</p> <p>1.3 Monitor own work practices and those of others to ensure compliance with legislation, regulations and standards</p> <p>1.4 Review workplace policies and procedures for effectiveness in complying with legislation, regulations and standards</p>
2. Implement and monitor Good Practices Standards for production of medicinal cannabis	<p>2.1 Establish quality practices and specifications for production of medicinal cannabis</p> <p>2.2 Identify hazards, assess risks and determine critical control limits, measures and corrective actions for production processes</p> <p>2.3 Contribute to the development of procedures for each identified control limit, measure and corrective action to ensure optimum quality and minimise hazards and risks</p> <p>2.4 Allocate responsibilities and instructions for carrying out procedures to staff and contractors</p> <p>2.5 Provide staff and contractors with training on the quality standards policies and procedures in the area of responsibilities</p> <p>2.6 Monitor day-to-day operations for effectiveness of quality standards procedures</p> <p>2.7 Investigate, evaluate and record production deviations as required</p>
3. Manage recording and reporting requirements	<p>3.1 Identify recording and reporting requirements of licensed cultivators and manufacturers of medicinal cannabis</p> <p>3.2 Monitor regulatory recording and reporting requirements for activities relating to supply, traceability, storage, and disposal and destruction of medicinal cannabis</p> <p>3.3 Maintain recording requirements and completion to support quality standards</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret complex textual information from a range of sources to identify relevant and key information about compliance and quality requirements
Writing	<ul style="list-style-type: none"> Document procedures and instructions for carrying out procedures using clear language and industry terminology
Oral communication	<ul style="list-style-type: none"> Use clear language and industry terminology when instructing and training staff and contractors

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC402 Monitor medicinal cannabis production for compliance and quality	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMDC402 Monitor medicinal cannabis production for compliance and quality

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively monitored production processes of medicinal cannabis that apply in own area of responsibility, to ensure compliance with legislation, regulations and quality standards on at least one occasion, including:

- reviewed workplace procedures for compliance with legal and regulatory requirements and elements of Good Practices Standards
- conducted a risk and hazard identification audit and established critical control limits, measures and corrective actions
- instructed staff and contractors in quality procedures
- identified and managed record requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislation, regulations and standards relevant to the production of medicinal cannabis
- roles and functions of commonwealth government authorities responsible for administering the legislation and standards
- legislative and regulatory responsibilities required of licensed cultivators and manufacturers of medicinal cannabis, including recording and reporting requirements
- Good Practices Standards and organisation quality management systems relevant to the production of medicinal cannabis, including:
 - Good Agricultural and Collection Practices (GACP) in relation to cultivation and harvesting of plants, and quality and consistency of products
 - Good Manufacturing Practices (GMP) in relation to pre-processing and quality of products
- process for conducting risk and hazard identification and determining critical control limits, measures and corrective actions

- processes used to monitor regulatory compliance and quality practices in work operations and procedures
- purpose and process used for conducting and documenting a deviation investigation
- methods used for training staff and contractors on policies and procedures
- function and operations of organisation record system.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - workplace recording system
- specifications:
 - legislation and regulations related to the production of medicinal cannabis
 - workplace quality procedures
 - workplace procedures relating to the production of medicinal cannabis, including recording and reporting requirements
- relationships:
 - staff and/or contractors.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC/MDC403 Plan and implement a propagation program for medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan, implement and monitor a propagation program for medicinal cannabis. It requires the ability to determine propagation requirements to develop the propagation plan, communicate plans and procedures to implement the program, and monitor and evaluate the effectiveness of the program.

The unit applies to individuals at the supervisory or managerial level and who are responsible for managing and monitoring propagation processes on a licensed medicinal cannabis production site.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine propagation requirements for	1.1 Identify and confirm cultivation specifications and requirements with senior personnel 1.2 Determine propagation methods and quantity of propagation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
medicinal cannabis	<p>material based on product and production targets</p> <p>1.3 Determine space requirements for the program, including any parameters that impact on propagation</p> <p>1.4 Determine legal and regulatory considerations</p>
2. Develop propagation plan	<p>2.1 Identify labour, materials, tools and equipment needs for crop propagation</p> <p>2.2 Determine propagation media requirements based on the propagation method to be used</p> <p>2.3 Determine identification and quality specifications for propagation material</p> <p>2.4 Determine monitoring and treatment strategies to maintain health of propagation material</p> <p>2.5 Develop schedules for propagation activities, including monitoring of propagation material health, water and nutrients requirements and environmental climate conditions</p> <p>2.6 Identify hazards, assess risks and determine control limits, measures and corrective actions that ensure health and safety, hygiene, quality and security requirements</p>
3. Implement and monitor propagation program	<p>3.1 Communicate propagation plan and establish roles and responsibilities to all involved</p> <p>3.2 Communicate and provide training on workplace procedures and schedules, including health and safety, hygiene and security requirements for propagation activities</p> <p>3.3 Monitor hygiene, quality and record-keeping requirements during propagation activities</p> <p>3.4 Confirm propagation activities meet legal and regulatory requirements</p>
4. Evaluate propagation program	<p>4.1 Evaluate propagation program for effectiveness</p> <p>4.2 Identify and record variances from plan and scheduled activities</p> <p>4.3 Assess propagated plants for health and quality</p> <p>4.4 Complete reports on propagation activities to meet workplace and compliance requirements, including deviation investigations as required</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret a range of textual and numerical information relevant to propagation requirements to determine required actions
Writing	<ul style="list-style-type: none"> Prepare and logically structure components of the propagation plan
Oral communication	<ul style="list-style-type: none"> Participate in verbal exchanges to report and present information to a range of personnel
Numeracy	<ul style="list-style-type: none"> Calculate required quantities of propagation materials to meet production objectives Calculate required resources for propagation plan for a period of time

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC403 Plan and implement a propagation program for medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC MDC403 Plan and implement a propagation program for medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned and implemented a propagation program for medicinal cannabis for at least one propagation cycle, including:

- documented a plan that incorporates each of the following:
 - propagation methods and required quantities of propagation materials
 - resource requirements
 - identification and quality specifications
 - strategies for monitoring and treating propagation material
 - schedules for propagation activities
 - risk assessment and control measures and actions
 - regulatory requirements
- communicated and provided training on propagation activities
- monitored and evaluated activities against the plan and results of propagated plants
- reported on propagation monitoring activities, including any deviations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for developing a propagation program for medicinal cannabis, including determining:
 - propagation material needs to meet production targets, which may include mother plants, seeds or tissue culture
 - propagation water and nutrient requirements and environmental climate conditions
 - quality specifications
 - identification, propagation and establishment techniques

- application of non-chemical intervention or treatments
- problems performing propagation activities, and preventative action
- hygiene standards required for propagation activities
- preferred types of propagation media
- scheduling for propagation activities
- legal and regulatory requirements required of licensed cultivators of medicinal cannabis, including reporting requirements
- principles of Good Agricultural and Collection Practices (GACP) in relation to the propagation of medicinal cannabis plants, including:
 - propagation methods
 - traceability
 - hygiene and sanitation
 - health and safety
 - monitoring, sampling and control
 - documentation processes, including deviation investigations reports
- methods and systems that may be used for developing, monitoring and evaluating propagation plans, schedules and workplace procedures
- principles of risk assessment, including hazard identification, risk analysis, control limits, control measures and corrective actions and evaluation
- effective training methods used to train staff on workplace procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - software applications/workplace documentation for developing plans and schedules
- specifications:
 - cultivation specifications
 - workplace procedures relating to the propagation of medicinal cannabis, including security, health and safety, hygiene and sanitation, quality, recording and reporting requirements
- relationships:
 - senior personnel and staff.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMDC404 Plan and implement a care and maintenance program for medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan, implement and monitor a program for the care and maintenance of medicinal cannabis plants during their vegetative and flowering cycles. It requires the ability to determine plant care and maintenance requirements, develop the maintenance plan, communicate the plan and procedures to implement the program, and monitor and evaluate the effectiveness of the program. The program may include the care and maintenance of mother plants that are kept in the vegetative stage and used for cuttings and clones.

The unit applies to individuals at the supervisory or managerial level and who are responsible for managing and monitoring the care and maintenance of plants on a licensed medicinal cannabis production site.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine care and	1.1 Identify and confirm cultivation specifications with senior

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
maintenance requirements for medicinal cannabis plants	personnel 1.2 Determine plant care and maintenance requirements, including climate conditions for growing and flowering cycles 1.3 Determine space requirements for the program, including any parameters that impact on required growing conditions 1.4 Determine legal and regulatory considerations
2. Develop care and maintenance plan	2.1 Identify labour, materials, tools and equipment needs for crop care and maintenance 2.2 Determine identification and quality specifications for medicinal cannabis plants during vegetative and flowering cycles 2.3 Determine monitoring and treatment strategies to maintain health of medicinal cannabis plants 2.4 Develop schedules for care and maintenance activities, including monitoring of plant health, water and nutrient requirements and environmental climate conditions 2.5 Identify hazards, assess risks and determine control limits, measures and corrective actions that ensure health and safety, hygiene, quality and security requirements
3. Implement and monitor care and maintenance program	3.1 Communicate plan and establish roles and responsibilities to all involved 3.2 Communicate and provide training on workplace procedures and schedules, including health and safety, hygiene and security requirements for care and maintenance activities 3.3 Monitor hygiene, quality and record-keeping requirements during care and maintenance activities 3.4 Confirm maintenance activities meet legal and regulatory requirements
4. Evaluate care and maintenance program	4.1 Evaluate program for effectiveness 4.2 Identify and record variances from plan and scheduled activities 4.3 Assess plants for health and quality 4.4 Complete reports on care and maintenance activities to meet workplace and compliance requirements, including deviation investigations as required

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none">Interpret a range of textual and numerical information relevant to care and maintenance requirements to determine required actions
Writing	<ul style="list-style-type: none">Prepare and logically structure components of the care and maintenance plan
Oral communication	<ul style="list-style-type: none">Participate in verbal exchanges to report and present information to a range of personnel
Numeracy	<ul style="list-style-type: none">Calculate required resources for maintenance plan for a period of time

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC404 Plan and implement a care and maintenance program for medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC MDC404 Plan and implement a care and maintenance program for medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned and implemented a program for the care and maintenance of medicinal cannabis plants for at least one of their vegetative and flowering cycles, including:

- documented a plan that incorporates each of the following:
 - plant care and maintenance requirements
 - resource requirements
 - identification and quality specifications
 - strategies for monitoring and treating plants
 - schedules for care and maintenance activities
 - risk assessment and control measures and actions
 - regulatory requirements
- communicated and provided training on plant care and maintenance activities
- monitored and evaluated activities against the plan
- reported on care and maintenance activities, including any deviations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for developing a care and maintenance program for medicinal cannabis during the growing and flowering cycles, including determining:
 - care and maintenance requirements, including water and nutrient requirements and environmental climate conditions for vegetative and flowering cycles, and for preserving mother plants
 - identification and quality specifications
 - application of non-chemical intervention or treatments

- problems performing maintenance activities, and preventative action
- hygiene standards required for maintenance activities
- scheduling for care and maintenance activities
- legal and regulatory requirements required of licensed cultivators of medicinal cannabis, including reporting requirements
- principles of Good Agricultural and Collection Practices (GACP) in relation to the care and maintenance of medicinal cannabis, including:
 - cultivation processes during vegetative and flowering cycles, and preserving mother plants
 - traceability
 - hygiene and sanitation
 - health and safety
 - monitoring, sampling and control
 - documentation processes, including deviation investigations reports
- methods and systems that may be used for developing, monitoring and evaluating maintenance plans, schedules and workplace procedures
- principles of risk assessment, including hazard identification, risk analysis, control limits, control measures and corrective actions and evaluation
- effective training methods used to train staff on workplace procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - software applications/workplace documentation for developing plans and schedules
- specifications:
 - cultivation specifications
 - workplace procedures relating to the care and maintenance of medicinal cannabis, including security, health and safety, hygiene and sanitation, quality, recording and reporting requirements
- relationships:
 - senior personnel and staff.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMDC405 Plan and implement a harvest and pre-processing program for medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan, implement and monitor a program for the harvest and pre-processing of medicinal cannabis. It requires the ability to determine harvest and pre-processing requirements, develop the harvest and pre-processing plan, communicate the plan and procedures to implement the program, and monitor and evaluate the effectiveness of the program.

The unit applies to individuals at the supervisory or managerial level and who are responsible for managing and monitoring harvest and pre-processing operations on a licensed medicinal cannabis production site.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Medicinal Cannabis (MDC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine harvest and pre-processing requirements for	1.1 Identify and confirm cultivation and production specifications with senior personnel 1.2 Determine harvest and pre-processing requirements, including

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
medicinal cannabis	optimum harvest time based on product specifications and implementation of Good Manufacturing Practices 1.3 Determine space requirements for the program, including any parameters that impact on manual handling 1.4 Determine legal and regulatory considerations
2. Develop harvest and pre-processing plan	2.1 Identify labour, materials, tools and equipment needs for crop harvest and pre-processing 2.2 Determine identification and quality specifications for medicinal cannabis during harvest and each pre-processing stage 2.3 Determine monitoring strategies to maintain quality of harvested plants and product for each process 2.4 Develop schedules for harvest and pre-processing activities, including monitoring of environmental climate conditions for each process 2.5 Identify hazards, assess risks and determine control limits, measures and corrective actions that ensure health and safety, hygiene, quality and security requirements
3. Implement and monitor harvest and pre-processing program	3.1 Communicate harvest and pre-processing plan, and establish roles and responsibilities to all involved 3.2 Communicate workplace procedures and schedules, including health and safety, hygiene and security requirements for harvest and pre-processing activities 3.3 Monitor hygiene, quality and record-keeping requirements during harvest and pre-processing activities 3.4 Confirm harvest and pre-processing activities meet legal and regulatory requirements
4. Evaluate harvest and pre-processing program	4.1 Evaluate harvest and pre-processing program for effectiveness 4.2 Identify and record variances from plan and scheduled activities 4.3 Assess quality of pre-processed product 4.4 Complete reports on harvest and pre-processing activities to meet workplace and compliance requirements, including any deviations

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none">Interpret a range of textual and numerical information relevant to harvest and pre-processing requirements to determine required actions
Writing	<ul style="list-style-type: none">Prepare and logically structure components of the harvest and pre-processing plan
Oral communication	<ul style="list-style-type: none">Participate in verbal exchanges to report and present information to a range of personnel
Numeracy	<ul style="list-style-type: none">Calculate required resources for harvest and pre-processing plan for a period of time

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMDC405 Plan and implement a harvest and pre-processing program for medicinal cannabis	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC MDC405 Plan and implement a harvest and pre-processing program for medicinal cannabis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned and implemented a program for the harvest and pre-processing of medicinal cannabis for at least one crop harvest, including:

- documented a plan that incorporates each of the following:
 - harvest and pre-processing requirements
 - resource requirements
 - identification and quality specifications
 - strategies for monitoring and treating plants
 - schedules for harvest and pre-processing activities
 - risk assessment and control measures and actions
 - regulatory requirements
- communicated and provided training on harvest and pre-processing activities
- monitored and evaluated activities against the plan
- reported on harvest and pre-processing activities, including any deviations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for developing a harvest and pre-processing program for medicinal cannabis, including determining:
 - harvest and pre-processing requirements, including environmental climate conditions for each process
 - identification and quality specifications
 - problems performing harvest and pre-processing activities, and preventative action
 - health and safety considerations, including manual handling

- hygiene standards required for harvest and pre-processing activities
- scheduling for harvest and pre-processing activities
- legal and regulatory requirements required of licensed cultivators of medicinal cannabis, including reporting requirements
- principles of Good Agricultural and Collection Practices (GACP) in relation to the harvest and pre-processing of medicinal cannabis, including:
 - determining when to harvest for best quality and yield, and based on required active ingredient
 - traceability
 - hygiene and sanitation
 - climate conditions
 - quality controls
 - documentation processes
- principles and regulations for Good Manufacturing Practices (GMP) in relation to pre-processing of medicinal cannabis, including:
 - disposal and destruction of plant material waste
 - entering and exit procedures
 - hygiene and sanitation
 - trimming, drying and milling processes
 - labelling and packaging requirements, including mandatory data
 - secured storage areas for medicinal cannabis material and product
- methods and systems that may be used for developing, monitoring and evaluating harvest and pre-processing plans, schedules and workplace procedures
- principles of risk assessment, including hazard identification, risk analysis, control limits, control measures and corrective actions and evaluation
- effective training methods used to train staff on workplace procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a medicinal cannabis production site or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - software applications/workplace documentation for developing plans and schedules
- specifications:
 - cultivation and production specifications
 - workplace procedures relating to the harvest and pre-processing of medicinal cannabis, including security, health and safety, hygiene and sanitation, quality, recording and reporting requirements
- relationships:

- senior personnel and staff.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMER303 Sell products and services

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to sell products and services.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Merchandising and Sales (MER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Engage customer	1.1 Approach customer in a timely and professional manner 1.2 Use interpersonal skills to engage customer

Element	Performance criteria
	1.3 Present customers with purchase options that address their needs and assist to identify their preferred option 1.4 Identify personal and professional and legal limitations in addressing customer needs and seek assistance from appropriate personnel
2. Sell products and services	2.1 Determine prices and quotations on the advice of appropriate personnel and provide to customer 2.2 Complete sales to maximise potential for customer satisfaction 2.3 Identify and respond to opportunities for up selling and repeat sales
3. Maintain products	3.1 Handle and store products safely and efficiently 3.2 Complete documentation and re-ordering 3.3 Review sales techniques to enhance future sales results

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMER303A Sell products and services.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMER303 Sell products and services

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- engage customers
- identify the potential for a sale
- present purchase options to the customer
- provide quotations
- complete a sale
- follow enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- customer needs in various merchandising settings
- customer buying signals
- sales techniques
- how to effectively engage and communicate with a range of customers from culturally diverse backgrounds, and of varying physical and mental abilities
- legal requirements in sales environments, particularly Fair Trading, Trade Practices and Sale of Goods legislation, public liability and work health and safety legislation

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC MER304 Recommend irrigation products and services

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to recommend irrigation products and services to fulfil the needs of a client.

It applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Merchandising and Sales (MER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Research store product range	1.1 Accessing relevant sources of information to develop product knowledge 1.2 Identify products according to relevant product information 1.3 Operate store products, machinery and equipment safely 1.4 Demonstrate a broad knowledge of irrigation product range

Element	Performance criteria
2. Recommend irrigation products	2.1 Identify client's needs 2.2 Provide details of product specifications and explain to clients to assist buying decisions 2.3 Explain features and benefits of products to clients to create a buying environment
3. Estimate quantities	3.1 Estimate quantities of irrigation products accurately from measurements and information provided according to product requirements 3.2 Provide client with accurate quotation for estimated quantities
4. Advise on irrigation product warranties	4.1 Provide client with clear explanations of the comparisons between products and manufacturer's warranties 4.2 Confirm individual product warranty terms and conditions from relevant sources of information 4.3 Provide client with written information regarding individual product warranty terms and conditions, especially extended or promotional warranties
5. Negotiate price and payment options	5.1 Explain payment options including store recommended retail pricing for various brand options 5.2 Negotiate individual product prices where necessary to achieve sales
6. Advise on and arrange product service and repairs	6.1 Question client to determine nature of problem 6.2 Identify problem by accessing manufacturer's information 6.3 Offer solutions taking in consideration the nature of problem and available product information 6.4 Identify and discuss the service or repair process 6.5 Quote price and timeline for basic service or repairs 6.6 Obtain client details and record on repair form 6.7 Label item for repair and store securely 6.8 Notify client on completion of service or repair

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCIRG307A Recommend irrigation products and services.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMER304 Recommend irrigation products and services

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- demonstrate and assemble irrigation products and components
- determine pump capacities in relation to proposed application
- perform basic diagnostic techniques

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for recommending irrigation products and services
- manufacturer's specifications for a range of products
- price negotiation techniques and payment options for the store
- pump and irrigation equipment characteristics, technical capabilities and limitations
- pump and irrigation equipment components, controls, features and functions
- store irrigation products and pump range
- store product and service and repair policy

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMER305 Provide information on hardware products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify customer needs and provide information on hardware products.

The unit applies to individuals who provide information on hardware products under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Merchandising and Sales (MER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish customer needs	1.1 Use interpersonal skills to engage customer and identify needs 1.2 Handle customer enquiries courteously and promptly according to workplace procedures and legislative requirements 1.3 Match available products to customer needs

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Research and provide product information	2.1 Research and update knowledge and understanding of hardware products from authoritative sources 2.2 Provide information to customer in a timely and professional manner according to workplace procedures and legislative requirements 2.3 Exhibit and safely demonstrate products to customer 2.4 Address customer concerns and questions and suggest alternative or additional products to meet requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about hardware product range and legislative requirements
Oral communication	<ul style="list-style-type: none"> Use clear language with customers to gather information and match products to customer needs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMER305 Provide information on hardware products	AHCMER302 Provide advice on hardware products	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMER305 Provide information on hardware products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has provided information on hardware products on at least three occasions, and has:

- engaged with and advised customer on the range of products available for their specific application and environment
- complied with relevant legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- represented the workplace in a timely and professional manner when dealing with customers
- applied workplace procedures for providing information on hardware products and services, and workplace health and safety requirements
- demonstrated hardware products.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- workplace hardware product range and services, and how to source research information
- industry terminology used for hardware products
- workplace procedures for providing information on hardware products and workplace health and safety requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - hardware products
- specifications:
 - legislative requirements relevant to sales environments, including fair trading, trade practices and sale of goods legislation and public liability
 - workplace procedures relevant to providing information on hardware products and services, and workplace health and safety requirements
- relationships:
 - customers.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMER306 Sell products and services

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to engage the customer and sell and maintain products and services.

This unit applies to individuals who sell products and services under broad direction and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Merchandising and sales (MER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish customer needs	1.1 Approach customer in a timely and professional manner 1.2 Use interpersonal skills to engage customer 1.3 Present customers with purchase options that address their needs, and assist to identify their preferred option 1.4 Identify personal, professional and legislative requirements in

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	addressing customer needs, and seek assistance from appropriate personnel
2. Sell products and services	2.1 Determine prices and quotations on the advice of appropriate personnel, and provide to customer 2.2 Complete sales to maximise potential for customer satisfaction 2.3 Identify and respond to opportunities for up-selling and repeat sales 2.4 Review sales techniques to enhance future sales results
3. Store and maintain products	3.1 Handle and store products safely and efficiently 3.2 Complete sales documentation and reorder products

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about legislative requirements
Writing	<ul style="list-style-type: none"> Record product sales and reordering
Oral communication	<ul style="list-style-type: none"> Use clear language with customer to gather information and confirm customer needs Initiate discussions with appropriate personnel, using clear language to seek sales assistance

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMER306 Sell	AHCMER303 Sell	Performance criteria	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
products and services	products and services	clarified Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMER306 Sell products and services

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has sold products and services on at least three occasions, and has:

- engaged customers
- identified the potential for a sale
- complied with relevant legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- applied workplace procedures for safely handling, storing and selling products and services
- provided quotations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles of customer service and sales techniques
- how to effectively engage and communicate with a range of customers from diverse backgrounds
- customer needs in various merchandising settings
- customer buying signals
- legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- workplace procedures for safely handling, storing and selling products and services.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - legislative requirements relevant to sales environments, including fair trading, trade practices and sale of goods legislation and public liability
 - workplace procedures relevant to safely handling, storing and selling products and services
- relationships:
 - customers, appropriate personnel.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMER401 Coordinate customer service and networking activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to coordinate customer service and networking activities.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

This unit applies to agricultural or horticultural merchandise or department managers who have responsibility for customer service delivery by others.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Merchandising and Sales (MER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Contribute to quality customer standards	1.1 Access, interpret, apply and monitor customer service standards in the workplace 1.2 Make contributions to the development, refinement and improvement of service policies, standards and processes 1.3 Ensure customer interactions are consistent with legislation, codes of practice and enterprise policies
2. Implement customer service systems	2.1 Encourage personnel to consistently implement customer service systems 2.2 Review customer feedback in consultation with appropriate personnel and analyse when improving work practices 2.3 Identify customer service complaints and make adjustments to ensure continued service quality 2.4 Communicate adjustments to all those involved in service delivery within appropriate time frames 2.5 Coordinate and manage delivery of services or products to ensure they effectively and efficiently meet agreed quality standards
3. Manage networks to ensure customer needs are addressed	3.1 Establish effective regular communication with customers 3.2 Establish, maintain and expand networks to ensure referral of customers to products or services 3.3 Establish procedures to ensure that decisions about targeting of customer services are based on up-to-date information about the customer and the products/services available 3.4 Establish procedures to ensure that referrals are based on the matching of the assessment of customer needs and availability of products/services 3.5 Maintain records of customer interaction in accordance with organisational guidelines

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMER401A Coordinate customer service and networking activities.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMER401 Coordinate customer service and networking activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- access and apply customer service policies and procedures
- respond to customer feedback and complaints
- develop and use networks to source goods and services
- provide value for the customer in sourcing and supplying goods and services
- maintain records of customer feedback and interactions

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant legislation, codes and enterprise policies
- the organisation's business structure, products and services
- customer service systems/procedures including the continuous quality improvement framework, together with some knowledge of the customer population and how the system applies to delivering customer service to that customer population
- the principles of customer service
- the principles of effective communication in relation to listening, questioning and non-verbal communication
- the individual's role in delivering customer service
- techniques for dealing with customers with special needs
- techniques for building relationships of trust and mutually acceptable outcomes
- related organisations, agencies and networks
- the principles and operations of networks

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMER404 Provide advice on agronomic products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide advice on agronomic products.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

This unit applies to rural products merchandisers whose job role includes providing advice on agronomic products including fertilisers.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Merchandising and Sales (MER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Identify customer needs	1.1 Use interpersonal skills to identify customer needs 1.2 Handle customer enquiries courteously and promptly in accordance with enterprise and legislative requirements 1.3 Match available products to customer needs and against ecological considerations 1.4 Research and update knowledge and understanding of agronomic products and related products from authoritative sources 1.5 Research local enterprise and district requirements for agronomic products
2. Provide product advice	2.1 Provide advice that addresses customer needs in a timely and professional manner and is in line with enterprise and legislative requirements 2.2 Exhibit or demonstrate products to customer in line with enterprise procedures and legislative requirements 2.3 Organise product trials of products when required 2.4 Suggest alternative and additional products and services 2.5 Address customers concerns and questions in line with enterprise requirements 2.6 Provide relevant safety information to the customer for recommended products

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMER404A Provide advice on agronomic products.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHC MER404 Provide advice on agronomic products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research sources of agronomic information to retain technical currency in all aspects of agronomy relevant to local district requirements
- engage with and give advice to customers
- ensure that the advice and product type are applicable and suitable for the purpose and growing environment of the client
- encourage add on sales
- represent the enterprise in a professional manner when dealing with customers
- follow enterprise of work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- customer service techniques
- systems and procedures for the safe handling of products
- enterprises business values, structure, products and services
- industry terminology for products
- requirements of local or specific customers
- relevant requirements of work health and safety, industry, fair trading, trade practices, sales of goods, environment and public liability legislation
- agronomic products including fertilizers and crop seeds and their uses
- relevant components of State/Territory Acts relating to fertilisers and certified seeds

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMER407 Provide irrigation sales and service

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide irrigation sales and service.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Merchandising and Sales (MER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify customer needs	1.1 Use appropriate interpersonal skills to accurately identify customer needs 1.2 Handle customer enquiries courteously and promptly

Element	Performance criteria
	1.3 Match available products to customer needs and against ecological considerations 1.4 Research and update knowledge and understanding of irrigation products regularly from authoritative sources
2. Provide advice on products and services	2.1 Provide advice that addresses customer needs to customers in a timely and professional manner 2.2 Explain or show products to customer that may meet needs 2.3 Suggest alternative and additional products and services as necessary 2.4 Address customer concerns and questions sensitively
3. Recommend irrigation components and pumps	3.1 Interpret irrigation design 3.2 Confirm pump and component requirements and discuss with customer 3.3 Provide advice on irrigation pumps based on suitability for the task, energy efficiency from pump curves and serviceability 3.4 Provide advice on components based on technically correct and current information
4. Research irrigation innovations and products	4.1 Maintain contacts in irrigation product development and review new products regularly 4.2 Study exhibitions and field displays to update technical expertise 4.3 Read and incorporate technical information and extension advice to provide advice to customers
5. Conduct retail transactions with irrigation clients	5.1 Estimate quantities for irrigation installation projects 5.2 Provide quotes on products and services 5.3 Negotiate price and payment options 5.4 Provide advice on irrigation product warranties 5.5 Organise product service and repairs 5.6 Organise delivery of irrigation merchandise

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCIRG428A Provide irrigation sales and service.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMER407 Provide irrigation sales and service

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- calculate pressure loss due to irrigation components
- calculate pumping requirements
- conduct research of products
- estimate requirements for materials and components from a plan
- identify adverse environmental impacts of irrigation pumping activities and take appropriate remedial action
- implement and follow work health and safety and environmental requirements
- interpret irrigation plans
- interpret pump curves
- monitor performance of pumps and irrigation components
- pressure testing pumps
- provide customer service
- select irrigation components for a system
- use pressure testing equipment
- use recorded information to review energy and water efficiency for an irrigation system

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of irrigation sales and service
- basic irrigation system diagnostic techniques
- demonstration and assembly of irrigation products and components
- determination of pump capacities in relation to proposed application

- interpretation of manufacturers specifications
- irrigation components technical specifications and suitability
- price negotiation and payment options
- pump and irrigation equipment characteristics, technical capabilities and limitations
- pump and irrigation equipment components, controls, features and functions
- store irrigation products and pump range
- store product and service and repair policy

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMER408 Coordinate customer service and networking activities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to contribute to quality customer service standards, and implement and manage customer service systems and networking activities.

The unit applies to individuals who apply specialist skills and knowledge to coordinate customer service and networking activities. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Merchandising and Sales (MER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Contribute to quality customer service	1.1 Access, interpret, apply and monitor customer service standards in

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
standards	<p>the workplace</p> <p>1.2 Make contributions to the development, refinement and improvement of service policies, standards and processes</p> <p>1.3 Confirm customer service interactions are consistent with legislation, codes of practice and workplace procedures</p>
2. Monitor and review customer service systems	<p>2.1 Encourage personnel to consistently implement customer service standards</p> <p>2.2 Review and analyse customer feedback in consultation with appropriate personnel to improve work practices</p> <p>2.3 Identify customer service complaints and make adjustments to customer service system to ensure continued customer service standards quality is met</p> <p>2.4 Communicate customer service system adjustments to all those involved in service delivery within appropriate timeframes</p> <p>2.5 Coordinate and manage delivery of services or products to ensure customer service standards are met</p>
3. Manage networks to ensure customer needs are addressed	<p>3.1 Establish regular communication with customers</p> <p>3.2 Establish, maintain and expand networks and referral of customers to products or services</p> <p>3.3 Establish procedures to ensure that decisions about targeting of customer services are based on up-to-date customer, product and service information</p> <p>3.4 Establish procedures to ensure that referrals are based on matching customer needs to products and services</p> <p>3.5 Maintain records of customer interaction according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information on customer service standards, workplace procedures, and legislative and code of practice requirements Interpret textual information from customer service complaints
Writing	<ul style="list-style-type: none"> Document customer service system adjustments
Oral communication	<ul style="list-style-type: none"> Use clear language with customers and appropriate personnel to gather information and match referral of customers to products and services, analyse and review customer feedback and communicate, customer service system adjustments

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMER408 Coordinate customer service and networking activities	AHCMER401 Coordinate customer service and networking activities	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMER408 Coordinate customer service and networking activities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has coordinated customer service and networking activities on at least two occasions, and has:

- accessed and applied customer service systems, standards and procedures
- complied with relevant legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- responded to customer feedback and complaints
- represented the workplace in a professional manner when dealing with customers
- developed and used networks to source goods and services
- maintained records of customer feedback and interactions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- customer service systems and practice, including:
 - principles of customer service
 - the individual role in delivering customer service
 - techniques for building relationships of trust and mutually acceptable outcomes
 - principles and operations of networks
 - quality improvement
 - customer demographic
 - how the system delivers customer service to target customer demographic
- legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- workplace procedures, legislation and codes of practice requirements applicable to customer service

- the principles of effective communication in relation to listening, questioning and non-verbal communication
- workplace business structure, products and services.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - customer service systems
- specifications:
 - customer service standards
 - legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
 - workplace procedures, legislation and codes of practice requirements applicable to customer service
- relationships:
 - appropriate personnel, customers
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMER501 Develop a sales strategy for rural products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop a sales strategy for rural products.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

This unit applies to individuals who take responsibility for their own work and who provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

This unit applies to retail and wholesale rural products managers.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Merchandising and Sales (MER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Review existing sales plans	1.1 Review current market returns against sales objectives for the property 1.2 Analyse and compare current performance data to relevant benchmark information 1.3 Identify trends and opportunities in respect to customer requirements 1.4 Review current specifications for products and services
2. Devise a sales strategy	2.1 Identify range of market options for farm products and services 2.2 Analyse alternative market options for their profitability and feasibility consistent with sales objectives for property 2.3 Review the legal implications of the sales strategy 2.4 Develop sales plan identifying product specifications and quality assurance strategy, target market outlets, timing and volume of sales and price risk management strategy 2.5 Determine available resource commitments and capacity to implement the sales strategy 2.6 Define contingency arrangements to manage variations in production and market prices
3 Implement and review a sales strategy	3.1 Conduct sales according to the sales strategy and adjust according to the contingency plan 3.2 Review and amend sales plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMER501A Develop a sales strategy for rural products.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMER501 Develop a sales strategy for rural products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- review current product sales against the marketing plan
- identify:
 - product specifications and quality assurance strategy
 - target market outlets
 - timing and volume of sales
 - price risk management strategy
- assess a range of options for selling rural products
- devise a sales strategy
- implement the sales strategy and review against targets in the marketing plan

Knowledge Evidence

The candidate must demonstrate knowledge of:

- potential market outlets
- customer specifications for products and services
- relevant information sources related to markets and market returns
- marketing and promotional planning targets
- relevant work health and safety legislation, codes of practice and enterprise requirements
- relevant commercial law and legislation

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC MER502 Develop a sales strategy for rural products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to review existing sales plans, and develop, implement and review a sales strategy for rural products.

The unit applies to individuals who apply specialised skills and knowledge to the development of a sales strategy for rural products, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Merchandising and Sales (MER)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review existing sales plans	1.1 Review current market returns against sales objectives for the business 1.2 Analyse and compare current performance data to relevant

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	benchmark information 1.3 Identify trends and opportunities in respect to customer requirements 1.4 Review current specifications for products and services
2. Devise a sales strategy	2.1 Identify range of market options for rural products and services 2.2 Analyse alternative market options for their profitability and feasibility consistent with sales objectives for the business 2.3 Develop sales plan identifying product specifications and quality assurance strategy, target market outlets, timing and volume of sales, and price risk management strategy 2.4 Review the implications of the sales strategy according to legislation and codes of practice 2.5 Determine available resource commitments and capacity to implement the sales strategy 2.6 Define and develop contingency plan to manage variations in product and market prices
3. Implement sales strategy	3.1 Conduct sales according to the sales strategy 3.2 Adjust sales strategy according to contingency plan 3.3 Monitor sales and measure performance against sales strategy targets

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for rural products sales strategy, contingency plan and legal requirements
Writing	<ul style="list-style-type: none"> Document rural products sales strategy and contingency plan

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMER502 Develop a sales strategy for rural products	AHCMER501 Develop a sales strategy for rural products	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMER502 Develop a sales strategy for rural products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed a sales strategy for rural products on at least one occasion, and has:

- reviewed current product sales against the marketing plan
- assessed a range of options for selling rural products
- developed a sales plan that identifies:
 - product specifications and quality assurance strategy
 - target market outlets
 - timing and volume of sales
 - price risk management strategy
- devised a sales strategy
- developed a contingency plan
- implemented the sales strategy and reviewed against targets in the marketing plan
- monitored performance against sales strategy targets.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- marketing plans relevant to the development of a rural products sales strategy'
- relevant information sources related to markets and market returns
- specifications for products and services
- potential market outlets relevant to rural products sales strategy
- legislation and codes of practice requirements relevant to developing a sales strategy for rural products
- marketing and promotional planning targets.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - marketing plans
 - sales benchmark information
 - product and service specifications
- specifications:
 - legislation and codes of practice requirements applicable to developing a sales strategy for rural products.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM211 Operate side by side utility vehicles

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to undertake work using a side by side utility vehicle used for general transport, carrying loads, towing small trailers and mustering stock.

All work must be carried out to comply with workplace procedures, work health and safety requirements manufacturer's specifications and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare side by side	1.1 Confirm the activity to be undertaken with supervisor, including

Element	Performance criteria
utility vehicle for use	identifying safe working areas, potential hazards and implementation of safe working procedures 1.2 Conduct safety pre operational checks on the vehicle and report faults or malfunctions for repair 1.3 Use and maintain personal protective equipment 1.4 Attach equipment and loads that do not exceed the weight limitations or change the dynamic stability of the vehicle 1.5 Secure loads and ensure weight does not exceed limits
2. Operate side by side utility vehicle	2.1 Operate machinery and equipment in a safe, efficient and controlled manner 2.2 Operate side by side utility vehicles in accordance with task requirements, conditions and manufacturers operating guidelines 2.3 Assess and minimise potential risks to self, others and the environment 2.4 Ensure that the vehicles seat belts and other safety features are functional and used 2.5 Identify and account for environmental implications associated with machinery operation
3. Complete work	3.1 Conduct shut-down procedures according to manufacturer's specifications and enterprise requirements 3.2 Perform routine operational servicing and minor maintenance 3.3 Identify and report malfunctions, faults, irregular performance or damage 3.4 Clean, secure and store machinery 3.5 Ensure biosecurity procedures are followed where required 3.6 Maintain machinery use records for servicing purposes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMOM211A Operate side by side utility vehicles.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM211 Operate side by side utility vehicles

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and risks associated with side by side utility vehicle use
- conduct pre and post operational checks
- operate side by side utility vehicles in a safe, efficient and controlled manner
- minimise environmental impacts of side by side utility vehicle use
- perform any required minor maintenance
- follow wash-down procedures in line with biosecurity guidelines
- follow enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- equipment characteristics, technical capabilities and limitations
- safe driving techniques in a range of surface conditions and terrain
- transporting the side by side utility vehicles on a trailer or transportation device
- manufacturer's specifications and workplace requirements for pre-start checks, machinery operation techniques, load carrying operator level servicing and shutdown emergency procedures
- components and controls, features and functions
- enterprise work health and safety policies
- relevant State /Territory legislation in regard to side utility vehicle use

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting. All evidence collected must meet minimum requirements including industry standard timeframes for performance of tasks.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM212 Operate quad bikes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to operate and maintain quad bikes as well as load and unload them onto trailers or other vehicles used for their transport.

All work must be carried out to comply with workplace procedures, work health and safety requirements manufacturer's specifications and operator manuals and sustainability practices.

Working with quad bikes is an inherently dangerous activity. Individuals who work at this level must be thoroughly instructed in all work health and safety aspects of operating quad bikes.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and provide solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare a quad bike for operation	1.1 Confirm the activity to be undertaken with supervisor, including potential hazards and implementation of safe working procedures 1.2 Select, fit correctly, use and maintain personal protective equipment including helmets 1.3 Conduct safety pre operational checks on quad bike and report faults or malfunctions for repair 1.4 Identify safe work areas and applications (loads and attachments) from workplace safety plan and operators manual 1.5 Unload quad bike safely from the trailer or transportation device
2. Operate a quad bike	2.1 Recognise and control risks to self and others 2.2 Steer, manoeuvre, position and stop quad bike in a smooth and controlled manner 2.3 Apply hand-eye coordination and transfer of body weight appropriately (active riding) to maintain bike stability 2.4 Identify and avoid riding surfaces, terrains and slopes that are dangerous to safe operation 2.5 Identify environmental implications associated with machinery operation and minimise impact 2.6 Identify and account for biosecurity implications associated with machinery operation
3. Complete and check quad bike operation	3.1 Conduct shut-down procedures 3.2 Perform routine operational servicing and minor maintenance 3.3 Identify and report malfunctions, faults, irregular performance or damage 3.4 Clean, secure and store quad bike 3.5 Follow wash-down procedures in line with biosecurity guidelines where required 3.6 Maintain quad bike use records for servicing purposes 3.7 Load and secure quad bike safely

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

No passengers, no riders under 16 years of age, no towing, helmets must be worn at all times.

Candidates must NOT be under the influence of any alcohol or drugs. Candidates must NOT be taking any medication (prescribed or otherwise) that may impair judgement.

Unit Mapping Information

This unit is equivalent to AHCMOM212A Operate quad bikes.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM212 Operate quad bikes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be observed operating a quad bike using safe work procedures.

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and risks associated with quad bike use
- identify safe work areas
- select, fit correctly, use and maintain personal protective equipment including helmets
- operate quad bikes in a range of riding surface conditions and terrain conditions
- steer, manoeuvre, position and stop the quad bike in a smooth and controlled manner
- apply hand-eye coordination and correctly transfer body weight (active riding) to maintain bike stability including riding on uneven or steep terrain
- follow enterprise work health and safety procedures
- unload and load quad bike safely
- follow wash-down procedures in line with biosecurity guidelines

Knowledge Evidence

The candidate must demonstrate knowledge of:

- hazards and risks associated with quad bike use
- components, controls and features of quad bikes and their functions
- a range of quad bikes and functional applications
- operating principles and operating methods of quad bikes
- manufacturer's instructions, including but not exclusive to the operating manual
- load limits and the principles of weight distribution with regard to load shifting and bike movement including riding on uneven or steep terrain
- loading and unloading safely from a trailer or other transportation device

- effects of different riding surfaces and terrain conditions on the operation of quad bikes

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting. All evidence collected must meet minimum requirements including industry standard timeframes for performance of tasks.

Assessment must be conducted in a range of riding surface conditions and in a range of terrains appropriate for the safe use of quad bikes.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM403 Provide advice and sell machinery

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify customer needs, provide advice, and sell, handle and maintain agricultural machinery, spare parts and related products.

The unit applies to individuals who apply specialist skills and knowledge to providing advice and selling agricultural machinery, spare parts and related products. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery Operation and Maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish customer needs	1.1 Use interpersonal skills to engage with customer and identify needs

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Handle customer enquiries courteously and promptly according to workplace procedures and legislative requirements</p> <p>1.3 Match available products to customer needs</p>
2. Research and provide product advice	<p>2.1 Research and update knowledge and understanding of machinery, spare parts and related products from authoritative sources</p> <p>2.2 Research local workplace and district requirements for machinery, spare parts and related products</p> <p>2.3 Provide advice to customer in a timely and professional manner according to workplace procedures and legislative requirements</p> <p>2.4 Exhibit or demonstrate machinery, spare parts and related products safely to customer according to regulatory requirements</p> <p>2.5 Address customer concerns and questions</p> <p>2.6 Provide safety information to the customer for recommended machinery, spare parts and related products</p> <p>2.7 Prepare and supply quotations according to workplace procedures</p>
3. Sell products	<p>3.1 Complete sales to maximise potential for customer satisfaction according to workplace procedures and legislative requirements</p> <p>3.2 Identify and respond to opportunities for add-on and repeat sales</p> <p>3.3 Complete sales documentation according to workplace procedures</p>
4. Complete sales documentation and maintain products	<p>4.1 Handle and store machinery, spare parts and related products safely and efficiently according to manufacturer and workplace health and safety requirements</p> <p>4.2 Monitor sales results against specified criteria</p> <p>4.3 Review sales techniques to enhance future sales results</p> <p>4.4 Monitor stock levels and follow reordering procedures as required</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about machinery, spare parts and related product range, and legislative requirements
Writing	<ul style="list-style-type: none"> Record machinery, spare parts and related product sales and reordering
Oral communication	<ul style="list-style-type: none"> Use clear language with customers to gather information and match products to customer needs, explain products and suggest additional products and services

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM403 Provide advice and sell machinery	AHCMER402 Provide advice and sell machinery	Unit code and sector changed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM403 Provide advice and sell machinery

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has provided advice and sold machinery on at least two occasions, and has:

- engaged with and advised customers on the range of machinery, spare parts and related products, and received information on their specific application and environment, and created additional sales opportunities
- complied with relevant legislative requirements in sales environments, including fair trading, trade practices and sale of goods legislation and public liability
- represented the workplace in a professional manner when dealing with customers
- researched machinery supplier information to retain technical currency in all aspects of machinery relevant to local district requirements
- applied relevant components of state or territory Acts and regulations relating to machinery use
- applied workplace procedures for providing advice on machinery, spare parts and related products
- organised the demonstration of machinery, spare parts and related products
- applied workplace health and safety procedures applicable to machinery, spare parts and related products
- encouraged add-on and repeat sales.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles of customer service and sales techniques
- requirements of local or specific customers for machinery, spare parts and related products
- legislative requirements in sales environments, including fair trading, trade practices and sales of goods legislation and public liability

- industry terminology used for machinery, spare parts and related products
- machinery and related products requirements relevant to local district requirements
- industry trends and improved practices in relation to machinery usage and equipment
- manufacturer product recommendations and warranty requirements
- relevant components of state or territory Acts relating to machinery use
- workplace procedures for providing advice on machinery, spare parts and related products
- workplace health and safety procedures for the safe handling of machinery, spare parts and related products.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - agricultural machinery, spare parts and related products
- specifications:
 - legislative requirements relevant to sales environments, including fair trading, trade practices and sales of goods legislation and public liability
 - components of state or territory Acts relevant to machinery use
 - workplace procedures relevant to providing advice on machinery, spare parts and related products
 - workplace health and safety procedures for the safe handling of machinery, spare parts and related products
- relationships:
 - customers.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNAR201 Carry out natural area restoration works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out natural area restoration work.

This unit applies to supervised workers in land management programs.

All work is undertaken to supervisor instructions, according to the restoration plan and enterprise work procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Natural Area Restoration (NAR)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Prepare for natural area restoration works	1.1 Locate task site using natural area restoration or revegetation plans 1.2 Identify environmental implications of works and assess and report the likely outcomes 1.3 Select, prepare and transport tools, equipment and machinery for use and confirm native plant species to be re-established 1.4 Carry out pre-operational and safety checks on tools, equipment and machinery 1.5 Use and maintain personal protective equipment
2. Apply weed control measures	2.1 Identify weeds requiring control 2.2 Prepare herbicides 2.3 Undertake weed control measures according to the weed and non-target species characteristics 2.4 Ensure control measures damage only the target weed species
3. Prepare the soil for natural area restoration	3.1 Select soil treatments according to the soil condition and species requirements 3.2 Protect intact natural soil profiles from damage 3.3 Apply soil treatments either broadly or at specific sites in accordance with work health and safety policies and procedures
4. Replace native vegetation on the site	4.1 Determine vegetation replacement methods and prepare assisted natural regeneration, planting, seeding or transplanting treatments 4.2 Apply assisted regeneration treatments to remnant vegetation and intact soil profiles 4.3 Sow seed either by hand in discrete areas or broadly using sowing or ripping trailed machinery 4.4 Position containerised plants or transplants and plant firmly ensuring good contact between roots and surrounding soil 4.5 Undertake hand watering or irrigation 4.6 Use plant guards and fencing to protect plants, where necessary 4.7 Carry out all tasks according to work health and safety policies and procedures
5. Complete natural area restoration work	5.1 Install and maintain plant guards or fencing 5.2 Undertake follow up weed control treatments 5.3 Remove and dispose of waste material 5.4 Clean, maintain and store tools, equipment and machinery 5.5 Maintain a clean and safe area 5.6 Carry out all tasks according to work health and safety policies and procedures

Element	Performance criteria
	5.7 Report work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNAR201A Carry out natural area restoration works.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNAR201 Carry out natural area restoration works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- establish the task and site with supervisor by referring to a revegetation plan
- carry out weed control and ground preparation as part of a team
- transport tools, plants and planting materials to the site
- carry out planting and regeneration techniques to organisational standards
- protect the restored area with plant guards and fencing
- remove any waste at the end of the job and clean site to pre-work condition
- carry out all work according to organisational standards and work health and safety requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- common names of native plants and animals present in restoration area
- common names of weeds and pest animals present in restoration area
- the importance and value of the local provenance species
- natural area restoration techniques
- enterprise requirements for natural area restoration works

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNAR202 Maintain wildlife habitat refuges

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain wildlife habitats and refuges to protect desirable animal species from predators.

All work is undertaken in accordance with statutory and local authority requirements.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication. However, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

Pre-requisite Unit

Nil.

Unit Sector

Natural Area Restoration (NAR)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess the scope of the	1.1 Identify species to be protected and determine their behaviour

Element	Performance criteria
refuge maintenance job	<p>pattern</p> <p>1.2 Identify characteristics of refuges required for target species</p> <p>1.3 Determine locations of refuges</p> <p>1.4 Estimate time to complete the work</p> <p>1.5 Identify environmental risks associated with the work</p> <p>1.6 Determine vehicles, equipment and materials required to complete the work</p>
2. Prepare for the refuge maintenance job	<p>2.1 Determine location and boundaries for the wildlife habitat refuge maintenance job in accordance with the pest management strategy and monitoring program</p> <p>2.2 Conduct safety risk assessment and apply work health and safety policies and procedures</p> <p>2.3 Take precautions to minimise environmental and biosecurity risks associated with the work</p> <p>2.4 Check vehicles, equipment and materials for serviceability and cleanliness in accordance with manufacturer specifications and relevant enterprise policies</p>
3. Maintain wildlife habitat refuges for protection of desirable species from predators	<p>3.1 Operate vehicles and equipment in accordance with manufacturer and organisational procedures</p> <p>3.2 Maintain wildlife habitat refuges in accordance with industry practice and environmental statutory requirements</p> <p>3.3 Implement strategies to control vertebrate pests in a wildlife habitat</p> <p>3.4 Identify harbours used by pest animals and notify supervisor</p> <p>3.5 Dispose of debris from site in accordance with industry practice and environmentally sustainable and work health and safety policies and procedures</p>
4. Clean and store equipment and material	<p>4.1 Clean and store equipment and materials to enterprise and environmental standards in order to maintain biosecurity of area</p> <p>4.2 Record job completion according to relevant policies and procedures</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNAR202A Maintain wildlife habitat refuges.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNAR202 Maintain wildlife habitat refuges

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- maintain wildlife habitats and refuges to protect desirable animal species from predators
- identify native species that are present in the wildlife refuge
- confirm the features required for a wildlife habitat refuge
- provide harbors and modify habitat where necessary to provide refuge for native species
- assess the risk of vertebrate pest predators within the refuge
- implement strategies to control vertebrate pests in a wildlife habitat as directed by supervisor
- apply work health and safety practices in the context of own work
- apply biosecurity measures in the context of own work
- apply appropriate sustainability practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- vertebrate predators present in local area
- harbours used by vertebrate pests
- wildlife habitats used by desirable animal species
- wildlife habitat modification techniques

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNAR301 Maintain natural areas

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain natural areas.

This unit applies to workers on land management projects who carry out the maintenance of natural areas.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Natural Area Restoration (NAR)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan maintenance works	1.1 Plan movement through place to minimise disturbance and degradation

Element	Performance criteria
	1.2 Identify legislative requirements, codes of practice and the relevant management strategy and plan 1.3 Identify relevant environmental factors in maintenance works 1.4 Consult stakeholders about pending maintenance works 1.5 Determine and obtain equipment, machinery and materials for maintenance works 1.6 Conduct pre operational machinery checks according to environmental, biosecurity and safety requirements
2. Undertake maintenance	2.1 Follow enterprise work health and safety, environmentally sustainability and biosecurity policies and procedures when undertaking maintenance work 2.2 Undertake maintenance and rehabilitation works according to plans 2.3 Ensure maintenance works conform to relevant risk control measures and practices 2.4 Take interim protective measures to avoid degradation and disturbance during maintenance works 2.5 Monitor activities of personnel and visitors to reduce risks to the significance of the place
3. Complete of activities	3.1 Clean and restore site on completion of works 3.2 Clean and store equipment and machinery 3.3 Remove and store or dispose of excess materials from site according to organisational requirements 3.4 Report completed maintenance works to supervisor according to organisational and legislative requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNAR301A Maintain natural areas.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNAR301 Maintain natural areas

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare to carry out maintenance activities in a manner which minimises damaging impacts to site
- consult with stakeholders, including traditional owners about pending maintenance works
- carry out agreed maintenance works with minimal damaging impacts to environment
- select and apply protective structures, devices and signs
- clean up the site and remove surplus materials and waste
- report completion of activities to supervisor
- apply work health and safety practices in the context of own work
- apply biosecurity measures in the context of own work
- apply appropriate sustainability practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- environmental factors to be considered in maintenance works, including:
 - ecology in land based, coastal zones or marine parks
 - marine, shore and land based species
 - natural and human threats to places of natural significance
 - pollution sources and damage potential
- basic protection and rehabilitation methods
- enterprise procedures for reporting maintenance works
- applicable State or Territory and Commonwealth legislation covering parks, conservation, environmental protection and heritage

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNAR303 Implement revegetation works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement revegetation works in natural restoration areas.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Natural Area Restoration (NAR)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for revegetation works	1.1 Identify appropriate timing and method of planting required 1.2 Select tools and materials required for the task and check functionality and cleanliness 1.3 Identify, obtain and store plant materials 1.4 Determine and organise labour and machinery requirements

Element	Performance criteria
	1.5 Prepare a works schedule and provide to management or client 1.6 Conduct a safety risk assessment and apply work health and safety procedures
2. Prepare the revegetation site	2.1 Identify site hazards, assess risks and implement risk controls 2.2 Undertake site preparation according to planting plan or supervisor's instructions 2.3 Use soil nutrients and ameliorants, if required by plan specifications 2.4 Mark out revegetation site according to supervisor instructions or plan, applying knowledge of ecosystems and habitat requirements 2.5 Treat all diseased and competing plants, debris and pollutants according to the plan and implement risk controls 2.6 Select and apply treatments according to the risk controls selected 2.7 Install protective structures where indicated by the risk controls implemented
3. Undertake revegetation works	3.1 Carry out revegetation works in accordance with work health and safety policies and procedures and wear appropriate personal protective equipment 3.2 Inspect plant materials before revegetation works and discard defective materials 3.3 Treat plant materials with required nutrients according to documented guidelines 3.4 Plant revegetation stock according to planting program 3.5 Apply appropriate techniques for protecting, securing or anchoring new plants 3.6 Apply appropriate biosecurity and environmentally sustainable practices 3.7 Ensure all of the revegetation program requirements have been implemented 3.8 Identify and report potential threats to revegetation works
4. Maintain revegetated site	4.1 Monitor growth of plants 4.2 Maintain site according to the planting program requirements 4.3 Undertake remedial action and plant protection according to the needs of the species 4.4 Clean, maintain and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNAR303A Implement revegetation works.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNAR303 Implement revegetation works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- carry out all revegetation works according to the planting plan or supervisor instructions
- prepare the site for revegetation works
- conduct a site hazard identification and risk control assessment
- recognise and treat plant diseases on a revegetation site
- treat weeds and competing plants
- clean and maintain the revegetated site
- use, clean, maintain and store machinery and equipment according to manufacturer instructions
- apply work health and safety practices in the context of own work
- apply biosecurity measures in the context of own work
- apply appropriate sustainability practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- revegetation techniques
- ecosystems, provenance and habitat requirements
- factors affecting the timing and method of planting
- identification of pests and diseases of trees
- principles and methods relating to the prevention and control of pests and diseases
- safety requirements when handling and using hazardous goods
- nutrient requirements of a range of plant species and cultivars
- physiology of plant growth

- techniques for protecting and securing or anchoring trees and shrubs
- soils, nutrients and ameliorants applicable to revegetation program

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNAR305 Collect native seed

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to collect, treat and store seed for native revegetation projects.

This unit applies to workers who work under broad direction and use discretion and judgement in the selection and use of available resources to collect seed in a bush environment.

Licensing conditions and permissions or approvals apply to the collection of native seed. Specific determination should be sought through the relevant State or Territory.

Pre-requisite Unit

Nil.

Unit Sector

Natural Area Restoration (NAR)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to collect seed	1.1 Identify and follow environmental, legislative and organisational requirements to collect seed 1.2 Review work plan for seed collection 1.3 Identify potential locations for seed collection 1.4 Obtain necessary approvals and permissions for access to site and

Element	Performance criteria
	removal of seeds 1.5 Plan seed collecting operations to ensure safe working conditions 1.6 Communicate with others involved in seed collection project 1.7 Select and prepare materials, tools, equipment and personal protective equipment
2. Select and assess seed	2.1 Follow work health and safety policies and procedures when collecting and cleaning seed 2.2 Follow environmental protection and biosecurity measures for the site 2.3 Identify plant species required 2.4 Assess plant species and conditions to ensure seeds are from healthy plants 2.5 Select the appropriate methods of seed collection 2.6 Collect seed from a range of plants and different areas of the plant without causing damage to the parent plant 2.7 Place seed in clean containers and clearly and accurately label according to organisational requirements
3. Clean and store seed	3.1 Separate seed from other materials 3.2 Weigh and store seed in line with species requirements 3.3 Accurately record seed information 3.4 Record and report seed collection information and results

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - No equivalent.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNAR305 Collect native seed

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- obtain all necessary permissions and approvals to collect seed in a particular area, including operating in a particular jurisdiction, removal of native seed from a national park and permission from Elders or Custodians to work on Country
- use and maintain relevant material, equipment and resources efficiently and safely
- carry out seed collecting, cleaning and storage procedures efficiently and safely
- identify seed species relevant to plan
- follow organisational policies and procedures relevant to collecting seed
- distinguish between healthy and unhealthy parent plants for seed collection
- accurately record seed collection information and results
- apply work health and safety procedures for seed collection
- apply biosecurity measures in collection and storage of seeds
- apply sustainability practices in the context of own work

Knowledge Evidence

The candidate must explain:

- environmental protection requirements and procedures for minimising environmental impact
- native plant and seed characteristics of revegetation site
- types of diseases and pests likely to infect a range of seed species
- work health and safety requirements for seed collection methods
- procedures for collecting, storing and labelling seed

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNAR306 Conduct photography for fieldwork

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to setup and use photographic equipment and techniques to take photographs in the field.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Area Restoration (NAR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to take photographs	1.1 Determine the purpose and intended use of photographs 1.2 Prepare a photograph specification for subject, purpose and requirements 1.3 Assess work health and safety hazards and risks for fieldwork

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	photography and apply controls according to workplace procedures 1.4 Ensure permits and releases have been obtained according to workplace procedures and copyright requirements
2. Identify and select appropriate equipment	2.1 Select camera suitability for the intended use 2.2 Select and prepare photographic equipment and accessories required to capture intended images 2.3 Transport and store photographic equipment and accessories to prevent damage
3. Take photos using correct methods and techniques	3.1 Implement safety controls and safe work practices 3.2 Select and set up camera in position to take photographs 3.3 Select camera settings to suit conditions and subject 3.4 Select the perspective, framing and sequencing of photographs according to the subject and purpose of photographs 3.5 Capture photograph and check image according to selected camera type to ensure fit for purpose 3.6 Use specialist photography techniques appropriate to subject, environment and purpose 3.7 Record field notes according to workplace procedures
4. Store and catalogue photographs	4.1 Transfer photographs from camera for storage according to workplace procedures 4.2 Maintain photograph records and filing system according to workplace procedures and copyright requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Reads and interprets documents for preparing permits and camera settings to determine photographic outcomes

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately prepares applications and updates records using clear language and appropriate terminology
Numeracy	<ul style="list-style-type: none"> Performs basic calculations when interpreting and setting camera settings
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for following procedures and industry requirements
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks and workload. Makes routine decisions and implements procedures and uses formal decision-making processes for more complex situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNAR306 Conduct photography for fieldwork Release 2	AHCNAR306 Conduct photography for fieldwork Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNAR306 Conduct photography for fieldwork

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have conducted photography fieldwork, including:

- determined the purpose of the photograph and prepared a specification
- ensured that appropriate permits and releases have been obtained for planned photographs
- assessed work health and safety risks and apply suitable controls
- selected, transported and stored the appropriate camera and equipment for specified photographs
- set up and adjusted camera settings to obtain planned photograph outcomes
- used at least 4 specialised photography techniques, including:
 - macro photography
 - photo points
 - evidentiary photography
- capture photographs and check against the photograph specification
- recorded field notes according to purpose and workplace procedures
- transferred photographs from camera, recorded and stored images according to workplace procedures and copyright requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic types of photography and photographic techniques applicable to field work
- legal requirements of copyright, privacy, permission, releases and environmental protection relating to taking photos for fieldwork
- work health and safety hazards, risks and controls

- purpose, setting up and operation of photographic equipment used in fieldwork
- principles of photography including aperture, shutter speed, depth of field, ISO, white balance, exposure compensation and dynamic range
- purpose and technique for specialist photography in land management, including:
 - identifying flora and fauna
 - vegetation communities and landscapes
 - photo-point surveys
 - photography for compliance evidentiary purposes
 - photography for publications
 - project monitoring and reporting
 - underwater
- media and methods used for documenting, labelling and storing photographs for analogue and digital photography.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in accessible field environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - camera, lens, equipment and media for capturing photographs
 - personal protective equipment
- specifications:
 - workplace documents including policies, procedures, processes, instructions and forms
 - use of manufacturer's operating instructions for specific cameras and equipment
 - photographic specifications or briefs
 - copyright legislation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNAR307 Read and interpret maps

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to read and interpret road and topographical maps for navigation or positioning and plotting purposes.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Area Restoration (NAR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan a route using a map	1.1 Select maps, equipment and navigation aids and check for accuracy, currency and operational effectiveness for intended use 1.2 Identify relevant symbols, information and navigation on map 1.3 Identify and locate current position in the field on map using

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	geographical features 1.4 Identify and locate required destination on map 1.5 Assess and select route to destination using map data 1.6 Plan a safe route to destination 1.7 Measure and estimate distance to destination using map scale for selected route
2. Navigate using a map	2.1 Navigate and traverse according to planned route and schedule 2.2 Orient the map or plan to surroundings and planned route 2.3 Use navigation aids to assist progress according to manufacturer instructions 2.4 Plan and navigate alternative routes to avoid inefficient route progress
3. Plot sites and locations using maps and Global Positioning System (GPS)	3.1 Identify and locate point on map using landmarks and key geographical features 3.2 Use GPS data to precisely record locations according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Reads and interprets symbols and features on maps to determine special awareness to determine navigational route
Numeracy	<ul style="list-style-type: none"> Performs mathematical calculations to interpret map spatial measurements and determine navigation routes and distances
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks and workload for efficiency and effective outcomes Uses familiar digital technologies and systems to access map and geographic information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNAR307 Read and interpret maps Release 2	AHCNAR307 Read and interpret maps Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNAR307 Read and interpret maps

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have read and interpreted maps, including:

- identified, selected and checked maps and equipment suitable for the navigation activity
- interpreted symbols, lines and features on maps to identify locations
- assessed and selected routes to a location using a map
- navigated and traversed a route of at least 2km long using maps and navigational aids
- identified current position by comparing nearby geographic features on maps
- identified impediments to efficient navigation and planned alternative routes
- interpreted map scale and estimated route distances
- marked location points on a map using map geographical features and Global Positioning Systems (GPS) data.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of maps and map reading
- types of maps and their use
- symbols and representations of topographical and geographical information used on maps
- common scales used on maps and their purpose
- features and use of common navigational aids, including:
 - compass
 - map distance meter (analogue and digital)
 - GPS

- compasses and dividers
- rulers and protractors
- advantages and disadvantages of different map and chart types and sources of error
- techniques for determining routes and estimating distances.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an outdoor setting suitable for map reading and navigational; purposes or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - maps and navigational charts
 - navigational aids for map reading
- specifications:
 - manufacturers' instructions for navigation aids.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNAR401 Supervise natural area restoration works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to supervise natural area restoration works on revegetation programs.

All work is undertaken according to enterprise guidelines and contract documents.

This unit applies to individuals who supervise others and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Natural Area Restoration (NAR)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify scope of natural area restoration works	1.1 Identify and check nature and scope of works and extent of responsibilities against relevant contract documentation 1.2 Confirm or create site map for works

Element	Performance criteria
	<p>1.3 Determine personnel and other resources required according to the scope of the project and relevant documentation</p> <p>1.4 Develop a work program to ensure that project outcomes are reached within designated time lines</p> <p>1.5 Determine and advise of potential environmental impacts of the proposed restoration</p> <p>1.6 Identify work health and safety hazards, assess risks and implement, monitor and review risk controls</p>
2. Coordinate the supply of materials and equipment	<p>2.1 Calculate and coordinate material quantities and equipment requirements</p> <p>2.2 Order materials, check for specified quantity and quality, then stockpile</p> <p>2.3 Confirm specific delivery requirements with suppliers</p> <p>2.4 Return rejected materials or products for replacement</p>
3. Monitor restoration works	<p>3.1 Coordinate the team to carry out restoration works</p> <p>3.2 Monitor and adjust the work program to meet client changes or directions and to ensure that project outcomes are reached</p> <p>3.3 Give written instructions to contractors</p> <p>3.4 Identify, record and report issues, likely to cause delays or alter the scope of the works, to management and the client</p> <p>3.5 Cost alterations using agreed unit rates and forward variations for approval by the client in writing</p> <p>3.6 Undertake periodic inspection of work to ensure project outcomes are achieved and to make progress payments</p> <p>3.7 Monitor the work site to ensure it remains in a clean, tidy and safe condition throughout and on completion of works</p> <p>3.8 Monitor team to ensure adherence to work health and safety, environmental sustainability and biosecurity policies and procedures</p>
4. Prepare site for completion	<p>4.1 Inspect site before practical completion to ensure all works have been completed to enterprise and client standards</p> <p>4.2 Note any works not complying and rectify according to the contract specification as outstanding items</p> <p>4.3 Produce and communicate a report to management or client</p> <p>4.4 Forward a practical completion certificate to the contractor</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNAR401A Supervise natural area restoration works.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNAR401 Supervise natural area restoration works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- supervise natural area restoration works
- identify hazards and ensure safe systems of work are in place
- scope the natural area restoration works required and compare to specifications of work on the contract
- develop a work program and source labour and equipment to undertake the work
- maintain the supply of materials and access to equipment to allow restoration work to proceed
- coordinate team to achieve optimum performance
- monitor the work program and make adjustments to task schedule where required
- monitor work to achieve specified outcomes and to minimise environmental disturbance
- inspect work to ensure specifications are met and environmental impact is minimised
- report project completion to management or client according to enterprise requirements
- monitor the application of appropriate sustainability practices in natural area restoration works
- monitor team to ensure work health and safety policies and procedures are followed
- monitor team to ensure biosecurity measures are applied

Knowledge Evidence

The candidate must demonstrate knowledge of:

- strategies and techniques to avoid negative environmental impacts
- work programming
- natural area restoration techniques to be used in the works

- environmental factors to be considered in restoration works, including:
- the role of native plants and animals in the ecosystem of the area
- vertebrate pests and options for control
- impact of weeds and pests and appropriate control methods
- ability to assess restoration potential of sites
- basic plant and animal ecology
- knowledge of different ecosystems
- team supervision
- strategies for monitoring work quality and progress
- application of work health and safety and environmental legislation, codes of practice and enterprise procedures in natural area restoration works

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNAR402 Plan the implementation of revegetation works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan the implementation of revegetation works.

This unit applies to supervisors of revegetation programs who supervise others and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Natural Area Restoration (NAR)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Carry out preliminary planning activities for revegetation works	1.1 Confirm client preferences and contract requirements including the scope of the work for the revegetation project 1.2 Identify statutory obligations and site responsibilities that may affect the implementation of works 1.3 Conduct an initial site visit to verify the biophysical and other factors of the project area including environmental considerations

Element	Performance criteria
	and historical modifications 1.4 Identify work health and safety obligations, assess hazards and develop controls 1.5 Verify the availability, quantity and costs of plants and other materials listed in the project schedules
2. Prepare a staged plan of work	2.1 Identify, cost and confirm availability of materials, tools and equipment required for revegetation procedures and ongoing maintenance of the site 2.2 Investigate site access and establishment issues 2.3 Prepare a program of works which incorporates a plan to minimise environmental impacts of works and work health and safety practices 2.4 Develop timelines for site establishment, the establishment period and maintenance of works 2.5 Incorporate seasonal factors and impacts in the staging strategy 2.6 Include special project works related to habitat resource development and enhancement in the implementation plan, where required 2.7 Document the staged implementation plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNAR402A Plan the implementation of revegetation works.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNAR402 Plan the implementation of revegetation works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan the implementation of revegetation works
- investigate site access and establishment issues
- plan for environmental impacts of site work practices and minimise safety risks to workers and the public
- assess site for opportunities and constraints associated with implementation of revegetation works
- establish the purpose and client preferences for the site to be revegetated
- carry out a site visit and confirm any planning requirements
- develop a plan for the site, detailing the resources required and the program of works
- develop schedules for the establishment and maintenance phases of the project
- document the staged implementation plan
- incorporate seasonal factors and impacts in the staging strategy to allow for planting, supply and care, wet day access, machinery use, fire hazards and establishment
- include work health and safety practices in plan

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the role of revegetation works in the restoration of the environment
- the environmental issues associated with undertaking revegetation works, how to comply with legislation and ensure that the impact on the environment is minimal, including:
- principles of ecology including specific native plant and animal relationships and habitat requirements
- identification, propagation and establishment techniques of specific native plant species

- chemical, cultural and biological weed and feral animal control techniques
- soil conservation and enhancement techniques and their advantages and disadvantages in reference to specific sites and habitats
- soil erosion control and stormwater management techniques
- maintenance requirements and practices for native plants prior to and after initial establishment
- growth habits and cultural requirements of specific native plants under a range of soil and environmental conditions
- site evaluation techniques including methods of analysing soils, waterways and their condition
- practical understanding of the advantages and disadvantages of options for revegetation procedures
- work health and safety hazards associated with undertaking revegetation works and the controls necessary to remove or minimise risks associated with them
- contract documents including specifications, plans of landscape works, services, supplies and surveyors documents

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNAR506 Develop and implement sustainable land use strategies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop and implement sustainable land use strategies.

This unit applies to managers of agricultural and production horticulture enterprises whose job role includes developing land use strategies that lead to improved ecological sustainability of land under production. These individuals take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Natural Area Restoration (NAR)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess requirements for improved land use	1.1 Audit the natural resource base and identify threats to sustainability

Element	Performance criteria
	1.2 Review the production and management plans to incorporate sustainable land use principles 1.3 Assess water resources, quality and impacts of run off for risk of erosion 1.4 Assess soil health and fertility against the requirements of the production plan 1.5 Assess vegetation types and coverage and identify required changes 1.6 Plan and prioritise land and water protection measures and structures
2. Carry out structural improvements to address threats to sustainability	2.1 Follow work health and safety policies and procedures in field work 2.2 Inspect sites, note key features and place pegs for improvements 2.3 Determine materials for the construction from the plans 2.4 Obtain and organise materials, personnel and equipment 2.5 Check equipment to be used 2.6 Construct structural works and revegetate the area and secure from livestock
3. Treat areas of land degradation	3.1 Realign fences to land classes and soil conservation works 3.2 Protect contour banks and repair as necessary 3.3 Construct water carrying structures or repair as necessary 3.4 Establish shelter belts for crop and stock protection 3.5 Review and amend soil cultivation and planting practices to prevent erosion and minimise soil run-off 3.6 Plan grazing strategies to maximise ground cover and avoid damage through foot tracks or damage to banks 3.7 Ensure all works and plans comply with environmental protection legislation, regulations and codes of practice

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNAR506A Develop and implement sustainable land use strategies.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNAR506 Develop and implement sustainable land use strategies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop and implement sustainable land use strategies
- identify the threats to sustainability for an area or region
- manage water resources and riparian zones
- manage vegetation and plant succession for an area
- manage the health and sustainability of soils
- incorporate sustainability principles into land use practices
- apply work health and safety practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the role of biodiversity in farming systems
- sustainable land and water use principles and practices applicable to the region
- sustainable soil management
- soil appraisal and remediation strategies
- environmental controls and codes of practice applicable to the business and to the improvement works
- relevant legislation and regulations relating to soil and water degradation issues, chemical use and structural works
- relevant work health and safety and environmental protection legislation, regulations and codes of practice
- causes of land degradation

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM507 Manipulate and analyse data within geographic information systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to extract, compare and manipulate data within a Geographic Information System (GIS) in response to customer requests.

This unit applies to those who undertake data analysis within a range of geographic information systems for the purpose of managing natural resources. They are likely to undertake a range of specialised skilled activities, exercise autonomy and take responsibility for complex work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop procedures for manipulation and	1.1 Specify desired data format based on job requirements 1.2 Specify parameters for the manipulation of data sets

Element	Performance criteria
analysis of data	1.3 Explain the procedure and rationale for development in new documented procedures
2. Establish models required to provide outcome	2.1 Evaluate applicability of existing tools, models, theories, applications and solutions 2.2 Specify feasible parameters, equations and assumptions 2.3 Establish models required to provide specified outcome
3. Analyse data	3.1 Specify steps to be undertaken and computer operating systems and applications to be used to analyse and manipulate data 3.2 Consider restricting factors when selecting techniques for analysis 3.3 Isolate and retrieve data from its source 3.4 Interrogate data to ensure reliability 3.5 Prepare data for presentation media

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNRM507A Manipulate and analyse data within geographic information systems.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM507 Manipulate and analyse data within geographic information systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must demonstrate that they can extract, compare and manipulate data in response to customer requests.

The candidate must provide evidence that they can:

- develop and document suitable procedures for data collection, manipulation and analysis
- use or create appropriate models
- use operating systems and computer applications for data analysis and report writing, according to organisational requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- database structures
- scripting and commands
- line instructions and programming
- operating systems used by enterprise for data analysis and storage, including:
 - UNIX
 - DOS
 - Windows
 - NT
- range of tools, models, theories, applications and solutions
- data analysis and manipulation techniques

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM509 Develop a coastal rehabilitation strategy

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop, implement and evaluate a rehabilitation strategy for a natural area in a coastal zone.

The unit applies to individuals working in workplaces or groups who are responsible for the management of natural resources within the coastal zone and who analyse information and exercise judgement to complete a range of advanced skilled activities, demonstrating a deep knowledge in specific technical areas within resource management. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine coastal resources and assets	1.1 Source available information and seek advice from current land management stakeholders for coastal site 1.2 Conduct site survey to determine biophysical elements, resources and threats

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify cultural and heritage sites within zone and assess need for an archaeological assessment</p> <p>1.4 Determine resource use, management stakeholders and the requirements and opportunities for consultation</p>
2. Establish condition of coastal area	<p>2.1 Assess current ecological and environmental condition of resources within the coastal area</p> <p>2.2 Assess the impact of threats on the resources and assets in the area</p> <p>2.3 Present preliminary findings on the coastal resource and its condition to stakeholders</p>
3. Develop a strategy to rehabilitate the coastal area	<p>3.1 Analyse findings and identify management options</p> <p>3.2 Present findings to managing authority and seek direction on drafting management actions</p> <p>3.3 Implement processes for consultation with stakeholders according to workplace policies and procedures</p> <p>3.4 Establish strategy, and prioritise activities for asset rehabilitation and improvement in accordance with environmental sustainability practices, legislative and regulatory requirements and industry standards</p> <p>3.5 Design management plan for implementation of strategy</p> <p>3.6 Document management and stakeholder approvals of plan according to workplace procedures</p> <p>3.7 Obtain formal approval from coastal site authority</p>
4. Implement and monitor the strategy and action plan	<p>4.1 Seek funding and labour resources to implement rehabilitation works</p> <p>4.2 Coordinate works with stakeholders</p> <p>4.3 Monitor progress of works according to management plan</p> <p>4.4 Monitor workforce according to workplace health and safety, biosecurity and environmental policies and procedures</p>
5. Evaluate rehabilitation strategy	<p>5.1 Review management plan, consider improvements and recommend changes according to workplace procedures</p> <p>5.2 Monitor changes in coastal resource conditions, and review effectiveness of strategy</p> <p>5.3 Report findings to management and stakeholders with</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	recommendations for adjustments to strategy

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, assess and critique information, legislation and regulations for incorporation into rehabilitation strategies
Writing	<ul style="list-style-type: none"> Select appropriate conventions and stylistic devices to express precise meaning in documented plans and strategies
Oral Communication	<ul style="list-style-type: none"> Establish and maintain effective communications when negotiating and consulting with stakeholders on rehabilitation strategies and providing feedback on work performance

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM509 Develop a coastal rehabilitation strategy	AHCNRM501 Develop a coastal rehabilitation strategy	Changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM509 Develop a coastal rehabilitation strategy

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, developed, implemented and evaluated a rehabilitation strategy for a natural area in a coastal zone, and has:

- assessed condition of natural area site:
 - reviewed existing information
 - conducted site surveys
 - consulted with stakeholders, managing authority and experts in the field
 - identified threats
- determined management options and facilitated the development of a strategy and action plan according to workplace health and safety policies, legislative requirements and sustainability practices
- monitored and evaluated the implementation of strategy
- prepared reports to workplace and authority standards.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- identifying and working with stakeholders, and their importance in building relationships for consultation and formulating agreed strategies, including:
 - coastal area agencies and managing authorities
 - Indigenous land rights and ownership
 - coastal area recreational users
 - special interest groups engaged in conservation activities
 - neighbouring property owners and impact of strategies on their activities
 - historical and cultural interest groups

- education and training users
- coastal zone biophysical environment, including:
 - geological and topographical features
 - soil and hydrological conditions
 - flora and fauna and their ecological impact
- ecological principles and environmental assessment techniques, including:
 - maintaining ecosystem structures and habitat
 - interactions between flora and fauna
 - vegetation types and their general characteristics for management
 - identification of plant and animal threats
- coastal zone information resources, including:
 - native flora and fauna identification
 - habitat requirements
 - vulnerable and endangered species
- sourcing and managing resources to implement strategies, including:
 - sources of funding and application process
 - assessing materials and consumables required for rehabilitation works
 - biosecurity and provenance concerns for plant materials
- management, restoration and rehabilitation techniques and strategies for application within the coastal zone
- environmental degradation processes
- management strategies for cultural and heritage sites
- natural resource management planning process
- state/territory legislative requirements related to revegetation works, environmental protection, biosecurity standards and workplace health and safety.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a coastal rehabilitation site
- resources, equipment and materials:
 - equipment, machinery, plants and consumables specified in strategy and action plans
- specifications:
 - workplace policies and procedures for rehabilitation works
 - legislation and regulations relevant to coastal area rehabilitation work and biosecurity
- relationships:
 - stakeholders
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM510 Develop a water quality monitoring program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to establish requirements for monitoring water quality and developing a program to monitor water quality in a given site. It includes carrying out water monitoring activities and evaluating program effectiveness.

The unit applies to individuals working in the role of manager concerned with gathering information for land or water management purposes, which may include consultation with specialists such as hydrologists and hydrographers. They also analyse information and exercise judgement to complete their duties with a deep knowledge in water management. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine water quality monitoring program requirements	1.1 Consult with client to identify scope, objectives and constraints in a program brief 1.2 Research and evaluate background information relevant to survey

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>type and site</p> <p>1.3 Determine water quality indicators to be measured, frequency and volume of sampling required to meet program brief</p> <p>1.4 Establish procedures for data collection, processing and reporting according to program brief and legislative requirements</p> <p>1.5 Seek estimates of costs and source of funds for the program</p> <p>1.6 Identify and assess workplace health and safety hazards for conducting the sampling program</p> <p>1.7 Provide a survey strategy to stakeholders for discussion and approvals according to program brief</p>
2. Undertake a site analysis	<p>2.1 Identify and record biophysical elements of the site</p> <p>2.2 Identify and record resource management factors contributing to water quality</p> <p>2.3 Survey site biota according to program brief</p> <p>2.4 Identify and evaluate sampling points for safety, accessibility and opportunities for repeatable data collection</p>
3. Plan monitoring program	<p>3.1 Select suitable sites for repeatable monitoring to obtain representative samples</p> <p>3.2 Source laboratory and field equipment for monitoring program, and determine costs</p> <p>3.3 Confirm suitability and availability of laboratory and field equipment</p> <p>3.4 Confirm surveyor access to site for duration of the monitoring program</p> <p>3.5 Document workplace health and safety controls and emergency procedures for the program according to workplace policies</p> <p>3.6 Document environmental sustainability policies and procedures and biosecurity measures</p> <p>3.7 Document sampling techniques to be used</p> <p>3.8 Document methods of data collection, monitoring and field techniques for field operators</p> <p>3.9 Present survey schedules and procedures to stakeholders and client for approval</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Monitor water quality	<p>4.1 Carry out water quality monitoring tasks according to plan</p> <p>4.2 Transport, store and treat samples to preserve the reliability and fidelity of sample results</p> <p>4.3 Monitor surveying process for accuracy, and compliance with the survey plans and procedures</p> <p>4.4 Implement contingency plans when problems arise, whilst continuously assessing and evaluating the plan for errors and inconsistencies</p>
5. Evaluate program	<p>5.1 Record and save data according to plan requirements</p> <p>5.2 Analyse data collected according to industry policies and guidelines and scientific standards</p> <p>5.3 Draw outcomes, conclusions or trends from the monitoring program using industry standards for interpretation of water quality data and appropriate evidence and reasoned arguments</p> <p>5.4 Seek advice from client as to satisfaction with monitoring program in terms of the process and outcomes</p> <p>5.5 Provide report on outcomes to client with recommendations for changes and improvements for any further monitoring activities</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Record outcomes of sampling and incorporate into monitoring program reports and documentation, expressing ideas and exploring complex issues, and ensuring accurate, succinct and logically constructed text
Numeracy	<ul style="list-style-type: none"> Capture, record and analyse monitoring data and use statistical analysis calculations to help formulate conclusions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM510 Develop a water quality monitoring program	AHCNRM502 Develop a water quality monitoring program	Minor changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM510 Develop a water quality monitoring program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, developed and implemented a water quality monitoring program according to a specific client brief and legislative and workplace policies and procedures.

There must also be evidence that the individual has:

- consulted with client and established the scope, objectives, constraints and quality monitoring requirements in a program brief
- conducted research and site analysis to select suitable monitoring sites
- developed and implemented a monitoring plan in accordance with program brief
- evaluated the program using data analysis, consultation with client and assessment against program objectives
- collected, transported and treated samples to preserve sample integrity
- analysed data according to scientific standards and workplace policies and procedures
- applied workplace health and safety practices
- incorporated sustainability practices and biosecurity procedures into monitoring program
- developed evidence-based conclusions from analysis and reasoned arguments
- produced written reports to workplace standards.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- water quality principles and factors, including:
 - hydrological cycle
 - aquatic ecology
 - water quality indicators
 - chemical principles

- catchment and coastal management issues contributing to surface and groundwater quality
- standard techniques to assess ecological health of aquatic sites
- mathematical sampling techniques
- sampling methods for maintaining accuracy and veracity of test results, including:
 - sampling techniques and range
 - storage methods and treatments to preserve sample integrity
 - statistical modelling for sampling
 - location and frequency of sampling
 - sampling methods for different analysis
- analytical techniques appropriate to water quality monitoring, including:
 - statistical analysis
 - comparative analysis
 - chemical
 - physical
 - biological
- data storage and management systems
- accepted scientific processes and standards for data collection and analysis
- health and safety legislative requirements and codes of practice, including hazard identification, assessment and control measures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field where water sampling requires regular monitoring, or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - sampling equipment relative to the type of study being undertaken
 - computer and software for report writing and statistical analysis
- specifications:
 - workplace policies and procedures for conducting collecting and analysing water samples and for recording results
 - client brief and specifications for water quality monitoring
- relationships:
 - client
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM511 Plan and monitor works projects in catchments and waterways

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan, implement, monitor and review works projects conducted in catchments and waterways. This includes engaging and working with stakeholders and ensuring works meet environmental and project outcomes and priorities.

The unit applies to individuals who are engaged in contract project works in catchments and waterways who take personal responsibility and exercise autonomy in undertaking work. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Inspect and assess catchment and waterways sites for	1.1 Establish the environmental outcomes and priorities of the works program 1.2 Apply workplace health and safety policies and procedures,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
inclusion in a works program	<p>environmentally sustainable practices and biosecurity measures</p> <p>1.3 Conduct a site assessment to confirm the physical characteristics and health of catchment and waterways</p> <p>1.4 Assess the range of operating conditions, hazards and sensitive environments for impact on proposed projects</p> <p>1.5 Assess heritage and cultural values of sites</p> <p>1.6 Consult project stakeholders on the scope and purpose of the works program</p>
2. Plan works project	<p>2.1 Consult with stakeholders to determine project priorities</p> <p>2.2 Obtain permits, licenses and authorisations</p> <p>2.3 Determine and source equipment and materials and personnel required for project</p> <p>2.4 Confirm terms and conditions of project work with project stakeholders</p> <p>2.5 Prepare plans and specifications for works project</p> <p>2.6 Complete project documentation and communicate details to stakeholders</p>
3. Monitor works project	<p>3.1 Establish monitoring program according to works objective</p> <p>3.2 Establish data benchmarks for evaluating the outcomes of project</p> <p>3.3 Identify ongoing support required of contractors and project workers</p> <p>3.4 Provide ongoing support according to identified needs in a timely manner</p> <p>3.5 Monitor condition of the project site to ensure it is left in an agreed condition</p> <p>3.6 Report outcomes of monitoring to workplace requirements</p>
4. Review works program	<p>4.1 Evaluate projects for compliance with agreed outcomes</p> <p>4.2 Determine projects comply with environmental targets</p> <p>4.3 Recommend changes to works program to achieve catchment and waterways priorities where non-compliance has been identified</p> <p>4.4 Use a relational data management system for recording monitoring data and reporting to stakeholders</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Record outcomes of programs into relational database and reports expressing ideas and exploring complex issues in recommendations, ensuring accurate, succinct and logically constructed text
Oral Communication	<ul style="list-style-type: none"> Establish and maintain effective communications when negotiating and consulting with stakeholders on projects and when providing feedback on project performance

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM511 Plan and monitor works projects in catchments and waterways	AHCNRM506 Plan and monitor works projects in catchments and waterways	Minor changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM511 Plan and monitor works projects in catchments and waterways

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned and monitored at least one catchment and waterways project, and has:

- applied effective consultation techniques to ensure stakeholder contribution to project priorities
- researched and determined environmental conditions of project worksites
- worked with and supported project stakeholders during project implementation
- developed waterway monitoring program that must include:
 - selected representative water quality monitoring sites
 - selected macro invertebrate monitoring sites
 - used data collection guidelines and parameters
 - specified timelines for monitoring
- monitored project to ensure it complied with regulatory requirements
- evaluated impact of projects on sustainable catchment management
- determined the physical and human resources required for project
- determined monitoring procedures sufficient for evaluating and reviewing project
- evaluated environmental benefits of works program using workplace techniques and reporting methods
- completed reporting requirements according to workplace standards and stakeholders outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- physical characteristics and indicators of health of waterways and catchments
- wetland and floodplain processes and function, including:

- factors that influence stream flow
- stream dynamics
- stream formation
- eutrophication
- impacts of land use on waterways
- indicators of catchment health, including:
 - pest plant and animal infestations
 - vegetation decline
 - soil erosion
 - stream bank erosion
 - water quality decline
- water quality parameters, including:
 - physical and chemical properties of water
 - biological indicators of water quality
- project planning processes
- consulting and negotiating with stakeholders, including:
 - investors
 - partners
 - interest groups
 - agencies
- permits and licences required for on-ground works.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- specifications:
 - workplace policies and procedures for monitoring and reporting
 - legislation and regulations for water catchment management
- relationships:
 - stakeholders
 - work team and/or contractors
- timeframes:
 - according to time specified in program for supporting project.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM512 Investigate suspected breaches of natural resource management legislation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to conduct site inspections and collect evidence for investigations into suspected breaches of natural resource management (NRM) legislation.

The unit applies to individuals who act in an official capacity to investigate suspected breaches of NRM legislation. They also analyse information and exercise judgement to complete their duties with a deep knowledge in land use. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

Natural resource management legislation applies in all states and territories and must be adhered to. Users are advised to check with the relevant regulatory authority

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Respond to advice of change in land use	1.1 Receive and record details relating to suspected change in land use 1.2 Conduct pre-site inspection investigations in accordance with

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures and legislative and regulatory requirements 1.3 Report suspected breach of NRM legislation to agency authority 1.4 Seek approval to proceed with investigation according to workplace authorisation procedures
2. Carry out site investigation	2.1 Follow workplace health and safety policies and procedures when carrying out site inspections and investigations 2.2 Provide notification to stakeholders of the consequences of suspected change in land use 2.3 Seek permission for site access from land owner to conduct investigation according to legislative and regulatory requirements 2.4 Seek assistance from civil authorities where permission is refused according to workplace procedures 2.5 Conduct interviews of witnesses and landholders 2.6 Conduct site observations and collect evidence related to the suspected breach in land use 2.7 Maintain records of interview and observations according to rules of evidence
3. Collate and assess site evidence	3.1 Check accuracy of collected site evidence against official land use documents and records 3.2 Identify supplementary information to assist in making a fair determination 3.3 Identify evidence indicating a possible breach in land use 3.4 Evaluate volume and sufficiency of evidence and supplementary information for a determination
4. Compile report on outcomes of investigation	4.1 Validate accuracy of evidence and supplementary information 4.2 Consider the evidence against the possible breach in NRM legislation and make a preliminary determination 4.3 Prepare report with recommendations based on preliminary determination according to legislative protocols and workplace procedures 4.4 Present report and supporting documentation to agency authority according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and critique ideas and information from land management documents, texts and data to help build and maintain a balanced understanding of NRM legislation, in order to provide informed recommendations on breaches
Writing	<ul style="list-style-type: none"> Generate written texts, demonstrating control over a range of writing styles and purposes associated with legal documentation
Oral Communication	<ul style="list-style-type: none"> Establish and maintain effective communication with stakeholders, to elicit and deliver information on breaches in NRM legislation, including in possible confrontational environments

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM512 Investigate suspected breaches of natural resource management legislation	AHCNRM508 Investigate suspected breaches of natural resource management legislation	Minor changes to Application Changes to Elements and reordered, changed and added to Performance Criteria for clarity and sequencing Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM512 Investigate suspected breaches of natural resource management legislation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted at least one site inspection, gathered evidence and interviews, assessed the evidence, and documented recommendations for an investigation into suspected breaches of natural resource management legislation.

There must also be evidence that the individual has:

- conducted all steps of investigation in accordance with legal and workplace protocols and procedures
- conducted a preliminary investigation into a reported or suspected breach of land use legislation
- sought approval to proceed with a full investigation
- sought approval for site visit with landholder and, where rejected, sought support from civil authority
- carried out a site inspection
- interviewed witnesses and land owners
- maintained records of interviews, proceedings and site inspection according to legal requirements and workplace protocols, which must include:
 - time and date of inspection
 - persons in attendance
 - details of current site activities
 - names of persons interviewed
 - details of each interview
 - images, photographs, drawings and measurements captured during the site visit
- validated accuracy of evidence and information collected and ensured it is sufficient to make an informed determination
- assessed evidence against suspected breach in legislation and made recommendations
- compiled outcomes into a report with supporting documentation and submitted to agency authority.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- Commonwealth and state/territory legislation and regulations for natural resource management and basic civil law
- types of breaches of natural resource management legislation
- workplace policies, procedures and codes of practice for conducting investigations and reporting outcomes
- techniques for consulting with stakeholders according to legal and agency policies and procedures
- approaches for accessing land owner properties, including:
 - rights and responsibilities of land holder
 - rights and responsibilities of agency staff
 - civil authorities and their potential role and assistance
- assessment approaches for area of notification
- basic law pertaining to civil cases, including:
 - balance of probabilities
 - rules of evidence
- types and importance of evidence, including:
 - interviews or testimonial evidence can be factual, false or anecdotal
 - visual images, videos, photographs and drawings
 - quantifiable and measurable, dimensions, weights and volumes
 - use of official data and records for testing gathered evidence
 - preserving the validity and security of evidence
- record-keeping processes for maintaining evidence and supporting documentation
- official and supporting documentation used in assessing breaches in NRM legislation, including:
 - maps and charts
 - surveyor plans, for regional, local and site locations
 - vegetation and land use planning and zoning documents
 - environmental protection legislation and regulations
 - site planning overlays, caveats and other specific restrictions
- formats for compiling reports and submitting evidence and recommendations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated for a site where there is a suspected breach in NRM legislation or an environment that accurately represents workplace conditions

- specifications:
 - workplace policies, procedures, processes for handling and reporting investigations
 - reports of suspected breach in NRM legislation
 - relevant legislation and codes of practice
- relationships:
 - potential litigant
 - agency authority.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM604 Review ecological management plans and strategies

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to review and assess the effectiveness of management plans and strategies. It includes establishing criteria and review mechanisms as well as modifying plans and strategies as required, in response to review outcomes.

The unit applies to individuals who conduct ecological management work at a paraprofessional and strategic level, with the capacity to devolve responsibilities and tasks. They apply knowledge and skills in land management with autonomy and judgement, and analyse information to complete activities, interpret and transmit solutions to others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine mechanisms and criteria for reviewing ecological management plans and	1.1 Establish reasons for review of management plans and strategies 1.2 Examine internal policy and procedural influences impacting on ecological management plans and strategies 1.3 Interpret trends to identify changes occurring in ecological

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
strategies	management plans and strategies beyond normal variations 1.4 Review current industry trends and establish need for review of management plans and strategies 1.5 Set timeframes for review process
2. Analyse existing ecological management plans and strategies	2.1 Assess ecological and environmental trends and threats against the objectives of the plans and strategies 2.2 Identify and assess the effectiveness, relevance and impact of existing management plans on current practices 2.3 Identify and prioritise gaps in management plans and strategies 2.4 Analyse management plans in the context for which they were developed 2.5 Inform contributors to the review of enterprise requirements 2.6 Undertake consultation with stakeholders for feedback for plans and strategies under review 2.7 Identify and resolve stakeholder feedback for plans and strategies
3. Modify ecological management plans and strategies	3.1 Modify plans and strategies and maintain consistency with business plans and identified needs 3.2 Elicit and evaluate feedback from employees on existing management plans and strategies 3.3 Instruct staff of changes to management strategies and monitoring and recording processes 3.4 Submit proposed changes for approval according to workplace requirements 3.5 Update plans with outcomes from the consultative process 3.6 Ensure modified plans and strategies comply with legislative requirements
4. Implement modified ecological management plans and strategies	4.1 Modify operational procedures according to changes in conservation strategies and plans 4.2 Provide training to work team on updated procedures according to workplace health and safety, environmental sustainability and biosecurity requirements 4.3 Communicate changes of plans and strategies to stakeholders 4.4 Implement modified plans and strategies according to planned

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	schedules and performance targets

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Compare and contrast plans, specifications, procedures and protocols against current industry trends and consolidate findings for modifying plans and strategies
Writing	<ul style="list-style-type: none"> Prepare detailed plans and strategies and document procedural texts, after defining the current needs and required modification, taking into account the needs of a culturally and linguistically diverse workforce using clear and concise language in a standardised format
Oral Communication	<ul style="list-style-type: none"> Establish and maintain effective spoken communication when training and updating stakeholders and work teams on modifications to plans, strategies and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM604 Review ecological management plans and strategies	AHCNRM601 Review land management plans and strategies	<p>Changed title to reflect current industry terminology</p> <p>Minor changes to Application and Performance Criteria for clarity</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment</p>	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM604 Review ecological management plans and strategies

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has identified the need and reviewed and modified plans and strategies for ecological management.

There must also be evidence that the individual has:

- analysed statistical trends to determine changes occurring in ecological management plans and strategies beyond normal variations
- analysed existing management plans and strategies, including for three of the following contexts:
 - historical
 - social
 - cultural
 - political
 - economic
- implemented modified management plans and strategies according to timeframes
- conducted internal and external consultation during the review process
- implemented training and communications procedures for updating work team and stakeholders of modifications to management plans and strategies.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- structure and design of plans and strategies used in ecological management
- mechanisms and criteria for reviewing management plans and strategies, including:
 - trends and development in ecological management practices
 - new materials and technological changes

- historical
- social
- cultural
- political
- economic
- threats, both natural and human activity, to places of natural significance, including:
 - ecosystems, including the interrelationship of geophysical, hydrological, biological and meteorological factors
 - normal and abnormal life cycles of the biodiversity
 - pollution sources and damage potential
- working with stakeholders and work teams during the review process, including:
 - negotiating change
 - capturing feedback
 - working with individuals with a diverse range of backgrounds
- legislation, regulations and local bylaws impacting on ecological management
- national standards for the practice of ecological restoration
- communications strategies for updating and training stakeholders and work teams, including:
 - analysing skills and knowledge of work teams
 - basic skills in training
 - working with property owners and managers
 - different strategies for communication.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- specifications:
 - workplace policies, procedures and processes used for the design of plans and strategies
 - existing ecological management plans and strategies for reviewing
 - relevant legislation, codes of practice and standards
- relationships:
 - stakeholders
 - work teams
- timeframes:
 - according to time specified in modified plans and strategies.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM605 Develop a monitoring, evaluation and reporting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop a monitoring, evaluation and reporting program for a land and water management organisation or project manager to measure progress against targets and reporting responsibilities.

The unit applies to individuals who are land or water managers and use an adaptive management framework to manage human, social, natural, physical and financial assets in natural resource management. They apply knowledge and skills in land and water management with autonomy and judgement and analyse information to complete activities, interpret and transmit solutions to others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Define terms of reference, scope and evaluation context	1.1 Specify the scope of the adaptive management framework activity 1.2 Identify measurable indicators for outcomes

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify the key stakeholders and consultation process</p> <p>1.4 Select evaluation, data analysis and monitoring methods best suited to size and significance of the program</p> <p>1.5 Define terms of reference</p> <p>1.6 Review existing evidence and literature relevant to the proposed evaluation</p> <p>1.7 Develop an evaluation methodology that supports broader management targets, natural resource management standards, targets and outputs</p>
2. Identify the key stages and outcomes of the program	<p>2.1 Define key stages, milestones and timeframes for the management framework activity</p> <p>2.2 Advise stakeholders of program and delivery timeframe for endorsement</p> <p>2.3 Identify hazards and risks that impact on the proposed program</p> <p>2.4 Refine targets, goals, objectives and indicators</p>
3. Define reporting and record-keeping requirements for data management	<p>3.1 Identify data collection, management and reporting requirements according to identified objectives</p> <p>3.2 Identify existing data sets to be accessed for the program</p> <p>3.3 Design data collection protocols and methodology according to workplace standards and required formats</p> <p>3.4 Identify data formatting, secure storage and data access procedures</p> <p>3.5 Identify information and data analysis products required for stakeholders</p> <p>3.6 Identify summary reports for specific stakeholder requirements</p>
4. Identify the resources needed to implement the program	<p>4.1 Identify human resources and skill sets required to implement the monitoring and evaluation program</p> <p>4.2 Assess the material resources required to undertake the work</p>
5. Design and manage the monitoring, evaluation and reporting program plan	<p>5.1 Produce monitoring program plan to workplace requirements and industry standards</p> <p>5.2 Specify reporting requirements for the program</p> <p>5.3 Incorporate work health and safety, environmental sustainability and biosecurity policies and procedures into the plan</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Conduct literature reviews and other desktop research to establish the scope and objectives of the MERI program
Writing	<ul style="list-style-type: none"> Demonstrate sophisticated writing skills by selecting appropriate conventions and stylistic devices to express precise meaning and understanding when documenting MERI programs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM605 Develop a monitoring, evaluation and reporting program	AHCNRM602 Develop a monitoring, evaluation and reporting program	Minor changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM605 Develop a monitoring, evaluation and reporting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has developed a monitoring, evaluation and reporting program for a land management organisation in accordance with an adaptive management framework.

There must also be evidence that the individual has:

- scoped a project that included:
 - outcomes sought
 - target audience who will use the information
 - for what purpose the adaptive management framework is to be conducted
- identified key stakeholders and defined terms of reference and context
- identified key stages and outcomes of the project
- assessed and defined data management requirements according to project requirements and objectives
- identified the resources needed to undertake the program, including:
 - financial
 - equipment
 - material
 - human resources
- developed data collection, management and analysis methodology and procedures
- designed and managed a monitoring, evaluation and reporting program
- produced reports and planning documents to current industry standards
- reviewed existing data and information for plan, according to workplace requirements
- incorporated workplace health and safety practices, policies and procedures into the program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- ecosystem attributes and indicators of their health and decline
- program design considerations, including:
 - equality
 - technical validation
 - ethical standards
- quantitative and qualitative methods for monitoring and evaluation
- experimental design
- data management techniques and data analysis principles and procedures
- conducting a literature review, including sources of existing evidence and literature relevant to the program
- adaptive management frameworks used for ecological management, including Monitoring, Evaluation, Reporting and Improvement (MERI) framework
- data collection protocols
- national standards for the practice of ecological restoration
- stakeholders and their needs for data access, analysis for decision making
- risks assessment of the program, including health and safety.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- specifications:
 - workplace policies, procedures and processes for formatting and documenting reports, data sets and plans
 - a project on which to employ MERI
 - legislation and codes of practice for conducting MERI projects
- relationships:
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY102 Support nursery work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to undertake routine nursery work under direct supervision and to support the nursery work of others.

The unit applies to individuals who support nursery work while working alongside a supervisor, exercising limited autonomy within established and well known parameters. They identify and seek help with simple problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for nursery work	1.1 Collect required materials, tools and equipment according to lists provided and supervisor instructions 1.2 Fit and use personal protective equipment (PPE) applicable to job requirements 1.3 Use correct manual handling techniques when loading and unloading materials

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Report faulty or unsafe tools, equipment or PPE to supervisor 1.5 Recognise and report workplace hazards to supervisor
2. Undertake nursery work as directed	2.1 Provide nursery work support according to workplace health and safety requirements and supervisor instruction 2.2 Follow instructions and directions provided by supervisor, and seek clarification when necessary 2.3 Interact with staff and customers in a professional manner 2.4 Follow workplace policies and procedures in relation to workplace practices, handling and disposal of materials 2.5 Maintain a clean and safe work site while undertaking nursery work 2.6 Report problems or difficulties in completing work to required standards or timelines to supervisor
3. Clean up on completion of nursery work	3.1 Store plants and materials according to supervisor instructions 3.2 Clean, maintain and store tools and equipment according to supervisor instructions 3.3 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> • Use clear language to report malfunctions, faults, wear or damage to tools • Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY102 Support nursery work	AHCNSY101 Support nursery work	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY102 Support nursery work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supported nursery work on at least two occasions, and has:

- prepared materials, tools and equipment for nursery work
- applied safe work practices
- undertaken nursery work as directed
- stored materials as directed
- cleaned up on completion of work.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- procedures for preparing for nursery work and cleaning up on project completion
- safe work practices used in nursery work
- principles and practices of nursery work
- basic nursery plant maintenance activities
- basic stock control procedures
- nursery hygiene and quality control.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- work instructions and workplace procedures applicable to supporting nursery work
- nursery maintenance materials, tools and equipment
- personal protective equipment applicable to supporting nursery work
- relationships:
 - supervisor, staff and customers
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY201 Pot up plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to transplant established plants with developed root systems.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for potting up operations	1.1 Clarify work activity instructions with supervisor 1.2 Identify any work health and safety hazards and tell supervisor 1.3 Select and use tools and equipment for potting up 1.4 Clean and disinfect work area 1.5 Collect materials and check that there is sufficient quantity and

Element	Performance criteria
	quality for potting up operations 1.6 Select and use suitable personal protective equipment (PPE)
2. Prepare growing media	2.1 Measure media components and mix as instructed 2.2 Test growing media to ensure the product complies with media specifications
3. Pot up propagated plants	3.1 Prepare plants for potting 3.2 Pot up selected propagated plants 3.3 Grade plants during the potting process to meet quality specifications and report any abnormalities to supervisor 3.4 Adjust media level in pots to produce a well-furnished plant 3.5 Ensure that placement and depth of plants comply with the planting method and plan 3.6 Add fertilisers and other products as directed
4. Complete potting up operation	4.1 Water plants in to eliminate air pockets and prevent dehydration 4.2 Perform cleaning procedures and follow hygiene practices 4.3 Collect waste and dispose of or recycle to minimise damage to the external environment 4.4 Maintain records of potting up operations in the appropriate format 4.5 Clean and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY201A Pot up plants.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY201 Pot up plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare tools, equipment, media and plants
- measure media components
- disinfect work areas
- operate potting machinery (if required)
- pot up propagated plants
- handle plants with care
- treat common problems of plants
- use and maintain tools

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of potting up plants
 - appropriate use of personal protective equipment
 - basic plant physiology
 - common problems in a controlled environment
 - enterprise plants and their characteristics
 - hygiene and quality control
 - methods of disposing of waste
 - properties of relevant potting media

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY202 Care for nursery plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain and care for containerised nursery plants.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to work	1.1 Clarify work activity instructions with supervisor 1.2 Identify any work health and safety hazards and tell supervisor 1.3 Select and use appropriate tools and equipment 1.4 Select and use suitable personal protective equipment (PPE)

Element	Performance criteria
2. Maintain the nursery environment	2.1 Service irrigation system components for basic operational use and repair or replace basic user serviceable parts 2.2 Check irrigation system for functionality 2.3 Monitor environmental controls to ensure specified levels are maintained 2.4 Follow hygiene practices to minimise risk of contamination
3. Maintain nursery plants	3.1 Apply fertiliser and other products as directed 3.2 Remove weeds from pots as directed 3.3 Apply water in the quantity and method specified 3.4 Block and space plants as required 3.5 Prune plants as directed 3.6 Stake and tie plants as directed 3.7 Provide feedback to supervisor on work completed
4. Complete nursery plant maintenance operation	4.1 Record workplace information in the appropriate format 4.2 Collect waste and dispose of or recycle 4.3 Clean and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY202A Tend nursery plants.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY202 Care for nursery plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- select and use appropriate tools and equipment
- maintain nursery hygiene
- Service, repair or replace basic operational irrigation system components and user serviceable parts
- maintain nursery plants as instructed
- check irrigation system performance
- monitor environmental controls
- recognise common problems in nursery plants
- repair or replace user serviceable irrigation components
- record workplace information

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of nursery plant care
 - botany and plant physiology as applies to maintaining nursery plants
 - common problems that may occur with containerised plants in a controlled environment and their treatment
 - daily water requirements of nursery plants
 - hygiene and quality control when tending nursery plants
 - principles and operations of irrigation systems used in nurseries, in basic terms

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY203 Undertake propagation activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out a range of propagation tasks.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for plant propagation	1.1 Clarify work activity instructions with supervisor 1.2 Identify any work health and safety hazards and tell supervisor 1.3 Select and use tools and equipment for potting up 1.4 Clean and disinfect work area

Element	Performance criteria
	1.5 Select and use suitable personal protective equipment (PPE) 1.6 Collect propagation material using the appropriate method for the species 1.7 Maintain and store propagation material to ensure maximum viability
2. Propagate plants	2.1 Apply pre-treatment appropriate to the propagation method and species 2.2 Carry out propagation techniques appropriate to the requirements of the species 2.3 Handle propagation material in a way that minimises damage and maximises viability 2.4 Apply water and nutrients to suit the media conditions, plant requirements and propagation techniques used 2.5 Apply labels 2.6 Monitor plant health and take remedial action if required
3. Complete propagation activities	3.1 Collect waste and dispose of or recycle to minimise damage to the external environment 3.2 Maintain records of activities in the appropriate format 3.3 Clean and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY203A Undertake propagation activities.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY203 Undertake propagation activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare for plant propagation according to instructions
- collect propagation material as appropriate to species
- apply pre-treatments
- apply water and nutrients
- carry out a variety of propagation techniques
- collect propagation material
- maintain environmental parameters and temperature controls
- minimise damage to and maximise viability of propagated material
- maintain records of activities

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of propagation
 - botany and plant physiology as it applies to propagation
 - common problems that occur while performing propagation activities
 - enterprise hygiene requirements
 - enterprise requirements for handling and disposal of nursery wastes
 - maintenance requirements of tools and equipment used for propagation
 - plant nutrition
 - propagation methods required for a range of plant species
 - quality specifications/characteristics of a range of parent plants and propagation materials

- record keeping relevant to the work function

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY204 Maintain indoor plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain and care for indoor plants.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to maintain indoor plants	1.1 Clarify work activity instructions with supervisor 1.2 Identify any work health and safety hazards and tell supervisor 1.3 Select and use appropriate tools and equipment 1.4 Select and use suitable personal protective equipment (PPE)

Element	Performance criteria
2. Maintain the growing environment	2.1 Access plants as directed 2.2 Transport tools, equipment and materials safely to comply with access requirements 2.3 Maintain watering system and adjust where necessary 2.4 Take light meter readings to ensure specified parameters are maintained 2.5 Check condition of media 2.6 Clean containers and growing site to ensure the aesthetic and hygiene standards of indoor plants are maintained
3. Maintain indoor plants	3.1 Recognise common problems in indoor plants and rectify and report to the supervisor 3.2 Select and apply treatments to optimise plant health and appearance 3.3 Apply water in the quantity and method specified by the supervisor 3.4 Replace plants when no longer at optimum health and appearance
4. Complete indoor plant maintenance operation	4.1 Remove rubbish, litter and decaying material from plants, pots and surrounds and perform cleaning procedures 4.2 Collect and dispose of or recycle waste to minimise damage to the environment 4.3 Clean and store tools and equipment 4.4 Record workplace information in the appropriate format

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY204A Maintain indoor plants.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY204 Maintain indoor plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- Prepare for indoor plant maintenance activities according to instructions
- inspect plant quality
- measure quantities and calculate application rates
- operate, adjust and maintain watering system
- use a light meter
- monitor and maintain health of indoor plants
- maintain indoor plant environment
- record workplace information

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of indoor plant maintenance
 - acclimatisation techniques for indoor plants
 - botany and physiology of indoor plants
 - common problems that may occur with indoor plants and their treatment
 - growth requirements of indoor plants
 - identification and characteristics of common indoor plants and their culture
 - light and moisture tolerance and intolerance for common indoor plant species
 - methods of disposing of waste to minimise damage to the environment
 - operations and maintenance of a range of irrigation and subirrigation systems used for watering indoor plants and displays

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY205 Pot up plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to pot up established plants with developed root systems, including preparing and potting up propagated plants and completing potting up operations.

The unit applies to individuals who pot up plants under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for potting up operations	1.1 Confirm plant potting up activities to be undertaken with supervisor 1.2 Recognise potential hazards and risks and implement safe working practices to minimise risk to self and others 1.3 Select appropriate tools, equipment and materials according to supervisor instructions

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Clean and disinfect work area according to hygiene requirements 1.5 Select, fit and use personal protective equipment applicable to the task
2. Undertake potting up operations	2.1 Prepare and grade plants for potting as directed 2.2 Pot up selected plants 2.3 Check placement and depth of plants comply with planting method and instructions 2.4 Add fertilisers according to supervisor instructions 2.5 Apply hygiene requirements associated with potting up plants
3. Complete potting up operations	3.1 Water plants in to eliminate air pockets and prevent dehydration 3.2 Transport and place plants in growing area according to supervisor instructions 3.3 Remove and dispose of waste material according to workplace procedures, and perform cleaning procedures 3.4 Clean, disinfect, maintain and store tools and equipment, and work area according to hygiene requirements 3.5 Identify and report unserviceable tools and equipment according to workplace procedures 3.6 Record and report potting up operations according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to record plant potting up activity
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm and report plant potting up operations and report tool and equipment unserviceability

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY205 Pot up plants	AHCNSY201 Pot up plants	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY205 Pot up plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed plant potting up on at least three occasions, and has:

- applied workplace health and safety requirements
- selected, used and maintained plant potting up tools, equipment, material and plants
- disinfected work areas
- graded and potted up propagated plants as directed
- handled plants with care
- applied plant hygiene, stock movement and placement requirements
- removed and disposed of waste material
- recorded and reported plant potting up operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for potting up plants, including appropriate use of personal protective equipment (PPE)
- the principles and practices of potting up plants, including:
 - plant grading and pot selection
 - plant hygiene, stock movement and placement requirements
 - methods of disposing of waste.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plant potting up tools, equipment and materials
 - PPE applicable to plant potting up
- specifications:
 - workplace requirements applicable to health and safety in the workplace and potting up of plants
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY206 Care for nursery plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to maintain and care for containerised nursery plants, including preparing for work, maintaining the nursery environment and plants, and completing plant maintenance operations.

The unit applies to individuals who care for nursery plants under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Confirm care activities to be undertaken with supervisor 1.2 Recognise potential hazards and risks and implement safe working practices to minimise risks to self and others 1.3 Select appropriate tools and equipment for the task 1.4 Select fit, and use personal protective equipment and clothing applicable to the task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Maintain nursery plants	2.1 Follow hygiene practices to minimise risk of contamination 2.2 Prepare and apply fertiliser according to work instructions 2.3 Identify weeds and remove from pots as directed 2.4 Block and space plants according to spacing requirements and instructions 2.5 Prune plants using the required tools and safe work practices and according to instructions 2.6 Stake and tie plants using the required materials and according to instructions
3. Complete nursery plant maintenance operations	3.1 Remove and dispose of waste material according to workplace procedures 3.2 Clean, disinfect, maintain and store tools and equipment according to workplace procedures 3.3 Identify and report unserviceable tools and equipment according to workplace procedures 3.4 Record and report nursery plant care and maintenance according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to record plant care and maintenance activity
Oral Communication	<ul style="list-style-type: none"> Use clear language to confirm and report plant care and maintenance operations and report tool and equipment unserviceability to supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY206 Care for nursery plants	AHCNSY202 Care for nursery plants	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY206 Care for nursery plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed nursery plant care and maintenance on at least three occasions, and has:

- applied workplace health and safety requirements
- selected, cleaned, used and maintained plant care tools and equipment
- maintained nursery hygiene
- completed tasks following supervisor instructions
- removed and disposed of waste material
- recorded and reported nursery plant care, problems, operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for nursery plant care
- principles and practices of nursery plant care, including:
 - basic plant knowledge as it applies to maintaining nursery plants
 - common problems that may occur with containerised plants in a growing environment
 - hygiene and quality control when tending nursery plants.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - nursery plants
 - nursery plant care and maintenance tools and equipment
 - personal protective equipment applicable to nursery plant care and maintenance
- specifications:
 - workplace requirements applicable to health and safety in the workplace and nursery plant care
 - work instructions and workplace procedures applicable to caring for nursery plants
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY207 Undertake propagation activities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare for plant propagation, assist with plant propagation and complete propagation activities.

The unit applies to individuals who undertake propagation activities under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for plant propagation	1.1 Confirm propagation activities to be undertaken with supervisor 1.2 Recognise potential hazards and risks and implement safe working practices to minimise risk to self and others 1.3 Fit and use personal protective equipment applicable to the task 1.4 Collect and check appropriate tools, equipment and machinery for the task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Clean and disinfect work area according to workplace procedures 1.6 Organise propagation material for use as directed and in line with workplace procedures 1.7 Prepare and store propagation material and growing media as directed and in line with workplace procedures
2. Propagate plants	2.1 Assist with applying pre-treatment appropriate to the propagation method 2.2 Undertake propagation techniques and monitoring of equipment processes as instructed 2.3 Handle prepared propagation material in a way that minimises damage and maximises viability 2.4 Insert prepared material in the propagation receptacle according to supervisor instructions 2.5 Apply water and treatments according to supervisor instructions 2.6 Apply labels according to workplace requirements 2.7 Maintain propagated plants according to supervisor instructions
3. Complete propagation activities	3.1 Remove and dispose of waste material according to workplace procedures, and perform cleaning procedures 3.2 Clean, maintain and store tools and equipment 3.3 Identify and report unserviceable tools, equipment and machinery according to workplace procedures 3.4 Record and report propagation activities according to workplace procedures and supervisor instructions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to record propagation activity and complete plant labels

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm and report propagation activity and report tool and equipment unserviceability

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY207 Undertake propagation activities	AHCNSY203 Undertake propagation activities	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY207 Undertake propagation activities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has undertaken propagation activities on at least three occasions, including both seed and vegetative techniques and has:

- applied workplace health and safety requirements, including use of PPE
- prepared for plant propagation activities according to workplace instructions and procedures
- cleaned, used and maintained propagation tools, equipment and machinery
- collected propagation material as directed
- assisted with applying pre-treatments
- monitored equipment processes as instructed
- filled trays, containers or prepared media suitable for the propagation method as directed by supervisor
- undertaken propagation techniques as directed by supervisor
- minimised damage to and maximised viability of propagated material
- applied water and treatments according to supervisor instructions
- removed and disposed of waste material
- recorded and reported propagation activities and unserviceable tools, equipment and machinery.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to propagation activities and health and safety in the workplace
- the principles and practices of propagation, including:
 - basic plant knowledge as it applies to propagation

- common problems that occur while performing propagation activities
- workplace hygiene and biosecurity requirements
- workplace requirements for handling and disposal of nursery waste
- maintenance requirements of tools, equipment and machinery used for propagation
- basic plant nutrition as it applies to propagation
- basic seed and vegetative propagation techniques, including use of equipment
- quality specifications and characteristics of a range of parent plants and propagation materials
- record-keeping relevant to the work function.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - propagation tools, containers, equipment and machinery
 - seed and vegetative propagation material, growing media and treatments
 - personal protective equipment applicable to propagation activities
- specifications:
 - workplace requirements applicable to health and safety in the workplace and propagation activities
 - work instructions and workplace procedures applicable to propagation activities
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY208 Maintain indoor plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to maintain and care for indoor plants, including preparing for work, maintaining the growing environment and plants, and completing plant maintenance operations.

The unit applies to individuals who maintain indoor plants under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Confirm activity to be undertaken with supervisor 1.2 Recognise potential hazards and risks and implement safe working practices to minimise risks to self and others 1.3 Collect appropriate tools and equipment for the task 1.4 Fit and use personal protective equipment applicable to the task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Maintain the growing environment	<p>2.1 Access plants as directed and according to workplace procedures</p> <p>2.2 Transport tools, equipment and materials safely according to work instructions and workplace health and safety requirements</p> <p>2.3 Check that growing media condition is fit for purpose</p> <p>2.4 Clean containers and growing site to ensure aesthetic and hygiene standards of indoor plants are maintained</p>
3. Maintain indoor plants	<p>3.1 Recognise common problems in indoor plants, and report to supervisor</p> <p>3.2 Apply treatments to optimise plant health and appearance as directed</p> <p>3.3 Apply water where required, in quantity and method as directed and according to workplace procedures</p> <p>3.4 Replace plants when no longer at optimum health and appearance</p>
4. Complete indoor plant maintenance operations	<p>4.1 Remove and dispose of waste material according to workplace procedures, and perform cleaning procedures</p> <p>4.2 Clean, maintain and store tools and equipment</p> <p>4.3 Identify and report unserviceable tools and equipment according to workplace procedures</p> <p>4.4 Record and report indoor plant maintenance according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to record indoor plant maintenance activity
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm and report indoor plant maintenance operations and report tool and equipment unserviceability

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY208 Maintain indoor plants	AHCNSY204 Maintain indoor plants	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY208 Maintain indoor plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has maintained indoor plants on at least three occasions, and has:

- applied workplace health and safety requirements
- prepared for indoor plant maintenance activities according to workplace instructions and procedures
- selected, cleaned, used and maintained plant care tools and equipment
- monitored indoor plant environment
- inspected plant quality
- monitored and maintained health of indoor plants
- recognised common problems in indoor plants
- applied water as directed
- removed and disposed of waste material
- recorded and reported indoor plant maintenance operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable for indoor plant maintenance including health and safety requirements
- principles and practices of indoor plant maintenance, including:
 - acclimatisation techniques for indoor plants
 - risks associated with indoor plant maintenance in public spaces
 - common problems that may occur with indoor plants, and their treatment
 - growth requirements of indoor plants

- identification and characteristics of common indoor plants, and their culture
- methods of disposing of waste to minimise damage to the environment
- methods used for watering indoor plants and displays.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - indoor plants
 - indoor plant maintenance tools and equipment
 - personal protective equipment applicable to indoor plant maintenance
- specifications:
 - workplace requirements applicable to health and safety in the workplace and indoor plant maintenance
 - work instructions and workplace procedures applicable to indoor plant maintenance
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY301 Maintain nursery plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain and care for nursery plants.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to work	1.1 Select and use appropriate materials, tools and equipment 1.2 Identify work health and safety hazards, assess risks and implement suitable controls 1.3 Select, use and maintain suitable safety and personal protective equipment (PPE)

Element	Performance criteria
2. Monitor and maintain the nursery environment	2.1 Monitor environmental parameters against the needs of the plants 2.2 Alter environmental parameters, as required, to meet the needs of nursery plants and market requirements 2.3 Service irrigation system components for basic operational use and repair or replace basic user serviceable parts
3. Determine daily water requirements	3.1 Determine water requirements according to the needs of the plant and environmental parameters 3.2 Apply water to meet the needs of the plant group 3.3 Monitor water requirements of the plant
4. Promote plant growth by intervention	4.1 Test potting media in production areas to ensure quality specifications are met 4.2 Monitor the health of the plant 4.3 Undertake plant interventions as required 4.4 Dispose of waste with full consideration of the environmental implications
5. Complete work	5.1 Clean and store equipment, tools and equipment 5.2 Maintain records on all maintenance activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY301A Maintain nursery plants.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY301 Maintain nursery plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare for nursery plant maintenance activities
- calculate daily water needs
- implement a range of plant maintenance activities
- monitor plant health
- operate irrigation systems
- recognise stages of plant growth
- record workplace information
- repair or replace user serviceable irrigation components

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of nursery plant maintenance
 - botany and plant physiology as it applies to plant maintenance
 - characteristics of various types of potting media
 - common problems that occur with nursery plants and their treatment
 - effect of different pruning and intervention methods
 - effects of environmental parameters on plant growth
 - factors affecting the growth of nursery plants
 - methods of calculating daily water needs
 - optimum growing conditions for a range of plants in a nursery
 - principles and operations of a range of irrigation systems used in nurseries

- processes for modifying environmental parameters
- relationship between plant water needs and environmental parameters
- symptoms of unhealthy plants
- treatments required by plants at different stages and environmental parameters

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY302 Receive and dispatch nursery products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to select and collect nursery products for the purpose of dispatch, delivery or pick up by client and the process of receiving and processing of products from suppliers.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Select product for an order	1.1 Select and use materials, equipment and personal protective equipment (PPE) 1.2 Select product from stock batches to match order forms or client request

Element	Performance criteria
	1.3 Assist clients onsite with selection or direct to particular product or display area 1.4 Evaluate quality of product visually to ensure that it meets standard order requirements for quality 1.5 Block up stockholding areas for presentation 1.6 Monitor the amount of remaining product and retain information to inform other clients
2. Maintain the stock inventory	2.1 Collate orders in the sales or dispatch area 2.2 Check orders for quality of product and for accuracy of quantity 2.3 Keep electronic or manual records of outgoing sales in the product inventory 2.4 Adjust the inventory of the quantity of nursery stock available for sale
3. Prepare for dispatch or delivery	3.1 Check product for correct labelling and replace incorrect labelling 3.2 Package product for delivery and presentation to the client 3.3 Pack product into containers for ease of handling 3.4 Assist delivery of product by loading and stacking product according to the configuration of the transportation vehicle 3.5 Check product quality at each stage in the delivery process 3.6 Maintain and tidy sales and dispatch areas and packing and packaging materials
4. Receive products	4.1 Check incoming product for quality and correct quantities 4.2 Transfer product to stock holding areas with appropriate manual handling techniques 4.3 Transfer incoming documentation, receipts of delivery and invoices to administration

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY302A Receive and dispatch nursery products.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY302 Receive and dispatch nursery products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- evaluate product quality
- interpret order forms
- maintain product records
- meet client service requirements
- monitor and carry out product dispatch and delivery processes
- select product for order requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of receiving and despatching nursery products
 - best practice guidelines for nursery hygiene
 - common sources of cross contamination from transport vehicles
 - environmental controls necessary for transporting plants
 - quality standards for the packing, packaging and labelling of products
 - quarantine policies and relevant quarantine legislation
 - stock control procedures

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY303 Install and maintain plant displays

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to install and maintain plant displays. Plant displays can be permanent, semi-permanent and temporary displays of plant life under a range of gardening, exhibition, visual merchandising, marketing and commercial leasing and hiring activities.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess requirements for plantscaping	1.1 Assess access factors impacting plantscaping and record prior to installation 1.2 Assess and record environmental parameters prior to installation

Element	Performance criteria
	1.3 Note light sources in regard to both plant growth and client requirements 1.4 Take light meter readings interior installations and record 1.5 Analyse site conditions and constraints for plant suitability and record findings 1.6 Select plants to meet the requirements of the site
2. Install containerised and direct planted specimens	2.1 Identify and schedule materials, equipment and machinery required for the job 2.2 Identify and schedule personnel required for the job 2.3 Identify work health and safety hazards, assess risks and implement control measures 2.4 Select, use and maintain suitable safety equipment and personal protective equipment (PPE) 2.5 Install plants securely and in a manner that ensures they are presented well, are accessible for routine maintenance and conform to the plan or specifications 2.6 Prune damaged or unnecessary material to enhance the presentation 2.7 Water and fertilise plants as required 2.8 Leave the site in a clean and tidy state
3. Maintain plants	3.1 Identify the symptoms of under and over-watering and rectify 3.2 Identify the symptoms of low and high light intensity and rectify 3.3 Identify the symptoms of low and high fertiliser concentration and measure the pH of the growing medium where required and amend as required 3.4 Identify insects, pests and diseases associated with plants and control as required 3.5 Enhance appearance of plants 3.6 Determine the cost benefit of reviving or replacing plants

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY303A Install and maintain plant displays.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY303 Install and maintain plant displays

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess site conditions, requirements and constraints impacting plantscaping
- select plants that meet the requirements of the display and chosen site
- determine spatial measurements of a plantscape
- identify and schedule materials, equipment and personnel to install a plant display
- install plants securely to ensure accessibility for maintenance and ascetic requirements
- maintain plants to meet their water, light and fertiliser requirements
- detect and control pests and diseases

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of installing and maintaining plantscapes
 - acclimatisation techniques for plants
 - characteristics and attributes of a range of plants used for plantscaping
 - commonly occurring problems with plantscaping
 - light and moisture tolerance/intolerance for common plant species
 - options for remedial action
 - photosynthesis, respiration, nutrient uptake and growth rate for plants
 - plant growth requirements

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY304 Deliver and promote sales of plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to transport and deliver plants to retail outlets and other nurseries and the associated task of maintaining promotional displays.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to provide marketing support	1.1 Identify product list, clients, delivery schedule and transport vehicle 1.2 Select tools, equipment and machinery suitable for delivery requirements

Element	Performance criteria
	1.3 Carry out pre-operational and safety checks on tools, equipment and machinery 1.4 Select and prepare plants identified in orders, sample specifications and delivery schedule and load 1.5 Identify work health and safety hazards, assess risks and implement control measures 1.6 Select, use and maintain suitable personal protective equipment (PPE)
2. Deliver plants	2.1 Maintain stock 2.2 Update and maintain current stock lists 2.3 Maintain regular delivery service 2.4 Supply clients with information about stock availability on request 2.5 Complete delivery documentation
3. Maintain off-site displays	3.1 Check off-site product displays regularly 3.2 Maintain displays 3.3 Provide marketing support with due consideration of environmental implications
4. Promote sales	4.1 Inform retailers of available promotional literature with particular stock lines 4.2 Dispatch regular sales memos 4.3 Prepare advanced lists for seasonal promotions 4.4 Complete sales, promotional and marketing documentation

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY304A Deliver and promote sales of plants.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY304 Deliver and promote sales of plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- calculate orders, sales figures, ratios, proportions and application rates
- communicate with clients, work team members and supervisors
- coordinate own activities to deliver and maintain plant orders
- estimate treatment and product requirements, material sizes and quantities
- interpret and apply delivery schedules and marketing plans
- maintain mobile and remote displays and samples
- use reporting and work procedure documents

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of delivering and promoting plants
 - botanical, common and trade names, growth habits, and presentation requirements for display of plants
 - industry labelling standards and methods
 - practical understanding of the range of plants available from the enterprise
 - standards and methods for the preparation and dispatch of promotional literature and lists for seasonal promotions
 - standards and methods of packaging, and delivery of plant orders, samples and displays

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY305 Prepare specialised plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare specialised, unusual or rare plants in a production nursery or by other organisations, groups and individuals with a wide range of species and cultivars as the specialised plants or individual cultivars under production.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to treat specialised plants	1.1 Analyse customer requirements and clarify by market research or with a supervisor 1.2 Select specialist plants requiring treatment

Element	Performance criteria
	1.3 Select treatments appropriate to the specialised plant as outlined by the production and marketing plan of the organisation, or by the individual entrepreneur 1.4 Determine the timing of the treatments according to the seasonality of the plant species and market considerations 1.5 Identify work health and safety hazards, assess risks and implement control measures
2. Implement treatments	2.1 Select, prepare and use materials, tools and equipment required for implementing treatments 2.2 Select, use and maintain appropriate personal protective equipment (PPE) 2.3 Use treatments that meet the aesthetic requirements of the plan
3. Maintain aesthetic appearance of specialised plants	3.1 Monitor the health and aesthetic appearance of the plant to ensure quality standards are met 3.2 Apply water according to plant requirements 3.3 Modify environmental parameters to ensure optimum growth of plant 3.4 Apply remedial or preventative measures to the plants to ensure they maintain their aesthetic appearance

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY305A Prepare specialised plants.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY305 Prepare specialised plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- estimate treatment and plant requirements, sizes and quantities and calculating ratios, proportions and application rates
- organise and co-ordinate materials and equipment
- implement plant treatments
- meet quality standards for plant health and aesthetic appearance

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of specialised plant preparation
 - aftercare requirements of treated plants
 - characteristics of a range of potted plants commonly treated for special aesthetic purposes
 - different treatments which are applied to specialised plants to achieve desired aesthetic appearance
 - nursery industry best practice
 - optimum timing of treatments

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY306 Implement a propagation plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement a propagation plan for a range of plants using a range of different propagation methods.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for propagation activities	1.1 Interpret workplace instructions and organise tasks to achieve daily work routine within time constraints 1.2 Select and prepare appropriate tools, equipment and machinery 1.3 Identify work health and safety hazards, assess risks, implement control measures and report to the supervisor

Element	Performance criteria
	1.4 Select, use and maintain appropriate personal protective equipment (PPE) 1.5 Prepare growing environment to suit species and propagation method 1.6 Implement hygiene practices
2. Select propagation material	2.1 Identify parent plant and select according to health, vigour and desired characteristics 2.2 Select and collect propagation material according to the propagation method and species 2.3 Select appropriate conditioning and storage requirements to ensure maximum viability of propagating material
3. Prepare propagating media	3.1 Select media components for propagation mix 3.2 Test propagation media to ensure the product complies with media specifications 3.3 Determine storage requirements for the unused propagation media
4. Propagate plants	4.1 Prepare propagation material safely ensuring risks associated with airborne hazards are reduced 4.2 Perform propagation techniques appropriate for the plant species 4.3 Handle plants to minimise damage 4.4 Provide aftercare to suit the media conditions, plant requirements and propagation techniques employed
5. Complete propagation operations	5.1 Clean work site using appropriate hygiene requirements 5.2 Collect waste and dispose of or recycle to minimise damage to the environment 5.3 Complete and maintain records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY306A Implement a propagation plan.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY306 Implement a propagation plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare the growing environment to suit species and propagation method
- recognise and rectify problems and anomalies with parent plants, propagation material, propagation media, equipment and materials
- select appropriate propagation material
- handle potting mixes and propagation materials in a safe manner
- apply propagation techniques as appropriate to plants being propagated
- Provide aftercare to suit media conditions, plant requirements and propagation techniques

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices for implementing a propagation plan
 - aftercare requirements for a range of propagated plants
 - problems that may occur performing propagation activities and preventative action
 - enterprise hygiene standards required for propagation activities
 - preferred types of propagation media for different species
 - propagation techniques required for a range of plants
 - quality specifications for parent plants and propagation materials
 - testing methods applied to propagation media

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY307 Operate fertigation equipment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to operate fertigation equipment to deliver fertilisers via an irrigation system.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare materials and equipment for operation	1.1 Interpret workplace instructions and organise tasks to achieve daily work routine within time constraints 1.2 Select and prepare appropriate tools, equipment and machinery 1.3 Identify work health and safety hazards, assess risks, implement

Element	Performance criteria
	control measures and report to the supervisor 1.4 Select, use and maintain appropriate personal protective equipment (PPE) 1.5 Calibrate and connect injection or fertigation equipment 1.6 Calculate fertiliser concentration and mix the solution thoroughly 1.7 Set equipment to meet fertigation requirements
2. Operate the fertigation process	2.1 Implement start-up sequence 2.2 Operate and monitor fertigation process to ensure delivery is maintained 2.3 Monitor fertigation equipment to ensure no adverse environmental impact is caused by faulty operation 2.4 Implement corrections to the process and equipment adjustments as necessary
3. Shut down fertigation equipment	3.1 Flush injection equipment prior to shut down 3.2 Clean and store equipment 3.3 Manage waste generated by both the fertigation process and cleaning procedures 3.4 Report and record fertigation activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY307A Operate fertigation equipment.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY307 Operate fertigation equipment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- select and prepare fertigation materials
- connect and calibrate fertigation equipment
- monitor and adjust the delivery of fertilisers
- shut down, clean equipment and dispose of waste

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of fertigation operation
 - fertigation injection equipment
 - chemical handling procedures for fertiliser, chlorine, acid and cleaning agents
 - cleaning procedures for fertigation equipment
 - Material Data Sheets (MDSs)
 - environmental impacts of delivering fertilisers via the irrigation system

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY308 Maintain nursery plants

Modification History

Release	Comments
Release1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to monitor and maintain the nursery environment, determine water requirements and plant interventions that promote plant growth, and complete nursery plant maintenance work.

The unit applies to individuals who maintain nursery plants under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to work	1.1 Determine work requirements from workplace instructions 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Select required materials, tools and equipment, and check for safe operation 1.4 Select, fit, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	applicable to the task 1.5 Follow biosecurity practices applicable to maintaining plants
2. Monitor and maintain the nursery environment	2.1 Monitor environmental conditions against the needs of the plants 2.2 Adjust environmental controls to meet the needs of nursery plants 2.3 Check and operate irrigation system components according to manufacturer's specifications and desired application
3. Determine and apply daily water requirements	3.1 Determine water requirements according to plant needs and environmental conditions 3.2 Apply water to meet the needs of the plant
4. Promote plant growth by intervention	4.1 Monitor plant health and stage of growth according to end use 4.2 Undertake plant interventions as required
5. Complete work	5.1 Remove and dispose of waste according to workplace procedures 5.2 Clean and return tools and equipment to required location 5.3 Identify and report unserviceable tools and equipment according to workplace procedures 5.4 Record maintenance activities according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about nursery plant maintenance
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare irrigation system component service records, and complete nursery plant maintenance activity records
Oral communication	<ul style="list-style-type: none"> Use clear language to report tool and equipment unserviceability

Skill	Description
Numeracy skills	<ul style="list-style-type: none"> Calculate daily water requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY308 Maintain nursery plants	AHCNSY301 Maintain nursery plants	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY308 Maintain nursery plants

Modification History

Release	Comments
Release1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has maintained nursery plants on at least three occasions, and has:

- prepared for nursery plant maintenance activities according to workplace instructions
- applied workplace health and safety requirements, including use of PPE equipment
- selected, cleaned, used and maintained nursery plant maintenance tools and equipment
- applied workplace hygiene practices
- monitored and adjusted environmental conditions
- implemented plant maintenance activities according to workplace instructions
- serviced irrigation system components
- applied and monitored water according to plant needs and environmental conditions
- monitored plant health, and applied interventions as required
- recognised stages of plant growth
- removed and disposed of waste material
- recorded nursery plant maintenance activities and irrigation system service activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for maintaining nursery plants
- principles and practices of nursery plant maintenance, including:
 - plant physiology as it applies to plant maintenance
 - symptoms of unhealthy nursery plants, likely causes and treatment options
 - effect of different pruning and intervention methods
 - effects of environmental conditions on plant growth

- best practice guidelines for nursery hygiene
- methods of calculating daily water needs
- optimum growing conditions for a range of plants in a nursery
- principles and operations of irrigation systems used in nurseries
- processes for modifying environmental conditions
- relationship between plant water needs and environmental conditions
- treatments required by plants at different growth stages
- irrigation system manufacturer specifications.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - nursery plants
 - nursery plant maintenance tools and equipment
 - irrigation system, tools and components
 - personal protective equipment applicable to nursery plant maintenance
- specifications:
 - workplace requirements applicable to health and safety in the workplace and nursery plant maintenance
 - work instructions, workplace procedures, quality specifications and best practice guidelines for nursery hygiene applicable to nursery plant maintenance
 - irrigation system manufacturer specifications
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY309 Receive and dispatch nursery products

Modification History

Release	Comments
Release1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to select and collect nursery products. Further requirements are maintaining stock and receiving products from suppliers.

The unit applies to individuals who receive and dispatch nursery products under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select product for an order	1.1 Select required materials and equipment for receiving and dispatching stock 1.2 Select, fit and use personal protective equipment applicable to the task 1.3 Select product from stock batches to match order forms or customer requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Confirm with supervisor or workplace procedures, the product quarantine requirements prior to dispatch 1.5 Block up stockholding areas as required
2. Maintain the stock inventory	2.1 Collate orders in the sales or dispatch area 2.2 Check orders for product quality and quantity 2.3 Record electronic or manual outgoing sales records in the product inventory 2.4 Check inventory quantity of nursery stock available for sale
3. Prepare and dispatch products	3.1 Check product for correct labelling 3.2 List and prepare products to meet customer requirements 3.3 Pack product safely for ease of handling and to minimise damage 3.4 Load product according to vehicle configuration 3.5 Maintain and tidy sales and dispatch areas
4. Receive products	4.1 Check incoming product for type, quality and quantity 4.2 Transfer product to stock holding areas using correct manual handling techniques, and applying relevant biosecurity and quarantine requirements 4.3 Transfer incoming documentation, receipts of delivery and invoices to administration

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to prepare nursery product sales records in the product inventory, and record incoming stock
Numeracy	<ul style="list-style-type: none"> Match stock batch quantities to order forms Confirm and record product quantities and sales records

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY309 Receive and dispatch nursery products	AHCNSY302 Receive and dispatch nursery products	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY309 Receive and dispatch nursery products

Modification History

Release	Comments
Release1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has received and dispatched nursery products on at least three occasions, and has:

- applied workplace health and safety requirements, including use of PPE
- interpreted order forms
- met customer service requirements
- selected product for order requirements
- evaluated product quality
- monitored product dispatch, delivery and receipt processes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for receiving and dispatching nursery products
- principles and practices of receiving and dispatching nursery products, including:
 - workplace hygiene practices and procedures
 - common sources of cross-contamination from transport vehicles
 - environmental controls necessary for transporting plants
 - quality standards for the packing, packaging and labelling of products
 - quarantine policies and relevant biosecurity legislation
 - biosecurity practices
 - stock control procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - nursery plants and products
 - nursery plant and product receipt and dispatch materials and equipment
 - personal protective equipment applicable to nursery plant and product receipt and dispatch
- specifications:
 - workplace requirements applicable to health and safety in the workplace for receiving and dispatching nursery products
 - work instructions and workplace procedures for receiving and dispatching nursery products
- relationships:
 - customers
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY310 Install and maintain plant displays

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to assess plant display requirements, document plant display plan, and install and maintain plant displays.

The unit applies to individuals who install and maintain plant displays under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess client requirements and document plant display plan	1.1 Consult with client and determine requirements 1.2 Assess and record site factors impacting plant display requirements prior to installation 1.3 Assess and record environmental conditions prior to installation 1.4 Review project suitability and site conditions, constraints and maintenance requirements, and record findings

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select plants to meet the requirements of the site 1.6 Identify and schedule materials, equipment and machinery applicable to the task 1.7 Determine the benefit of reviving or replacing plants 1.8 Document display plan according to workplace procedures
2. Install plant display	2.1 Identify potential hazards and risks, and implement safe working practices to manage risks 2.2 Select, fit, use and maintain safety equipment and personal protective equipment applicable to the task 2.3 Install plants according to display plan 2.4 Prune damaged or unnecessary material to enhance the presentation 2.5 Water and fertilise plants as required 2.6 Clean and maintain site according to workplace requirements
3. Maintain plants	3.1 Identify watering requirements to maintain plant health 3.2 Identify and rectify the symptoms of low and high light intensity 3.3 Identify the symptoms of low and high fertiliser concentration 3.4 Identify and control insects, pests and diseases associated with plants as required 3.5 Service plants to ensure optimum appearance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to document plant display plan
Numeracy	<ul style="list-style-type: none"> Measure and calculate area and dimension of plant display site

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY310 Install and maintain plant displays	AHCNSY303 Install and maintain plant displays	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY310 Install and maintain plant displays

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has installed and maintained plant displays on at least three occasions, and has:

- consulted with clients to determine requirements
- assessed site conditions, requirements and constraints impacting plant display
- determined spatial measurements of a plant display
- selected plants that meet the requirements of the display and site
- identified and scheduled materials and equipment to install a plant display
- documented display plan, including:
 - plant selection
 - plant installation
 - plant rotation and maintenance requirements
- applied workplace health and safety requirements, including the use of appropriate PPE
- maintained plants to meet their water, light and fertiliser requirements
- detected and controlled pests and diseases.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of plant displays, considering:
 - timeframe
 - location
- ranges of plant displays, including:
 - exhibition
 - visual merchandising

- marketing
- commercial leasing and hiring activities
- the principles and practices of installing and maintaining plant displays, including:
 - acclimatisation techniques for plants
 - characteristics and attributes of a range of plants used for plant display
 - commonly occurring problems with plant display
 - light and moisture tolerance/intolerance for common plant species
 - options for remedial action
 - photosynthesis, respiration, nutrient uptake and growth rate for plants
 - plant growth requirements
- workplace requirements applicable to health and safety in the workplace for installing and maintaining plant displays.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plants
 - plant display site
 - personal protective equipment applicable to installing and maintaining plant displays
- specifications:
 - workplace requirements applicable to health and safety in the workplace for installing and maintaining plant displays
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY311 Promote sales of plants

Modification History

Release	Comments
Release1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to promote plant sales, support off-site marketing, maintain stock inventory and complete documentation.

The unit applies to individuals who promote sales of plants under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Promote sales	1.1 Inform retailers of available promotional literature about particular stock lines 1.2 Dispatch regular stock lists and sales information according to workplace requirements 1.3 Prepare advanced lists according to seasonal promotion 1.4 Complete promotional and marketing documentation according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Prepare for delivery of plants	<p>2.1 Identify product and client list, delivery schedule and transport vehicle according to workplace procedures</p> <p>2.2 Identify potential hazards and risks, and implement safe working practices to manage risks</p> <p>2.3 Confirm plants are loaded according to client order and delivery schedule</p>
3. Deliver plants and support off-site marketing	<p>3.1 Monitor the transport and supply of plants according to delivery schedule</p> <p>3.2 Check and maintain off-site product displays as required</p> <p>3.3 Provide marketing support according to workplace procedures</p>
4. Maintain stock inventory and complete documentation	<p>4.1 Update and maintain current stock lists according to workplace requirements</p> <p>4.2 Maintain regular delivery service according to workplace processes</p> <p>4.3 Supply clients with information about stock availability on request</p> <p>4.4 Complete delivery and sales documentation according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to complete delivery, sales, promotional and marketing documentation, sales memos and seasonal promotion advanced lists
Oral communication	<ul style="list-style-type: none"> Use clear language with clients and retailers to provide information on stock availability and promotions
Numeracy skills	<ul style="list-style-type: none"> Calculate and match plant quantities to identified orders, sample specifications and delivery schedule

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY311 Promote sales of plants	AHCNSY304 Deliver and promote sales of plants	Major changes to title and application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY311 Promote sales of plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has delivered and promoted sales of plants on at least three occasions, and has:

- communicated promotions and stock availability with clients
- interpreted and applied delivery schedules and marketing plans
- coordinated own activities to deliver and maintain plant orders
- applied workplace health and safety requirements
- checked and maintained mobile and remote displays and samples where required
- provided marketing support
- completed delivery, sales, promotional and marketing documentation.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the principles and practices of delivering and promoting sales of plants, including:
 - botanical, common and trade names, growth habits, and presentation requirements for display of plants
 - industry labelling standards and methods
 - practical understanding of the range of plants available from the workplace
 - standards and methods for the preparation and dispatch of promotional literature and lists for seasonal promotions
 - standards and methods of packaging, and delivery of plant orders, samples and displays
- workplace requirements applicable to health and safety in the workplace for delivery and promoting sales of plants.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plants
 - product and client list and delivery schedule
 - promotional material
- specifications:
 - workplace requirements applicable to health and safety in the workplace for delivery and promoting sales of plants
- relationships:
 - clients
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY312 Prepare specialised plants

Modification History

Release	Comments
Release1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare and implement plant treatments and maintain aesthetic appearance of specialised plants.

The unit applies to individuals who prepare specialised plants under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to treat specialised plants	1.1 Identify specialist plants requiring treatment 1.2 Assess appropriate techniques for plant species according to workplace production, marketing plan and customer requirements and clarify with supervisor 1.3 Determine treatment timing according to workplace procedures
2. Implement treatments	2.1 Identify potential hazards and risks, and implement safe working

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
and techniques	<p>practices to manage risks</p> <p>2.2 Select required materials, tools and equipment, and check for safe operation</p> <p>2.3 Select, fit, use and maintain personal protective equipment applicable to the task</p> <p>2.4 Use treatments and techniques that meet requirements</p>
3. Maintain aesthetic appearance of specialised plants	<p>3.1 Monitor the health and aesthetic appearance of the plant to ensure quality standards are met</p> <p>3.2 Maintain plant according to growth requirements</p> <p>3.3 Manage environmental controls to optimise plant growth</p> <p>3.4 Apply remedial or preventative measures to plants to ensure they maintain their aesthetic appearance</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about specialised plant treatment and techniques
Oral communication	<ul style="list-style-type: none"> Use clear language with customers to determine customer requirements Initiate discussions with supervisor as appropriate, using clear language to determine customer requirements and select appropriate plant treatments and techniques
Numeracy	<ul style="list-style-type: none"> Calculate plant treatment quantity, ratios, proportions and application rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY312 Prepare specialised plants	AHCNSY305 Prepare specialised plants	Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY312 Prepare specialised plants

Modification History

Release	Comments
Release1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared specialised plants on at least three occasions, and has:

- implemented plant treatments and techniques
- applied workplace production and marketing plan requirements
- applied workplace health and safety requirements, including the use of appropriate personal protective equipment (PPE)
- organised and coordinated materials and equipment
- met quality standards for plant health and aesthetic appearance.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the principles and practices of specialised plant preparation, including:
 - aftercare requirements of treated plants
 - characteristics of a range of potted plants commonly treated for special aesthetic purposes
 - different treatments and techniques that are applied to plants to achieve desired aesthetic appearance
 - optimum timing of treatments
- workplace production and marketing plan objectives
- workplace requirements applicable to health and safety in the workplace for preparing specialised plants.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - specialised plants
 - specialised plant preparation materials, tools and equipment
 - PPE applicable to preparing specialised plants
- specifications:
 - workplace requirements applicable to health and safety in the workplace for preparing specialised plants
 - workplace production and marketing plan
- relationships:
 - customers and supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY313 Implement a propagation plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement a propagation plan, including; preparing for, implementing and completing propagation of plants.

The unit applies to individuals who implement a propagation plan under broad direction, and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for propagation activities	1.1 Determine work requirements from workplace instructions 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Select required tools, equipment and machinery, and check for safe operation 1.4 Select, fit, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	applicable to the task 1.5 Prepare propagation environment to suit species and propagation method 1.6 Implement hygiene and biosecurity practices applicable to plant propagation activities
2. Select seed or vegetative propagation material	2.1 Identify parent plant or seed and select according to health, vigour or desired characteristics 2.2 Select or collect propagation material according to propagation method and species 2.3 Select appropriate conditioning and storage requirements to ensure maximum viability of propagating material 2.4 Undertake treatments as required
3. Prepare propagation components and media	3.1 Select components and prepare propagation media and appropriate container for planting 3.2 Test propagation media according to workplace quality specifications
4. Propagate plants	4.1 Prepare propagation material according to workplace instructions 4.2 Perform propagation techniques and treatments appropriate for plant species 4.3 Handle propagation material to minimise damage or deterioration 4.4 Label units or batches to enable tracking of propagated material 4.5 Place propagated material into suitable environment for propagation cycle 4.6 Provide aftercare to suit growing conditions, plant requirements and propagation techniques
5. Complete propagation operations	5.1 Clean work site using appropriate hygiene requirements 5.2 Remove and dispose of waste according to workplace procedures 5.3 Clean and return tools, equipment and machinery to required location 5.4 Identify and report unserviceable tools, equipment and machinery according to workplace procedures 5.5 Monitor and record propagation activities according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about plant propagation
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to complete propagation activity records
Oral communication	<ul style="list-style-type: none"> Use clear language to report tool, equipment and machinery unserviceability
Numeracy skills	<ul style="list-style-type: none"> Calculate propagation media ratios, proportions and quantity

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY313 Implement a propagation plan	AHCNSY306 Implement a propagation plan	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY313 Implement a propagation plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a propagation plan on at least one occasion, and has:

- prepared for propagation activities according to workplace instructions
- applied workplace health and safety requirements, including use of PPE
- implemented hygiene and biosecurity practices applicable to plant propagation activities
- selected, cleaned, used and maintained propagation tools, equipment and machinery
- prepared the growing environment to suit species and propagation method
- selected appropriate propagation material
- applied propagation techniques and treatments as appropriate to plants being propagated
- applied a minimum of 7 of the following propagation techniques as part of that plan:
 - deflasking plantlets
 - tissue culture
 - seed sowing
 - budding and grafting
 - soft tip cutting
 - semi-hardwood cutting
 - hardwood cutting
 - leaf cutting
 - division
 - layering
- labelled propagated units or batches, and recorded propagation activities
- provided aftercare to suit growing conditions, plant requirements and propagation techniques
- removed and disposed of waste material.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for implementing a propagation plan
- problems that may occur performing propagation activities, and preventative action
- enterprise hygiene and biosecurity standards required for propagation activities
- the principles and practices for implementing a propagation plan, including:
 - preferred types of propagation media for different species
 - propagation techniques and treatments required for a range of plants
 - problems and anomalies with parent plants, propagation material, propagation media, equipment and materials, and their rectification
 - quality specifications for parent plants and propagation materials
 - testing methods applied to propagation media
 - aftercare requirements for a range of propagated plants.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - parent plants, propagation media and propagation material applicable to propagation techniques being undertaken
 - propagation tools, equipment and machinery
 - personal protective equipment applicable to implementing a propagation plan
- specifications:
 - workplace requirements applicable to health and safety in the workplace for implementing a propagation plan
 - work instructions, workplace procedures and quality specifications applicable to implementing a propagation plan
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY314 Operate fertigation equipment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare, operate and shut down fertigation equipment, and report fertigation activities, to deliver fertilisers using an irrigation system.

The unit applies to individuals who operate fertigation equipment under broad direction, and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare materials and equipment for operation	1.1 Determine work requirements from workplace instructions 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Select required tools, equipment and machinery, and check for safe operation 1.4 Select, fit, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>applicable to the task</p> <p>1.5 Identify water quality issues related to fertigation activities</p> <p>1.6 Calibrate and connect injection or fertigation equipment</p> <p>1.7 Calculate fertiliser and chemical concentration, and mix according to compatibility requirements</p> <p>1.8 Prepare equipment to meet fertigation requirements</p>
2. Operate the fertigation process	<p>2.1 Start up fertigation process according to operators manual</p> <p>2.2 Operate and monitor fertigation process to confirm performance is maintained within specification</p> <p>2.3 Monitor water quality and test concentrations at irrigation emitter to ensure calculated concentration is achieved</p> <p>2.4 Identify, rectify and report out-of-specification equipment performance</p> <p>2.5 Apply emergency procedures in the event of a spillage or chemical accident</p>
3. Shut down fertigation equipment	<p>3.1 Carry out fertigation equipment shut-down according to operators' manual</p> <p>3.2 Clean fertigation equipment according to maintenance procedure</p>
4. Record information	<p>4.1 Record and report environmental hazards of fertigation process where applicable</p> <p>4.2 Record and report fertiliser application and storage details according to workplace recording procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about fertigation equipment operations

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare fertigation activity records
Oral communication	<ul style="list-style-type: none"> Use clear language to report out-of-specification equipment performance
Numeracy	<ul style="list-style-type: none"> Calculate fertiliser dilution rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY314 Operate fertigation equipment	AHCNSY307 Operate fertigation equipment	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY314 Operate fertigation equipment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has operated fertigation equipment on at least two occasions, and has:

- applied workplace health and safety requirements, including use of PPE
- selected, cleaned, used and maintained fertigation tools and equipment, and injection equipment, according to operators manuals, and scope of works
- selected and prepared fertigation and injection materials
- completed relevant calculations
- handled fertilisers and chemicals safely
- monitored and adjusted the delivery of fertilisers and chemicals
- monitored water quality and tested pH and Ec at irrigation emitter for correct application concentration
- reported and recorded corrective action
- taken corrective action in response to out-of-specification results or non-compliance
- implemented routine maintenance and minor repairs of the system
- removed and disposed of waste material
- recorded fertigation activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for operating fertigation equipment, including backflow prevention
- purpose and operation of fertigation equipment and instrumentation components
- basic injection equipment operating principles and process control systems where relevant
- the principles and practices of fertigation operation, including:

- chemical handling techniques for fertiliser, chlorine, acid and cleaning agents
- safety data sheets (SDS) information for fertiliser and chemicals to be injected
- fertiliser solubility and dilution rates
- fertiliser compatibility or incompatibility in mixtures, with crops, and fertigation equipment
- water quality monitoring and pH and Ec testing techniques and procedures
- advantages of delivering fertilisers using an irrigation system
- fertigation and injection equipment operators' manuals
- fertigation and injection equipment monitoring and control points
- common causes of application variation and corrective action required
- fertigation and injection equipment shutdown sequence, including emergency shutdown
- cleaning procedures for fertigation and injection equipment
- workplace fertiliser and chemical application and storage, and fertigation activity recording requirements and procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - fertigation and injection equipment operators manuals
 - fertigation and injection tools, equipment and procedures
 - fertilisers, chemicals and cleaning agents
 - personal protective equipment applicable to operating fertigation and injection equipment
- specifications:
 - workplace requirements applicable to health and safety in the workplace and operating fertigation and injection equipment
 - work instructions and workplace procedures applicable to operating fertigation and injection equipment
 - SDS for substances being injected
 - recording procedures
 - environmental procedures for collection, treatment, disposal or recycling of waste
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY401 Plan a growing-on program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan a growing-on program and monitor the implementation of the program.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify issues affecting the growing-on program	1.1 Determine production requirements in consultation with management 1.2 Identify factors that could limit the production of nursery plants

Element	Performance criteria
	1.3 Identify work health and safety hazards, assess risks and implement control measures 1.4 Consider the environmental implications of a growing-on program 1.5 Incorporate sustainable practices into the growing-on plan
2. Develop the growing-on plan	2.1 Identify activities involved in the growing-on program 2.2 Identify labour, materials, tools and equipment needs 2.3 Select environmental parameters and alter to meet plant needs and production plans 2.4 Determine growing media requirements, taking into account the needs of the plant and production plans 2.5 Determine planting dimensions and layout after consulting production plans 2.6 Identify treatments required for the growing-on program 2.7 Identify hygiene requirements for the growing-on program
3. Document the growing-on plan	3.1 Document the growing-on plan, including all information identified in the development stage 3.2 Document a budget supporting the plan and request approval by management 3.3 Organise a schedule of activities 3.4 Communicate the growing-on plan and schedule of activities to staff
4. Oversee and monitor the growing-on program	4.1 Monitor the health of the plants to ensure they are at optimum growth 4.2 Modify treatments as required to maintain optimum growth 4.3 Confirm plants are ready for dispatch meet customer specifications

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY401A Plan a growing-on program.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY401 Plan a growing-on program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify and assess factors that could impact the growing-on program
- Identify labour, materials and activities involved in the growing-on program
- conduct research about production requirements, growth conditions and marketing implications of a growing-on program
- negotiate, budget and document plans
- communicate plans and schedules to staff
- oversee and monitor the growing-on program

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of planning a growing on program
 - application techniques for chemical and non-chemical intervention or treatments
 - chemical, cultural and biological pest, weed and disease control techniques
 - common problems of growing-on and preventative actions that may apply
 - enterprise hygiene standards required for growing-on activities
 - enterprise quality standards of nursery plant production
 - optimal growing requirements of nursery plants
 - preferred types of propagation media for different species
 - processes and techniques for preparing, costing and documenting plans for and scheduling growing-on activities
 - testing methods applied to propagation media

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY402 Plan a propagation program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan a propagation program and monitor the implementation of the program.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Carry out preliminary planning activities for a plant propagation	1.1 Determine production requirements 1.2 Evaluate space requirements for the program 1.3 Determine propagation techniques, taking into account the species

Element	Performance criteria
program	and sound horticultural practice 1.4 Determine environmental parameters that impact on propagation 1.5 Negotiate a budget for the propagation program 1.6 Identify work health and safety hazards, assess risks and implement control measures
2. Develop the propagation plan	2.1 Identify labour, materials, tools and equipment needs 2.2 Determine propagation media requirements, taking into consideration the propagation method and needs of the plant 2.3 Determine strategies to modify environmental conditions, taking into account the type of plant and propagation method used 2.4 Determine selection criteria for the propagation material 2.5 Determine hygiene requirements for propagation activities
3. Monitor success of propagation activities	3.1 Identify and record variances from plan and scheduled activities 3.2 Assess propagated plants for health, quality and viability

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCNSY402A Plan a propagation program.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY402 Plan a propagation program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- negotiate, budget and document propagation plans
- research information about production requirements, growth conditions and marketing implications
- develop a propagation plan that takes into account labour, materials and propagation media requirements and environmental conditions
- determine hygiene requirements for propagation activities
- monitor propagation activities

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the principles and practices of propagation program planning
 - aftercare requirements for a range of propagated plant varieties and cultivars
 - application techniques for chemical and non-chemical intervention or treatments
 - problems performing propagation activities and preventative action
 - hygiene standards required for propagation activities
 - identification, propagation and establishment techniques for a range of plants
 - enterprise quality specifications for parent plants and propagation materials
 - Plant Breeders Rights (PBR) and related legislation
 - preferred types of propagation media for different species
 - processes for preparing plans for and scheduling propagation activities
 - testing methods applied to propagation media

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY403 Plan a growing-on program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and, Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan a growing-on program and monitor the implementation of the program.

The unit applies to individuals who apply specialist skills and knowledge to planning a growing-on program. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify issues affecting the growing-on program	1.1 Determine production requirements to meet client specifications 1.2 Identify factors that could limit the production of nursery plants 1.3 Identify hazards and assess risks in the workplace, and implement

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	control measures to manage risks according to workplace health and safety procedures
2. Develop the growing-on plan	2.1 Identify growing-on program activities 2.2 Identify plants, material, tools and equipment requirements 2.3 Identify labour and workflow requirements 2.4 Identify and select environmental parameters to meet plant needs 2.5 Determine growing media requirements 2.6 Determine container requirement to meet market or end use 2.7 Determine plant spacing and production capacity requirements 2.8 Identify treatments required for the growing-on program 2.9 Determine sustainability and biosecurity practices 2.10 Determine growing-on program hygiene practices 2.11 Determine growing-on program budget
3. Document and communicate the growing-on plan and schedule	3.1 Document the growing-on plan, using all information identified in the development stage 3.2 Document the growing-on program schedule 3.3 Communicate the growing-on plan and schedule of activities to staff
4. Oversee and monitor the growing-on plan	4.1 Coordinate activities according to program schedule and growing-on plan 4.2 Monitor the health and condition of the plants to ensure they are performing according to growing-on plan 4.3 Modify program schedule activities to achieve growing-on plan requirements 4.4 Confirm plants meet client specifications

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for growing-on plan and schedule of activities
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client or management, using clear language to discuss production requirements, budget and growing-on plan Use clear communications with staff to communicate growing-on plan and schedule of activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY403 Plan a growing-on program	AHCNSY401 Plan a growing-on program	Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY403 Plan a growing-on program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and, Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned a growing-on program on at least one occasion, and has:

- researched information about production requirements, growth conditions and marketing requirements of a growing-on program
- identified and assessed factors that could impact the growing-on program
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- developed and documented growing-on program and schedule that identifies plants, labour, materials, costs and activities requirements
- identified hygiene requirements for growing-on activities
- communicated plans and schedules to staff
- overseen and monitored the growing-on program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of planning a growing-on program, including:
 - application techniques for chemical and non-chemical intervention or treatments
 - integrated pest management
 - common growing-on activity problems and preventative actions
 - workplace hygiene standards required for growing-on activities
 - workplace quality standards of nursery plant production
 - optimal growing requirements of nursery plants
 - preferred types of growing media for different plant species and growth stages

- processes and techniques for preparing, costing and documenting plans, and scheduling growing-on activities
- quality specifications of growing media
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to planning a growing-on program.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - production plans
 - industry publications, internet and in house sources of information relevant to the planning of a growing-on program
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to planning a growing-on program
- relationships:
 - management and staff
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNSY404 Plan a propagation program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and, Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan a propagation program and monitor the implementation of the program.

The unit applies to individuals who apply specialist skills and knowledge to planning a propagation program. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Nursery (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out preliminary planning activities for a plant propagation program	1.1 Determine production requirements 1.2 Determine propagation techniques, taking into account the species, cultivar and horticultural practice

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Determine environmental parameters and space requirements that impact on propagation program</p> <p>1.4 Identify hazards and assess risks in the workplace, and control measures to manage risks according to workplace health and safety procedures</p>
2. Develop the propagation plan and schedule	<p>2.1 Identify propagation program activities</p> <p>2.2 Identify seed and vegetative propagation material, tools and equipment requirements</p> <p>2.3 Identify labour and workflow requirements</p> <p>2.4 Identify and select environmental parameters, taking into account the type of plant and propagation method used</p> <p>2.5 Determine propagation media requirements, taking into consideration the propagation method and needs of the plant</p> <p>2.6 Determine container requirement to meet need</p> <p>2.7 Determine selection criteria for propagation material</p> <p>2.8 Identify propagation program hygiene practices</p> <p>2.9 Determine propagation program budget</p> <p>2.10 Document the propagation plan entering all information identified during development</p> <p>2.11 Document the propagation program schedule</p>
3. Communicate, coordinate, and monitor propagation plan	<p>3.1 Communicate propagation plan and schedule of activities to staff</p> <p>3.2 Coordinate activities according to program schedule and propagation plan</p> <p>3.3 Monitor the health and condition of the plants to ensure they are performing according to propagation plan</p> <p>3.4 Modify program schedule activities to achieve propagation plan requirements</p> <p>3.5 Assess propagated plants for health, quality and viability</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for propagation program and plan
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client or management, using clear language to discuss production requirements, budget and propagation plan Use clear communications with staff to communicate propagation plan and schedule of activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNSY404 Plan a propagation program	AHCNSY402 Plan a propagation program	Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNSY404 Plan a propagation program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and, Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned a propagation program on at least one occasion, and has:

- researched information about propagation requirements and plant end use
- identified and assessed factors that could impact the propagation program
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- developed and documented a propagation plan and schedule that identifies plants, labour, materials, costs, propagation media requirements and environmental conditions
- identified hygiene requirements for propagation activities
- communicated plans and schedules to staff
- overseen and monitored the propagation program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to planning a propagation program
- principles and practices of propagation program planning, including:
 - workplace quality standards for parent plants and other propagation materials
 - common propagation activity problems and preventative actions
 - techniques to minimise deterioration during preparation of propagules
 - types of propagation environments required to meet plan requirements
 - propagation program hygiene practices
 - identification of techniques to meet propagation requirements
 - Plant Breeder's Rights (PBR) and common licensing arrangements

- preferred types of propagation media for different species and cultivars
- quality specifications of propagation media
- processes and techniques for preparing, costing and documenting plans and scheduling propagation activities
- application techniques for chemical and non-chemical intervention or treatments
- aftercare requirements applicable to propagated plant species and cultivars.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - production plans
 - industry publications, internet and in house sources of information relevant to the planning of a propagation program
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to planning a propagation program
 - PBR and common licensing arrangements
- relationships:
 - management and staff
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG501 Develop an organic management plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop an organic management plan (OMP).

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to those producers who develop an OMP to convert an agricultural or horticultural farm to an organic, biological and ecological system. It requires the capability to set objectives to meet organic certification requirements of the National Standard for Organic and Biodynamic Produce.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Locate and access assistance in developing the OMP	1.1 Locate and access sources of support and advice including agricultural extension officers and training programs 1.2 Assess industry publications and internet sources for their value in informing decision making 1.3 Seek and consider contributions of work colleagues and others during planning process 1.4 Access information from certifier and relevant Organic Standards on OMP requirements
2. Design the organic farming system to be described in the OMP	2.1 Develop or obtain map of property to be covered by OMP 2.2 Determine time scale to be addressed in plan 2.3 Collect information on soil fertility and management, and weed, pest, disease and animal health status and their interrelationships to serve as benchmarks for development of management options 2.4 Obtain regional catchment targets for land, water and biodiversity and identify those applicable to property and sub-catchment 2.5 Identify components of OMP that need to be developed 2.6 Develop suitable format for planning documents 2.7 Identify risks to organic integrity for the farm enterprise and outline strategies to manage these risks
3. Develop soil fertility plan	3.1 Undertake or commission a soil fertility assessment of farm production areas 3.2 Map soil types and topography on farm plan 3.3 Develop and document soil fertility plan that amends soil chemistry, soil structure and soil biology, based on assessment of soil test results, enterprise performance, overall budget and intended cropping/grazing regime 3.4 Identify appropriate inputs according to the National Standard for Organic and Biodynamic Produce and/or agro-ecological principles 3.5 Document plan according to established format
4. Develop soil management sub-plan	4.1 Determine suitability of land for production based on soil type, slope, aspect and previous use 4.2 Develop soil management plan to enhance soil structure and prevent compaction and water logging 4.3 Identify appropriate inputs according to the National Standard for Organic and Biodynamic Produce or agro-ecological principles

Element	Performance criteria
	4.4 Document sub-plan according to established format 4.5 Identify farm management practices and strategies that enhance soil fertility
5. Develop weed management sub-plan	5.1 Identify problematic weed species and observe weeds as an indicator of soil health 5.2 Identify life cycles of weeds species to inform management options 5.3 Identify appropriate inputs according to the National Standard for Organic and Biodynamic Produce or agro-ecological principles 5.4 Develop integrated farming strategies and cultural practices for managing weeds 5.5 Document sub-plan according to established format
6. Develop and design an integrated pest and disease management sub-plan	6.1 Collect and document evidence of pest and disease burden in farming system 6.2 Observe and monitor pests and diseases and their life cycles 6.3 Evaluate evidence of pest and disease burden to develop strategy for management 6.4 Evaluate pests and diseases as indicators of farming system health 6.5 Identify options for addressing pest and disease issues, including improving soil health, cultural practices and system redesign 6.6 Identify appropriate inputs according to the National Standard for Organic and Biodynamic Produce or agro-ecological principles 6.7 Document sub-plan according to established format
7. Develop animal health and management sub-plan	7.1 Identify regional and farm-based animal health issues 7.2 Identify options for preventative actions aimed at establishing and maintaining optimal animal health 7.3 Identify options for treating animal health issues 7.4 Develop a sustainable grazing management plan that addresses feed requirements, stocking densities and meets regional catchment land and soil condition targets where applicable 7.5 Develop an animal management program that ensures compliance to organic standards and/or agro-ecological principles 7.6 Document sub-plan according to established format
8. Integrate and finalise the organic management plan	8.1 Integrate sub-plans for soil fertility and management, and weed, pest, disease and animal health 8.2 Develop and implement record-keeping system to track various components of OMP as they are put into practice and reviewed 8.3 Review and update OMP annually noting any changes to farm practices

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG501A Develop an organic management plan.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG501 Develop an organic management plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify and develop required components of an OMP for a property
- understand and use interrelationships between soil, plant and animal health and farming system's resilience when developing plan
- identify options for prevention and treatment of risks
- apply appropriate regional catchment targets
- document the plan in compliance with certification requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles of organic agriculture, especially fundamental role of soil health
- principles of sustainable production
- requirements and components of an OMP
- systems approach to agriculture and horticulture
- organic and biodynamic certification requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG502 Prepare the enterprise for organic certification

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare an enterprise for organic certification.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to farmers who are preparing a production enterprise for compliance with the Federal Government Department of Agriculture, accredited certification bodies and the National Standard for Organic and Biodynamic Produce.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Investigate and access information sources and support for conversion to organic production	1.1 Establish contact with other organic producers and marketers of organic products 1.2 Identify and use other sources of support and advice including agricultural extension officers and training programs 1.3 Assess literature, publications and internet sources of information to support decision-making for usefulness and reliability 1.4 Obtain certification process requirements from certification bodies and select appropriate certifier 1.5 Investigate roles and responsibilities of inspector, certifier and accreditation bodies, including role of government departments
2. Conduct a risk assessment of the site	2.1 Identify and document previous land use and chemicals applied on the site 2.2 Undertake and document risk assessment for potential on-farm contaminants 2.3 Assess potential contamination risk from off-farm land use and agricultural practices 2.4 Incorporate risk management procedures to minimise potential contamination from internal and external sources into a certification preparation plan
3. Develop and implement hazard analysis critical control point (HACCP) based procedures	3.1 Identify and document production processes and activities, and those sections of supply chain under one's control, according to certification bodies' requirements and the National Standard for Organic and Biodynamic Produce 3.2 Identify, document and compare quality, organic and statutory product standards to be met to actual standards achieved by product and enterprise 3.3 Identify and document corrective actions or improvements to processes and activities 3.4 Develop and implement procedures and processes for monitoring and annual review, including an internal review protocol where appropriate 3.5 Where required integrate a food safety management program
4. Manage customer feedback	4.1 Develop and implement procedures to obtain, analyse and respond to customer feedback on quality and integrity of organic product 4.2 Develop, communicate to relevant parties and monitor product recall procedures

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG502A Prepare the enterprise for organic certification.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG502 Prepare the enterprise for organic certification

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify requirements for organic certification and apply them to one's enterprise
- identify critical points in supply chain at which the organic integrity of one's product may be compromised
- implement and monitor effective risk management for those parts of supply chain under one's control
- identify practices and strategies to minimise the risk of contamination and non conformance with organic standards
- develop an operational plan for conversion to organic production

Knowledge Evidence

The candidate must demonstrate knowledge of:

- certification process
- chain of custody
- HACCP (Hazard Analysis and Critical Control Points) principles and risk management
- health and food safety requirements and issues
- labelling requirements for domestic and export markets
- market for organic produce, including the organic movement and organic industry
- National Standard for Organic and Biodynamic Produce
- principles of organic agriculture
- procedures and responsibilities in the case of product recall
- procedures for conducting and documenting a risk assessment
- regulatory requirements and their domestic and international contexts

- requirements of an OMP, including record keeping
- role of quality management systems in organic industry including documentation requirements
- working knowledge of the regulated organic industry, including the role of the government, certification bodies and inspectors

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG507 Develop an organic or biodynamic management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to locate and access assistance, and design an organic management plan (OMP) or biodynamic management plan (BMP), develop soil fertility plan and soil, weed, integrated pest and disease, animal health and environmental sub-plan's and integrate and finalise the OMP or BMP.

The unit applies to individuals who apply specialised skills and knowledge to the development of an OMP or BMP and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and demonstrate deep knowledge in a specific technical area. They analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare and legislative and regulatory requirements, organic standards, sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Locate and access assistance in developing the OMP or BMP	<p>1.1 Locate and access sources of support and advice including agricultural extension officers and training programs</p> <p>1.2 Assess industry publications for their value in informing decision making</p> <p>1.3 Seek and consider contributions of work colleagues and others during planning process</p> <p>1.4 Access information from certifier and relevant organic or biodynamic standards for planning requirements</p>
2. Design the organic farming system to be described in the OMP or BMP	<p>2.1 Develop or obtain map of property to be covered by the plan</p> <p>2.2 Determine time scale to be addressed in plan</p> <p>2.3 Collect information on soil fertility and management, and weed, pest, disease and animal health status and their interrelationships to serve as benchmarks for development of management options</p> <p>2.4 Obtain regional catchment targets for land, water and biodiversity and identify those applicable to property and sub-catchment</p> <p>2.5 Identify components of OMP or BMP that need to be developed</p> <p>2.6 Develop suitable format for planning documents</p> <p>2.7 Identify risks to organic integrity for the farm enterprise and outline strategies to manage these risks</p>
3. Develop soil fertility plan	<p>3.1 Undertake or commission a soil fertility assessment of farm production areas</p> <p>3.2 Map soil types and topography on farm plan</p> <p>3.3 Develop and document soil fertility plan that amends soil chemistry, soil structure and soil biology, based on assessment of soil test results, enterprise performance, overall budget and intended cropping/grazing regime</p> <p>3.4 Identify appropriate inputs according to the National Standard for Organic and Biodynamic Produce or agro-ecological principles</p> <p>3.5 Document plan according to established format</p>
4. Develop soil management sub-plan	<p>4.1 Determine suitability of land for production based on soil type, slope, aspect and previous use</p> <p>4.2 Develop soil management plan to enhance soil structure and prevent compaction and water logging</p> <p>4.3 Identify appropriate inputs according to the National Standard for Organic and Biodynamic Produce or agro-ecological principles</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.4 Document sub-plan according to established format</p> <p>4.5 Identify farm management practices and strategies that enhance soil fertility</p>
5. Develop weed management sub-plan	<p>5.1 Identify problematic weed species and observe weeds as an indicator of soil health</p> <p>5.2 Identify life cycles of weeds species to inform management options</p> <p>5.3 Identify appropriate inputs according to the National Standard for Organic and Biodynamic Produce or agro-ecological principles</p> <p>5.4 Develop integrated farming strategies and cultural practices for managing weeds</p> <p>5.5 Document sub-plan according to established format</p>
6. Develop and design an integrated pest and disease management sub-plan	<p>6.1 Collect and document evidence of pest and disease burden in farming system</p> <p>6.2 Observe and monitor pests and diseases and their life cycles</p> <p>6.3 Evaluate evidence of pest and disease burden to develop strategy for management</p> <p>6.4 Evaluate pests, diseases and beneficial flora and fauna as indicators of farming system health</p> <p>6.5 Identify options for addressing pest and disease issues, including improving soil health, cultural practices and system redesign</p> <p>6.6 Identify appropriate inputs according to the National Standard for Organic and Biodynamic Produce or agro-ecological principles</p> <p>6.7 Document sub-plan according to established format</p>
7. Develop animal health and management sub-plan	<p>7.1 Identify regional and farm-based animal health issues</p> <p>7.2 Identify options for preventative actions aimed at establishing and maintaining optimal animal health</p> <p>7.3 Identify options for treating animal health issues</p> <p>7.4 Develop a sustainable grazing management plan that addresses feed requirements, stocking densities and meets regional catchment land and soil condition targets where applicable</p> <p>7.5 Develop an animal management program that ensures compliance to organic standards or agro-ecological principles</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	7.6 Document sub-plan according to established format
8. Develop an environmental management sub-plan	8.1 Identify environment and climate issues 8.2 Identify options for addressing environment and climate issues 8.3 Identify appropriate inputs according to the National Standards for Organic and Biodynamic Produce or agro-ecological principles 8.4 Document sub-plan according to established format
9. Integrate and finalise the OMP or BMP	9.1 Integrate sub-plans for soil fertility and management, and weed, pest, disease, animal health, and environmental management 9.2 Develop and implement record-keeping system to track various components of the plan as they are put into practice and reviewed 9.3 Review and update OMP or BMP annually noting any changes to farm practices

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information regarding the National Standard for Organic and Biodynamic Produce or agro-ecological principles, and planning requirements Identify and interpret information regarding soil fertility and management, and weed, pest, disease and animal health status Identify and interpret information on regional catchment targets for land, water and biodiversity applicable to property and sub-catchment
Oral communication	<ul style="list-style-type: none"> Initiate discussions with work colleagues and others, using clear language to plan and communicate plan
Numeracy	<ul style="list-style-type: none"> Access and analyse data for input to OMP or BMP Document time scale and costs of implemented strategy
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility

Skill	Description
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information within work team

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCORG507 Develop an organic or biodynamic management plan	AHCORG501 Develop an organic management plan	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG507 Develop an organic or biodynamic management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed two biodynamic or organic management plans on at least two different occasions and has:

- identified and developed required components of an organic management plan (OMP) or biodynamic management plan (BMP) for a property
- identified and used interrelationships between soil, plant, animal health and environmental management and farming system's resilience when developing plan
- identified options for prevention and treatment of risks
- applied appropriate regional catchment targets
- documented the plan in compliance with certification standard requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles of organic agriculture, especially fundamental role of soil health
- principles of sustainable production
- requirements and components of an OMP and BMP
- organic and biodynamic certification standard requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - industry publications relevant to OMP or BMP
 - OMP or BMP certifier information

- map of property
- farm production area soil fertility assessment
- specifications:
 - National Standard for Organic and Biodynamic Produce or agro-ecological principles
- relationships:
 - work colleagues
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG508 Prepare the enterprise for organic or biodynamic certification

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to investigate and access information to support conversion to organic or biodynamic production, conduct a risk assessment, implement hazard analysis critical control point (HACCP) based procedures and manage customer feedback.

The unit applies to individuals who apply specialised skills and knowledge to prepare an enterprise for organic certification and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and demonstrate deep knowledge in a specific technical area. They analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare and legislative and regulatory requirements, organic standards, sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Investigate and access information sources and support for conversion to organic or biodynamic production	<p>1.1 Establish contact with other organic producers and marketers of organic products</p> <p>1.2 Identify and use other sources of support and advice including agricultural extension officers and training programs</p> <p>1.3 Assess literature, publications and internet sources of information to support decision-making for usefulness and reliability</p> <p>1.4 Obtain certification process requirements from certification bodies and select appropriate certifier</p> <p>1.5 Investigate roles and responsibilities of inspector, certifier and accreditation bodies, including role of government departments</p>
2. Conduct a risk assessment of the site	<p>2.1 Identify and document previous land use and chemicals applied on the site</p> <p>2.2 Undertake and document risk assessment for potential on-farm contaminants</p> <p>2.3 Assess potential contamination risk from off-farm land use and agricultural practices</p> <p>2.4 Incorporate risk management procedures to minimise potential contamination from internal and external sources into a certification preparation plan</p>
3. Develop and implement hazard analysis critical control point (HACCP) based procedures	<p>3.1 Identify and document production processes and activities, and those sections of supply chain under the businesses control, according to certification body requirements and the National Standard for Organic or Biodynamic Produce</p> <p>3.2 Identify, document and compare quality, organic and statutory product standards to be met to actual standards achieved by product and workplace</p> <p>3.3 Identify and document corrective actions or improvements to processes and activities</p> <p>3.4 Develop and implement procedures and processes for monitoring and annual review, including an internal review protocol where appropriate</p> <p>3.5 Integrate a food safety management program where required</p>
4. Manage customer feedback	<p>4.1 Develop and implement procedures to obtain, analyse and respond to customer feedback on quality and integrity of organic product</p> <p>4.2 Develop and monitor product recall procedures and communicate to relevant parties</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information regarding the National Standard for Organic or biodynamic Produce, and certification requirements
Oral communication	<ul style="list-style-type: none"> Initiate discussions with agricultural extension officers, work colleagues and others, using clear language to inform the development of a site certification preparation plan
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information within work team and to relevant parties

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCORG508 Prepare the enterprise for organic or biodynamic certification	AHCORG502 Prepare the enterprise for organic certification	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG508 Prepare the enterprise for organic or biodynamic certification

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared an enterprise for organic or biodynamic certification on at least one occasion and has:

- identified requirements for organic certification and applied them to the workplace
- identified critical points in supply chain at which the organic or biodynamic integrity of the product may be compromised
- implemented and monitored effective risk management for those parts of supply chain under their control
- identified and documented practices and strategies to minimise the risk of contamination and non-conformance with organic or biodynamic standards
- developed an operational plan for conversion to organic or biodynamic production.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- certification process
- chain of custody
- Hazard Analysis and Critical Control Points (HACCP) principles and risk management
- health and food safety requirements and issues
- labelling requirements for domestic and export markets
- market for organic produce, including the organic movement and organic industry
- National Standard for Organic or Biodynamic Produce
- principles of organic or biodynamic agriculture
- procedures and responsibilities in the case of product recall
- procedures for conducting and documenting a risk assessment
- regulatory requirements and their domestic and international contexts
- role of quality management systems in organic industry including documentation and record keeping requirements

- working knowledge of the regulated organic industry, including the role of the government, certification bodies and inspectors.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - literature, publications and internet sources of information relevant to organic or biodynamic certification
 - certification process requirements
- specifications:
 - National Standard for Organic or Biodynamic Produce
- relationships:
 - work colleagues
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM201 Recognise plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to recognise commonly encountered plants. Plants include desired species as well as weeds.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Plants culture and management (PCM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for plant recognition	1.1 Clarify work activity instructions with supervisor 1.2 Identify any work health and safety hazards and tell supervisor 1.3 Prepare resources and equipment for use in recognition activity 1.4 Identify, select and prepare available processes for plant

Element	Performance criteria
	recognition 1.5 Identify a range of desirable and non-desirable plants requiring recognition
2. Recognise specified plants	2.1 Carry out a visual inspection of plants 2.2 Recognise specified plants by their identifiable characteristics and name them 2.3 Record brief descriptions of plant habits, characteristics and significant features 2.4 Consult with others, browse the internet browsing, collect specimen collections, consult field guides and use workplace notetaking to assist with plant recognition 2.5 Seek advice when necessary and where appropriate to assist with plant recognition
3. Update the reference collection	3.1 Document information about plants and add to the reference collection 3.2 Update reference collection as new plants are recognised

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPCM201A Recognise plants.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPM201 Recognise plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare resources and processes for use in recognition activity
- identify desirable and non-desirable plants requiring recognition
- recognise and describe plant attributes
- describe specific handling requirements and growth requirements
- use appropriate methods of research to assist with plant recognition
- document and update information about identified plants

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of plant recognition
 - plant morphology and physiology as they relate to recognising plants
 - plant nomenclature
 - procedures for obtaining and providing advice and information about plants
 - plant recognition techniques

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM203 Fell small trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to fell small trees where hazards have been assessed as low risk.

It is an introductory or base-level unit that covers felling procedures for small trees.

This unit applies to individuals who undertake defined activities with specialised tools and methods, work in a structured context, apply knowledge and skills to demonstrate autonomy and limited judgement, and provide solutions to a limited range of predictable problems. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant state or territory.

Pre-requisite Unit

AHCMOM213 Operate and maintain chainsaws

Unit Sector

Plant culture and management (PCM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Assist in preparation of work site	1.1 Determine location of worksite and correct tree from the scope of works 1.2 Identify site hazards, assess risks and report to supervisor 1.3 Confirm work zone with work crew and monitor site 1.4 Identify first aid and emergency personnel, equipment and procedures 1.5 Record and implement work health, safety, site, environmental and traffic control measures
2. Identify tree felling requirements	2.1 Identify hazards associated with felling operation 2.2 Assess risks and report to supervisor 2.3 Examine topography and site conditions 2.4 Identify factors influencing the tree felling operation and confirm findings with supervisor 2.5 Identify <i>trees considered outside own skill level for felling</i> and seek assistance from appropriate personnel 2.6 Determine natural direction of fall, safe fall zone and exclusion zone and confirm with supervisor 2.7 Receive instructions for tree felling operations from supervisor and clarify instructions prior to undertaking work
3. Prepare for tree felling	3.1 Select and prepare felling equipment and component options appropriate to the task being undertaken 3.2 Prepare, transport and appropriately position support tools to minimise felling delays 3.3 Select, check, use, maintain and store suitable safety and personal protective equipment (PPE) 3.4 Clear fall zone of obstacles and articles which may be damaged by felled tree 3.5 Establish clear escape route appropriate to site
4. Fell tree	4.1 Note and monitor location of other personnel 4.2 Carry out tree felling operation 4.3 Communicate with work team during operations using voice, hand and whistle signals 4.4 Determine standard tree felling techniques, patterns and cut sequences by ground conditions and state of canopy 4.5 Take corrective action in response to changing conditions or problems encountered 4.6 Use planned escape route when tree starts to fall 4.7 Monitor fall of tree and movement on ground until felled tree is stable 4.8 Use low risk work practices in all activities

Element	Performance criteria
5. Complete tree felling operation	5.1 Determine appropriate method of clearing the site of felled tree 5.2 Select and use machinery required for removal of felled tree 5.3 Clear fall site of tree and all tree debris 5.4 Clean and store all machinery and equipment on completion of operation

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCARB202A Fell small trees.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPM203 Fell small trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare, transport and appropriately position support tools to minimise felling delays
- assess topography and site conditions, identify factors influencing tree felling operation and confirm findings with supervisor
- receive instructions for tree felling operations from supervisor and clarify prior to undertaking work
- clear fall zone of obstacles and articles which may be damaged by felled tree
- confirm first aid and emergency personnel, equipment and procedures
- identify site hazards, assess risks and report to supervisor
- record and implement work health, safety, site, environmental and traffic control measures
- select, check, use, maintain and store suitable safety and personal protective equipment
- confirm work zone with work crew and monitor location of other personnel
- determine natural direction of fall, safe fall zone and exclusion zone and confirm with supervisor
- determine standard tree felling techniques by ground conditions and state of canopy
- establish clear escape route appropriate to site
- safely operate a chainsaw to fell small trees
- monitor fall of tree and movement on ground until felled tree is stable
- take corrective action in response to changing conditions or problems encountered

Knowledge Evidence

The candidate must demonstrate knowledge of:

- corrective action
- emergency and first aid procedures
- felling equipment and components

- first aid and emergency personnel, equipment and procedures
- ground conditions
- how to determine natural direction of fall
- how to establish a clear escape route
- industry standard terminology
- low risk work practices
- obstacles and articles which may be damaged by felled trees
- positioning support tools
- safe operating procedures for felling small trees
- safe fall and exclusion zones
- selection, preparation and appropriate equipment for task
- standard tree felling techniques, patterns and cut sequences
- topography, site conditions and other factors influencing tree felling operations

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM204 Recognise plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to recognise commonly encountered plants, including desired species and weeds, and to document and confirm plant identification.

The unit applies to individuals who recognise plants under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for plant recognition	1.1 Confirm work activity and instructions with supervisor 1.2 Recognise workplace health and safety hazards, and report to supervisor 1.3 Select and prepare tools, equipment and material for plant recognition activity 1.4 Locate a range of desirable and non-desirable plants requiring

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	recognition
2. Recognise specified plants	2.1 Conduct a visual inspection on plants to identify plant family features and classifications 2.2 Record brief descriptions of plant habits, characteristics and significant features 2.3 Use available resources to assist with plant recognition 2.4 Seek advice to assist with plant recognition from appropriate personnel 2.5 Recognise and name specified plants using their identifiable characteristics
3. Identify plants	3.1 Record plant information according to workplace requirements 3.2 Confirm plant identification with supervisor, and refer to plant by botanical name

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual, photographic and drawn information from a range of sources to identify relevant and key information about plant recognition
Writing	<ul style="list-style-type: none"> Record plant habits, characteristics, significant features and relevant information
Oral communication	<ul style="list-style-type: none"> Initiate discussions with appropriate personnel and supervisor, using clear language to discuss plant recognition

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM204 Recognise plants	AHCPCM201 Recognise plants	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCP204 Recognise plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has recognised a range of plants from a range of plant families and classifications, including:

- annual
- biennial
- perennial
- evergreen and deciduous
- trees
- shrubs
- ground cover
- climbers
- monocot.

There must also be evidence that the individual has:

- applied workplace health and safety requirements applicable to recognising plants
- selected and prepared tools, equipment and materials for use in recognition activity
- located desirable and non-desirable plants requiring recognition
- recognised and described plant habits, characteristics and significant features
- used appropriate reference material to assist with plant recognition
- recorded information about identified plants.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for recognising plants
- principles and practices of plant recognition, including:
 - plant morphology and physiology as they relate to recognising plants

- plant nomenclature
- resources for obtaining information about plants
- plant recognition techniques.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plants
 - plant recognition resources and equipment
 - access to internet and field guide reference materials applicable to plant recognition
- specifications:
 - workplace requirements applicable to health and safety in the workplace for recognising plants
- relationships:
 - appropriate personnel and supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM205 Fell small trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare for tree felling, fell small trees and complete felling operations where hazards have been assessed as low risk.

The unit applies to individuals who apply low risk work procedures and comply with worksite health and safety requirements when felling trees under general supervision, with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- AHCMOM213 Operate and maintain chainsaws.

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist in preparation of worksite	1.1 Identify location of worksite and correct tree from scope of works, and confirm with supervisor 1.2 Identify site hazards, assess risks and report to supervisor 1.3 Confirm work zone with work crew, and monitor site

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Confirm first aid and emergency personnel, equipment and procedures</p> <p>1.5 Document and implement site health and safety in the workplace, environmental and traffic control measures according to workplace procedures</p>
2. Identify tree felling requirements	<p>2.1 Identify hazards and risks relevant to felling operation, and implement safe working practices to manage risks</p> <p>2.2 Examine topography and site conditions</p> <p>2.3 Identify factors influencing the tree felling operation, and confirm with supervisor</p> <p>2.4 Identify trees considered outside own skill level for felling, and seek assistance from appropriate personnel</p> <p>2.5 Determine natural direction of fall, safe fall zone and exclusion zone, and confirm with supervisor</p> <p>2.6 Confirm tree felling operations and instructions with supervisor prior to undertaking work</p>
3. Prepare for tree felling	<p>3.1 Select and prepare felling equipment and component options appropriate to the task being undertaken</p> <p>3.2 Prepare, transport and position support tools to minimise felling delays</p> <p>3.3 Select and maintain safety and personal protective equipment (PPE) according to workplace health and safety requirements</p> <p>3.4 Fit and use safety equipment and PPE applicable to the task being undertaken</p> <p>3.5 Clear fall zone of obstacles and articles that may be damaged by felled tree</p> <p>3.6 Establish clear escape route appropriate to site</p>
4. Fell tree	<p>4.1 Note and monitor location of other personnel</p> <p>4.2 Carry out tree felling operation according to scope of works</p> <p>4.3 Communicate with work team during operations using voice, hand or whistle signals</p> <p>4.4 Determine standard tree felling techniques, patterns and cut sequences by ground conditions and state of canopy</p> <p>4.5 Take corrective action in response to changing conditions or</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>problems encountered</p> <p>4.6 Use planned escape route when tree starts to fall</p> <p>4.7 Monitor fall of tree and movement on ground until felled tree is stable</p> <p>4.8 Undertake tree felling activities using documented low risk work methods</p>
5. Complete tree felling operation	<p>5.1 Determine appropriate method of clearing the site of felled tree</p> <p>5.2 Select and use machinery required for removal of felled tree</p> <p>5.3 Clear fall site of tree and all tree debris according to supervisor instructions</p> <p>5.4 Clean and return machinery, tools and equipment to required location</p> <p>5.5 Identify and report unserviceable machinery, tools and equipment according to workplace procedures</p> <p>5.6 Report tree felling activities according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about tree felling operations
Oral communication	<ul style="list-style-type: none"> Use clear language to report hazards and risks and to confirm worksite, first aid and emergency personnel, equipment and procedures, and to report felling activities and unserviceable machinery, tools and equipment Participate in verbal exchanges to respond to questions and clarify information Use verbal and non-verbal communications with work team during operations using voice, hand and whistle signals

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHPCPM205 Fell small trees	AHPCPM203 Fell small trees	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPM205 Fell small trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has felled small trees on at least three occasions, and has:

- applied workplace health and safety requirements applicable to felling small trees
- applied principles and practices of small tree felling operations
- applied documented low risk work methods and workplace procedures
- assessed topography and site conditions, identified factors influencing tree felling operation, and confirmed findings with supervisor
- prepared, transported and positioned support tools to minimise felling delays
- safely operated a chainsaw to fell small trees
- reported felling activities, and machinery, tool and equipment unserviceability according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for small tree felling operations
- principles and practices of small tree felling operations, including:
 - corrective action
 - emergency and first aid procedures
 - felling equipment and components
 - first aid and emergency personnel, equipment and procedures
 - ground conditions
 - how to determine natural direction of fall
 - how to establish a clear escape route
 - industry standard terminology

- obstacles and articles that may be damaged by felled trees
- positioning support tools
- safe operating procedures for felling small trees
- safe fall and exclusion zones
- selection, preparation and appropriate equipment for task
- standard tree felling techniques, patterns and cut sequences
- topography, site conditions and other factors influencing tree felling operations
- low risk work methods and workplace procedures for small tree felling operations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - personal protective equipment (PPE) must be worn whilst operating chainsaw
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
- resources, equipment and materials:
 - chainsaws
 - chainsaw tools
 - small trees
 - tree felling machinery, tools and equipment
 - safety equipment and PPE applicable to the task being undertaken
- specifications:
 - workplace requirements applicable to health and safety in the workplace and small tree felling operations
 - documented low risk work methods and workplace procedures applicable to small tree felling operations
- relationships:
 - team members, supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM301 Implement a plant nutrition program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor and control the nutritional requirements of and applications to plants across a range of situations and environments.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Plants culture and management (PCM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for implementation of the plant nutrition program	1.1 Identify goals, target site, soils, plant species and varieties for implementing the program 1.2 Identify materials for soil and plant treatments and locate the storage site or supplier details

Element	Performance criteria
	1.3 Locate services using site plans and in consultation with the supervisor 1.4 Identify work health and safety hazard, assess risks and implement control measures 1.5 Select and use suitable personal protective equipment (PPE)
2. Monitor soil pH	2.1 Monitor soil pH in the implementation site in relation to plant nutrition 2.2 Identify, select, compare and source products useful in changing soil pH 2.3 Assess product application methods according to product type and type of growing media
3. Determine nutritional problems in plants	3.1 Identify common nutrient deficiency and toxicity problems in plants, using visual inspection 3.2 Consult supervisor or horticulturist, as required, to determine causes of nutritional or toxicity problems 3.3 Identify, compare, select and source soil ameliorants to improve soil fertility
4. Prepare to use fertilisers	4.1 Select a fertiliser that is compatible with plant species and type of growing media 4.2 Assess fertiliser application methods, taking into account the fertiliser type, soils and the environmental implications 4.3 Apply fertilisers appropriate to the plant growing cycle and the organisation's fertiliser calendar
5. Prepare application equipment	5.1 Select tools, equipment and machinery 5.2 Carry out pre-operational and safety checks on tools, equipment and machinery 5.3 Calibrate tools, equipment and machinery
6. Apply specific products at appropriate rates	6.1 Select specific products based on their analysis to meet plant needs 6.2 Calculate product application rates to optimise plant benefit and minimise environmental impact 6.3 Apply specific products at the correct rate, timing and method according to the product type and analysis and with consideration of the environmental implications 6.4 Record product applications 6.5 Monitor, document and report target plant response to the plant nutrition program, as well as non-target effects responses including environmental impacts or pests

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPCM301A Implement a plant nutrition program.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCMB01 Implement a plant nutrition program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify goals, target site, soils and plants for implementing the program
- identify materials and their supply source
- monitor soil pH in the implementation site
- identify appropriate products and application methods appropriate to implementing nutrition program
- estimate treatment and product requirements, material sizes and quantities
- conduct a site hazard identification and risk control assessment
- determine nutritional problems in plants
- plant nutrition program specifications
- apply specific products at appropriate rates and record their application
- select, check and calibrate tools, equipment and machinery

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of plant nutrition
 - botany and plant physiology
 - methods of nutrient uptake by plants
 - nutrient cycling and its practical relevance to the specific plants and soils
 - nutrients required by plants grown within the enterprise
 - soil ameliorants commonly required to treat the soil problems experienced by the enterprise
 - the effects of nutrient deficiency and toxicity on plant species and varieties

- the environmental implications of soil ameliorant and fertiliser use
- the main simple and compound fertiliser products available to the enterprise including analysis, solubility, salt index, application rates and costs
- the relationship between soil characteristics and the availability of nutrients

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM302 Provide information on plants and their culture

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide information to clients and others about plants and their cultural requirements.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Plants culture and management (PCM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify the issue	1.1 Initiate contact with the client when appropriate 1.2 Assist the client in explaining the issue by using attentive listening and questioning techniques 1.3 Clarify the nature of the issue by gathering all relevant information from the client

Element	Performance criteria
	1.4 Define the issue as closely as possible according to the amount of information gathered 1.5 Advise the client that expert advice may be required to assist them further with their issue
2. Decide on preferred solution	2.1 Identify and develop options and strategies using available in-house and online reference material, product information, own experiences and sharing collective workplace knowledge 2.2 Examine and evaluate options and strategies using sound problem-solving techniques 2.3 Determine the optimal solution based on reasoned argument, appropriate evidence and sound cultural principles
3. Provide the preferred solution	3.1 Explain the recommended solution, method of application and probable outcomes to the client 3.2 Refer to the original source of the plant and its cultural requirements where necessary 3.3 Respond to client requests for clarification or expansion by the use of attentive listening and questioning techniques

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPCM302A Provide information on plants and their culture.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMB02 Provide information on plants and their culture

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop product knowledge through research and access to in-house and online information
- interpret information sheets, labels, horticultural literature, specifications and design symbols
- investigate requests for information, identify and evaluate options, decide on a solution, and deliver recommendation and information to the client
- select plants from a range of available stock lists
- communicate with clients, work team members, supervisors, suppliers, contractors and consultants

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles of plant culture
 - broad range of plant species and their cultural requirements
 - duty of care in provision of advice and recommendations to retail, commercial and private clients
 - local plant suppliers, consultants, services, products and contractors
 - pest and disease symptoms, basic physiology and life cycle of pests and diseases, vulnerable plant growth stages, treatment thresholds, treatment products, effective application procedures and environmental implications
 - plant identification techniques, plant selection, plant physiology, habit and growth characteristics of the plants
 - soil characteristics particularly in relation to the local region

- weed species, growth stages, treatment thresholds, treatment products, effective application procedures and environmental implications

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM304 Report on health and condition of trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency covers the skills and knowledge required to report on general tree health and condition. It applies to the evaluation of trees for the purpose of work proposed in a local government area including parks and gardens, building and construction sites, public and private environments, and schools.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Plant culture and management (PCM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare tree inspection requirements	1.1 Determine scope of work 1.2 Identify and prepare tools and equipment for inspection 1.3 Document and implement traffic management requirements

Element	Performance criteria
	where required
2. Inspect the tree	2.1 Determine the type, location and condition of tree 2.2 Inspect tree for obvious signs of structural damage, defects, pests, diseases and fauna 2.3 Identify and record tree condition on the inspection form
3. Record findings and advise client	3.1 Record tree location and site details 3.2 Recommend follow up treatments or further inspection from a consulting arborist 3.3 Complete report on tree health and condition and advise client-stakeholder

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - No equivalent.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMB04 Report on health and condition of trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare materials and implement traffic management requirements for tree inspection
- document and implement traffic management requirements where required
- recognise a range of tree species and cultivars common to the region
- identify and report on the general health and condition of trees
- identify obvious potential structural defects, damage, pests and and/or diseases
- recommend treatments for pest and disease problems
- recognise potential structural or other defects that require inspection by an arborist
- record findings and inform client

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for inspecting trees
 - AS4373-2007 Pruning of amenity trees
 - botany and tree physiology
 - local government tree protection and preservation regulations
 - methods of determining tree dimensions
 - methods of low risk work
 - recognition of a wide range of trees common to the region
 - relevant Code of Practice
 - signs of structural defects, decay, damage and stress in trees

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM305 Implement a plant nutrition program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement a plant nutrition program, including preparing for the nutrition program, monitoring and controlling the nutritional requirements of plants, preparing fertilisers and application equipment, applying products to plants, and completing plant nutrition program activities.

The unit applies to individuals who implement a plant nutrition program under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for implementation of the plant nutrition program	1.1 Identify goals, target site, plant species and varieties for implementing the program 1.2 Locate services using site plans or consultation with supervisor 1.3 Identify potential hazards and risks, and identify safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Confirm environmental and biosecurity implications associated with plant nutrition program activities, and minimise impact 1.5 Select, fit use and maintain personal protective equipment applicable to the task
2. Identify and assess soil or growing media characteristics	2.1 Assess site soil or growing media characteristics, including pH, in relation to plant nutrition 2.2 Identify, compare, select and source ameliorants to improve soil or growing media characteristics or fertility 2.3 Assess product application methods according to product type and growing media
3. Determine nutritional problems in plants	3.1 Conduct a visual inspection and identify common nutrient deficiency and toxicity problems in plants 3.2 Determine causes of nutritional or toxicity problems, and confirm with supervisor or horticulturalist, as required
4. Prepare to use fertilisers	4.1 Select a fertiliser that is compatible with plant species and growing media according to nutrition program 4.2 Assess fertiliser application methods, taking into account the fertiliser type, soils and environmental implications according to nutrition program
5. Prepare application equipment	5.1 Select tools, equipment and machinery appropriate for the plant application being performed, and check for safe operation 5.2 Calibrate and adjust tools, equipment and machinery
6. Apply specific products at appropriate rates	6.1 Calculate product application rates to optimise plant benefit and minimise environmental impact according to nutrition program 6.2 Apply products with the correct rate, timing and method according to the product type, plant needs and with consideration of the environmental implications and according to nutrition program 6.3 Apply fertilisers appropriate to the plant growing cycle, workplace fertiliser schedule and nutrition program 6.4 Record product applications according to workplace procedures 6.5 Monitor, document and report target plant response to the plant nutrition program, as well as non-target effects or responses according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
7. Complete plant nutrition program activities	7.1 Remove and dispose of waste material according to workplace and environmental requirements 7.2 Clean, maintain and return tools, equipment and machinery to required location 7.3 Identify and report unserviceable tools, equipment and machinery according to workplace procedures 7.4 Record and report plant nutrition program activities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about the plant nutrition program
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to complete product application and plant nutrition program activity records
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to confirm site services, and report target plant response, non-target effects or responses, and unserviceable tools, equipment and machinery Initiate discussions with supervisor or horticulturalist using clear language to confirm plant nutritional or toxicity problems
Numeracy	<ul style="list-style-type: none"> Calculate soil ameliorant, fertiliser and product ratios, quantity and application rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM305	AHCPCM301	Minor changes to	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
Implement a plant nutrition program	Implement a plant nutrition program	application Major changes to performance criteria Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMB05 Implement a plant nutrition program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a plant nutrition program on at least one occasion, and has:

- applied workplace health and safety requirements, including a site hazard identification and risk control assessment
- minimised environmental and biosecurity impacts associated with the plant nutrition program
- identified appropriate products and application methods according to nutrition program
- determined nutritional problems in plants
- selected, calibrated and operated plant nutrition program tools, equipment and machinery, and checked for safe operation
- calculated treatment and product requirements, material sizes and quantities
- applied specific products at appropriate rates
- recorded product applications and plant nutrition program activities
- reported target plant response, non-target effects or responses, and unserviceable tools, equipment and machinery
- removed and disposed of waste material
- cleaned, maintained and stored tools, equipment and machinery.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace health and safety requirements applicable to implementing a plant nutrition program
- industry and workplace environmental and biosecurity procedures applicable to implementing a plant nutrition program
- principles and practices of plant nutrition, including:

- methods of nutrient uptake by plants
- nutrient cycling and its practical relevance to the specific plants and growing media
- common nutrients requirements applicable to plants grown in the workplace
- ameliorants commonly used to treat soil or growing media problems
- the effects of nutrient deficiency and toxicity on plant species and varieties
- the environmental implications of ameliorant and fertiliser use
- the main simple and compound fertiliser products available to the workplace, including analysis, solubility, salt index, application rates and costs
- the relationship between soil characteristics and the availability of nutrients
- plant nutrition tools, equipment and machinery operating instructions and safe work procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plant nutrition tools, equipment and machinery
 - soil ameliorants, fertiliser and plant nutrition products commonly used to treat soil problems
 - personal protective equipment applicable to plant nutrition
- specifications:
 - plant nutrition tools, equipment and machinery operating instructions and safe work procedures
 - industry and workplace environmental and biosecurity procedures applicable to implementing a plant nutrition program
 - workplace health and safety requirements applicable to implementing a plant nutrition program
- relationships:
 - supervisor and horticulturalist
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM306 Provide information on plants and their culture

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify client issues or requirements, identify the preferred solution, and provide information and solutions to clients.

The unit applies to individuals who provide information on plants and their culture under broad direction, and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify client issues or requirements	1.1 Initiate contact with the client in a timely and professional manner using interpersonal skills and communication techniques 1.2 Assist the client in explaining issues or requirements by using attentive listening and questioning techniques 1.3 Clarify the nature of the issue or requirements by gathering relevant information from the client

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Define the issue according to the amount of information gathered 1.5 Seek assistance from appropriate personnel, and follow up with client where required
2. Identify preferred solution	2.1 Identify and develop recommendations, options or strategies using available in-house and online reference material, product information, own experience and collective workplace knowledge 2.2 Examine and evaluate options and strategies using problem-solving techniques 2.3 Determine optimal solution based on reasoned argument and gathered evidence
3. Provide information or preferred solution	3.1 Explain cultural requirements for the plant or recommended solution, including method of application, where applicable, and probable outcomes to the client 3.2 Refer to original source of the plant and its cultural requirements, where necessary 3.3 Use attentive listening and questioning techniques to respond to client requests for clarification or more information

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about plant production information and culture requirements
Oral communication	<ul style="list-style-type: none"> Use clear language with clients to determine issue and explain plant cultural requirements or recommended solution Initiate discussions with personnel as appropriate, using clear language to communicate client issues or requirements and determine preferred solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM306 Provide information on plants and their culture	AHCPCM302 Provide information on plants and their culture	Minor changes to application Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMB06 Provide information on plants and their culture

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has provided information on plants and their culture on at least two occasions, and has:

- communicated effectively with clients and appropriate personnel as required
- investigated requests for information, identified and evaluated options, decided on a solution, and delivered recommendation and information to the client
- developed product knowledge through research and access to in-house and online information
- interpreted information sheets, labels, horticultural literature, specifications and design symbols
- selected solutions from a range of available stock lists.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles of plant culture, including:
 - duty of care in provision of advice and recommendations to retail, commercial and private clients
 - local plant suppliers, consultants, services, products and contractors
 - pest and disease symptoms, basic physiology and life cycle of pests and diseases, vulnerable plant growth stages, treatment thresholds, treatment products, effective application procedures and environmental implications
 - plant identification techniques, plant selection, plant physiology, and habit and growth characteristics of the plants
 - soil characteristics, particularly in relation to the local region

- weed species, growth stages, treatment thresholds, treatment products, effective application procedures and environmental implications.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - in-house and online information
- specifications:
 - information sheets, labels, horticultural literature, specifications and design symbols
- relationships:
 - clients and appropriate personnel
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM307 Report on health and condition of trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare and inspect trees and record and report findings.

The unit applies to individuals who report on the health and condition of trees under broad direction, and take responsibility for their own work.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare tree inspection requirements	1.1 Determine scope of work for tree inspection 1.2 Select tools and equipment appropriate for inspection being performed, and check for safe operation 1.3 Document and implement traffic management requirements where

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	required
2. Inspect the tree	2.1 Identify the type and location of tree 2.2 Inspect tree for obvious signs of structural damage, defects, pests, diseases and fauna 2.3 Identify and record tree condition on the inspection form
3. Record findings and advise client	3.1 Record tree location and site details 3.2 Recommend follow-up treatments or further inspection from a consulting arborist 3.3 Complete tree health and condition report, and advise client or other stakeholder according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare tree health and condition reports
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client or other stakeholder using clear language to report tree health and condition and recommend follow-up treatments or further inspection

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHPCMB07 Report on health and condition of trees	AHPCMB04 Report on health and condition of trees	Minor changes to application Performance criteria clarified	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCMB07 Report on health and condition of trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has reported on the health and condition of trees on at least two occasions, and has:

- applied workplace health and safety requirements
- selected tools and equipment for tree inspection
- documented and implemented traffic management requirements where required
- recognised a range of tree species and cultivars common to the region
- identified obvious potential structural defects, damage, pests or diseases
- completed inspection form and tree health condition report
- recognised potential structural or other defects that require inspection by an arborist
- reported and informed client of tree health and condition, and recommended follow-up treatments or further inspection.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace health and safety requirements applicable to inspecting and reporting on health and condition of trees
- principles and practices for inspecting trees, including:
 - Australian standard for pruning of amenity trees
 - botany and tree physiology applicable to determining the health and condition of trees
 - local government tree protection and preservation regulations
 - methods of determining tree dimensions
 - methods of low risk work applicable to inspecting trees
 - recognition of a wide range of trees common to the region
 - relevant codes of practice

- signs of structural defects, decay, damage and stress in trees
- workplace recording and reporting requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tree inspection tools and equipment
 - inspection forms
- specifications:
 - workplace health and safety requirements applicable to inspecting and reporting on health and condition of trees
 - Australian standard for pruning of amenity trees
 - local government tree protection and preservation regulations
 - relevant codes of practice
 - workplace recording and reporting requirements
- relationships:
 - client or other stakeholder
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM401 Recommend plants and cultural practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to recommend plants and cultural practices. It applies to both sales staff in plant nurseries and garden centres and others in the amenity horticulture industries.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Plants culture and management (PCM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify client preferences and	1.1 Initiate contact with the client when appropriate 1.2 Clarify the purpose of the planting and cultural and environmental

Element	Performance criteria
requirements	factors of the intended planting site by gathering all relevant information from the client 1.3 Use botanical and common names to describe plants
2. Select plants to suit specific situations	2.1 Identify plants and their growth and performance characteristics that suit the specific situation using research and experiential awareness 2.2 Compare, assess and evaluate available plants using sound problem-solving techniques 2.3 Determine the best choice based on reasoned argument, appropriate evidence, sound principles and customer needs
3. Advise on plants for specific situation	3.1 Explain performance characteristics and particular planting, cultural and maintenance requirements to the client 3.2 Refer to the original supplier of the plant where necessary 3.3 Respond to client requests for clarification or expansion by the use of attentive listening and questioning techniques 3.4 Record and report recommendations

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPCM401A Recommend plants and cultural practices.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM401 Recommend plants and cultural practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- conduct literature and industry research, collate and analyse findings on plant species and cultivars, their characteristics and requirements
- comply with legislative requirements
- explain to the client work health and safety requirements or basic safety precautions relevant to the establishment and on-going maintenance of plants
- document client preferences and site particulars
- select plants that suit client preferences and suitability for the site
- report recommendations to the client that detail the types of plants chosen and their requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for recommending plants and their cultural practices
 - customer service and communication skills
 - features of plant species and cultivars
 - innovation and recent practices in plant selection, use and performance
 - plant nomenclature (family, genus, species and cultivar) for the range of plants recommended by the enterprise
 - practical understanding of the physiology of the range of plants supplied and recommended by the enterprise and their comparative growth and performance characteristics in response to different cultural and environmental factors
 - principles and practices for the establishment and maintenance of plants

- soil characteristics, particularly in relation to the geographical and climatic region from which clients generally originate

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM402 Develop a soil health and plant nutrition program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop a soil health and plant nutrition program.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Plant culture and management (PCM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1.Determine relevant regional data and site characteristics	1.1 Define goals and target site for assessment and development of program 1.2 Access and review relevant climate data, environmental context

Element	Performance criteria
	<p>information and site data</p> <p>1.3 Determine appropriate soil, plant and water tests, taking into account plant species, climatic conditions and prevailing growth media</p> <p>1.4 Develop a soil, plant and water testing program that defines sampling, field testing, off-site analysis activities, task responsibilities, involvement of contractors, scheduling and desired information outcomes</p> <p>1.5 Implement and monitor soil, plant and water testing tasks, supervise liaison procedures with outside testing agencies and take remedial action where necessary</p> <p>1.6 Compile data and readings and present in a form that can be easily understood</p> <p>1.7 Determine seasonal variations and requirements from published data on species, historical records and own experience</p> <p>1.8 Determine characteristics, condition and nutritional status of soils and plant species by analysing collected data and comparing to accepted standards</p>
2. Define the requirements for plant nutrition	<p>2.1 Identify different nutritional requirements of the plant during the growing cycle and growing conditions, using published data on species, historical records and own experience</p> <p>2.2 Develop program to achieve appropriate soil conditions and nutrient availability for plant growth</p> <p>2.3 Determine soil amendments, management practices and fertiliser requirements</p> <p>2.4 Identify and cost resources, tools, equipment and machinery required for program and confirm availability with suppliers, contractors and appropriate personnel</p> <p>2.5 Determine cost-effective approach to soil management, soil amendment and provision of plant nutrients</p> <p>2.6 Identify work health and safety hazards associated with program, assess risks and develop and document control measures</p> <p>2.7 Identify and document environmental implications of program</p>
3. Document the soil health and plant nutrition program and specifications	<p>3.1 Establish a detailed soil health and plant nutrition plan, objectives, specifications and associated costs based on program requirements</p> <p>3.2 Develop and document detailed on-site procedures and schedules required for program</p>
4. Monitor plant growth and evaluate the program	<p>4.1 Monitor program implementation and results by testing soil, plants and produce</p> <p>4.2 Review and refine program to ensure it is responsive to changing</p>

Element	Performance criteria
	conditions 4.3 Identify non-compliance with documented objectives and specifications and implement remedial actions to alleviate or overcome identified shortcomings in program 4.4 Take remedial action to improve plant nutrition and document 4.5 Incorporate agreed changes into a detailed plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPCM402A Develop a soil health and plant nutrition program.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM402 Develop a soil health and plant nutrition program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- access and analyse information on regional site factors
- assess the physical, chemical and biological characteristics of soils
- assess the physical, nutritional and health requirements of plants
- develop a soil, plant and water testing program
- develop a program to achieve appropriate soil conditions and nutrient availability for plant growth, incorporating a soil health and plant nutrition plan
- research and analyse findings on plant nutritional requirements, nutrients available from soils and other growth media, and environmental implications of program
- select suitable management practices, soil amendments, additives and fertilisers

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of soil health and plant nutrition
 - characteristics of soil and other growth media types, uses and additives to enhance available nutrition for specific plants
 - main simple and compound fertiliser products available to enterprise, including analysis, solubility, salt index, application rates and costs
 - methods of nutrient uptake by plants and favourable conditions for effective uptake to occur
 - nutrients and water required by plants grown within enterprise and effects of nutrient deficiency and toxicity on individual plant species and varieties
 - visual and other symptoms of nutrient deficiency and toxicity on individual plant species and varieties

- organic matter, pest and disease, and nutrient interactions in soil and nutrient cycling
- environmental issues associated with selecting nutritional materials, implementing a plant nutrition program, legislation compliance requirements and ensuring minimal impact on environment
- the following types of relationships between soil and growth media characteristics and availability of nutrients to plants: macro and micro elements
- the following types of site evaluation techniques: methods of sampling and analysing soils and other growth media
- soil amendments commonly required to treat soil problems experienced by enterprise

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM404 Recommend plants and cultural practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify client preferences and requirements, and select and advise on plants for specific situations.

The unit applies to individuals who apply specialist skills and knowledge to recommending plants and cultural practices. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify client preferences and requirements	1.1 Use interpersonal skills to engage client and identify needs 1.2 Confirm with the client the purpose of the planting, and cultural and environmental factors of the intended planting site

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Use botanical and common names to describe plants
2. Select plants to suit specific situations	<p>2.1 Research plants and their growth and performance characteristics that suit the specific situation, using authoritative sources</p> <p>2.2 Research local workplace and district requirements for planting site</p> <p>2.3 Use problem-solving techniques to compare, assess and evaluate available plants</p> <p>2.4 Determine the best choice based on reasoned argument, appropriate evidence, sound principles and client needs</p>
3. Advise on plants for specific situation	<p>3.1 Explain performance characteristics and particular planting, cultural and maintenance requirements to the client</p> <p>3.2 Address client concerns and questions and refer to the original supplier of the plant where necessary</p> <p>3.3 Record and report cultural practice recommendations</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about plants and related cultural practices
Oral communication	<ul style="list-style-type: none"> Use clear language with clients to gather information, address concerns and questions, and explain plant performance characteristics and particular planting, cultural and maintenance requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHPCPM404 Recommend plants and cultural practices	AHPCPM401 Recommend plants and cultural practices	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM404 Recommend plants and cultural practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has recommended plants and cultural practices on at least two occasions, and has:

- conducted literature and industry research, and collated and analysed findings on plant species and cultivars, their characteristics and requirements
- complied with local workplace and district requirements
- selected plants that suit client preferences and suitability for the site
- explained to the client work health and safety requirements or basic safety precautions relevant to the establishment and ongoing maintenance of plants
- documented client preferences and site particulars
- reported recommendations to the client that detailed the types of plants chosen and their requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for recommending plants and their cultural practices, including:
 - customer service and communication skills
 - features of plant species and cultivars
 - innovation and recent practices in plant selection, use and performance
 - plant nomenclature, including family, genus, species and cultivar, for the range of plants recommended by the workplace
 - practical understanding of the physiology of the range of plants supplied and recommended by the workplace, and their comparative growth and performance characteristics in response to different cultural and environmental factors
 - principles and practices for the establishment and maintenance of plants

- soil characteristics, particularly in relation to the geographical and climatic region of the intended planting site
- local workplace and district requirements relevant to the intended planting site.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - planting, cultural and maintenance requirements
- specifications:
 - local workplace and district requirements relevant to the intended planting site
- relationships:
 - clients.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM405 Implement an integrated pest management program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to assess infestations, and plan and implement an integrated pest management program.

The unit applies to individuals who apply specialist skills and knowledge to implementing an integrated pest management program. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess weed, pest and disease infestations	1.1 Determine operational parameters and objectives of the integrated pest management (IPM) program

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Identify symptoms of weed, pest and disease infestation in response to client needs</p> <p>1.3 Define weed, pest and disease relationships and vectors as key factors in plan</p> <p>1.4 Assess size and scope of infestation</p> <p>1.5 Assess business implications and urgency of action according to published data and workplace procedures</p> <p>1.6 Report to management conditions likely to impact on business viability</p>
2. Plan appropriate integrated treatments for weeds, pests and diseases	<p>2.1 Identify and confirm treatments selected include chemical or non-chemical products according to workplace procedures and IPM program</p> <p>2.2 Outline integrated application of treatments in planning documentation</p> <p>2.3 Identify and cost treatments that provide a suitable response to infestations, having regard to cost of damage, cost of infestation, marketing requirements, withholding periods and sustainable horticultural practices</p> <p>2.4 Determine if professional assistance is required and seek professional assistance where necessary</p> <p>2.5 Document IPM plan according to workplace procedures</p>
3. Implement weed, pest and disease control measures	<p>3.1 Confirm control procedures reflect sound implementation of integrated pest management strategy, marketing objectives and business imperatives</p> <p>3.2 Develop and implement monitoring procedures</p> <p>3.3 Communicate IPM plan and activities to staff, and supervise work according to the IPM plan</p> <p>3.4 Identify non-compliance with documented objectives, and implement remedial actions to alleviate or overcome identified shortcomings in plan</p> <p>3.5 Identify and record variances from IPM plan or monitoring procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about IPM program requirements and key factors in plan development
Oral communication	<ul style="list-style-type: none"> Initiate discussions with management, using clear language to report conditions likely to impact on business viability Use clear communications with staff to communicate IPM plan and activities
Numeracy	<ul style="list-style-type: none"> Calculate IPM plan treatment costs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM405 Implement an integrated pest management program	AHCPCM403 Implement an integrated pest management program	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM405 Implement an integrated pest management program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented an integrated pest management (IPM) program on at least one occasion, and has:

- identified symptoms of weed, pest and disease infestation
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- applied and implemented IPM program requirements
- developed an IPM plan and monitoring procedures
- communicated IPM plan to staff, and supervised work.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for integrated pest management, including:
 - application techniques for chemical and non-chemical treatments
 - concept and principles of IPM
 - cost and benefit analysis relevant to selection of weed, pest and disease control measures
 - crop and plant scouting and monitoring
 - ecological impacts of different control treatments
 - integration of weed, pest and disease control measures
 - lifecycles of hosts, predators and pests and diseases
 - sustainable horticultural practices
 - weeds and pests of specific horticultural workplaces
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to implementing an IPM program

- IPM program requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - published data, marketing requirements, withholding periods and sustainable horticultural practice information relevant to implementing an integrated pest management program
 - industry publications and internet sources of information relevant to implementing an integrated pest management program
- specifications:
 - IPM program requirements
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to implementing an IPM program
- relationships:
 - staff and management.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM406 Develop a soil health and plant nutrition program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop, document and monitor a soil health and plant nutrition program.

The unit applies to individuals who apply specialist skills and knowledge to developing a soil health and plant nutrition program. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine relevant regional data and site characteristics	1.1 Define goals and target site for assessment and development of program 1.2 Access and review site and climate data, and environmental

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>context information</p> <p>1.3 Determine appropriate soil, plant and water tests, according to plant species, climatic conditions and prevailing growth media</p> <p>1.4 Develop a soil, plant and water testing program that defines sampling, field testing, off-site analysis activities, task responsibilities, involvement of contractors, scheduling and desired information outcomes</p> <p>1.5 Implement and monitor soil, plant and water testing tasks and liaison procedures with outside testing agencies, and take remedial action where necessary</p> <p>1.6 Compile and present data and readings</p> <p>1.7 Determine seasonal variations and requirements from published data on species, historical records and own experience</p> <p>1.8 Determine characteristics, condition and nutritional status of soils and plant species by analysing collected data and comparing to accepted standards</p>
<p>2. Define the requirements for a plant nutrition program</p>	<p>2.1 Identify nutritional requirements of the plant during the growing cycle and growing conditions, using published data on species, historical records and own experience</p> <p>2.2 Develop program to achieve appropriate soil conditions and nutrient availability for plant growth</p> <p>2.3 Determine soil amendments, management practices and fertiliser requirements</p> <p>2.4 Identify and cost resources, tools, equipment and machinery required for program, and confirm availability with suppliers, contractors and appropriate personnel</p> <p>2.5 Determine cost-effective approach to soil management, soil amendment and provision of plant nutrients</p> <p>2.6 Identify hazards and assess risks associated with program, and develop and document control measures to manage risks according to workplace health and safety procedures</p> <p>2.7 Identify and document environmental implications of program, and implement suitable controls</p>
<p>3. Document the soil health and plant nutrition program and</p>	<p>3.1 Establish a detailed soil health and plant nutrition plan, objectives, specifications and associated costs based on program requirements</p> <p>3.2 Develop and document detailed on-site procedures and scheduled</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
specifications	activities required for program
4. Monitor plant growth and evaluate the program	<p>4.1 Communicate soil health and plant nutrition plan, procedures and schedule of activities to staff</p> <p>4.2 Monitor program implementation and results by testing soil, plants and produce</p> <p>4.3 Review and refine program to ensure it is responsive to changing conditions</p> <p>4.4 Identify non-compliance with documented objectives and specifications, and implement remedial actions to alleviate or overcome identified shortcomings in program</p> <p>4.5 Identify and document remediation action to improve plant nutrition in consultation with management</p> <p>4.6 Identify and record variances from plan and scheduled activities</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for soil health and plant nutrition program and plan
Oral communication	<ul style="list-style-type: none"> Initiate discussions with management, using clear language to discuss program requirements, budget and soil health and plant nutrition plan Use clear communications with staff to communicate soil health and plant nutrition plan, site procedures and schedule of activities
Numeracy	<ul style="list-style-type: none"> Calculate labour, materials, tools and equipment cost Document soil health and plant nutrition budget

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM406 Develop a soil health and plant nutrition program	AHCPCM402 Develop a soil health and plant nutrition program	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM406 Develop a soil health and plant nutrition program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed a soil health and plant nutrition program on at least one occasion, and has:

- applied relevant workplace health and safety, and environmental and biosecurity legislation, regulations and workplace procedures
- accessed and analysed information on regional site factors
- assessed the physical, chemical and biological characteristics of soils
- assessed the physical, nutritional and health requirements of plants
- developed a soil, plant and water testing program
- researched and analysed findings on plant nutritional requirements, nutrients available from soils and other growth media, and environmental implications of program
- developed a program to achieve appropriate soil conditions and nutrient availability for plant growth, incorporating a soil health and plant nutrition plan
- selected suitable management practices, soil amendments, additives and fertilisers
- negotiated, budgeted and documented soil health and plant nutrition plans
- communicated plans, site procedures and schedules to staff
- monitored soil health and plant nutrition program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of soil health and plant nutrition, including:
 - characteristics of soil and other growth media types, their uses and additives to enhance available nutrition for specific plants
 - main simple and compound fertiliser products available to workplace, including analysis, solubility, salt index, application rates and costs

- methods of nutrient uptake by plants, and favourable conditions for effective uptake to occur
- nutrients and water required by plants grown within workplace, and effects of nutrient deficiency and toxicity on individual plant species and varieties
- visual and other symptoms of nutrient deficiency and toxicity on individual plant species and varieties
- organic matter, pest and disease, and nutrient interactions in soil and nutrient cycling
- types of relationships between soil and growth media characteristics and availability of nutrients to plants, including macro and micro elements
- types of site evaluation techniques, and methods of sampling and analysing soils and other growth media
- soil amendments commonly required to treat soil problems experienced by the workplace
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to developing a soil health and plant nutrition program.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - site and climate data, and environmental context information relevant to developing a soil health and plant nutrition program
 - industry publications and internet sources of information relevant to developing a soil health and plant nutrition program
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to developing a soil health and plant nutrition program
- relationships:
 - staff, suppliers, contractors, appropriate personnel and management
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM501 Diagnose plant health problems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to diagnose plant health problems.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Plants culture and management (PCM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor factors that influence plant health	1.1 Identify the plant species to the lowest taxonomic level and state its region of origin 1.2 Determine the seasonal growth stages of the plant

Element	Performance criteria
	1.3 Record the day-to-day cultural practices used on each horticultural species 1.4 Determine the characteristics of the growing environment that affect the growth of a specific plant species 1.5 Record climatic data and environmental growing conditions 1.6 Record the presence or numbers of beneficial organisms
2. Diagnose plant health problems	2.1 Identify environmental and cultural factors that predispose plants to attack by pests and diseases 2.2 Identify the symptoms and signs of plant health problems using accepted nomenclature 2.3 Assess the severity and extent of the problem in a plant species 2.4 Compare observations with published data, historical records and own experience 2.5 Determine the possible causes of the plant health problem 2.6 Consult with specialist services in severe, complex or rapid onset cases 2.7 Sample plant or soil specimens and dispatch for specialist diagnosis or laboratory testing where required 2.8 Record plant disorders and problems and document in a report
3. Remedy plant health problems	3.1 Formulate a weed, pest and disease control program, taking into account the Integrated Pest Management (IPM) strategy and production plan 3.2 Identify a range of modifications to growing conditions for a specific situation or plant species to rectify plant health problems 3.3 Identify resources, tools, equipment and machinery required for work activities, analyse the costs and benefits and confirm availability with suppliers, contractors and appropriate personnel 3.4 Identify work health and safety hazards associated with work activities, assess risks and implement controls
4. Evaluate treatment program	4.1 Monitor plants during treatment 4.2 Record appropriate data 4.3 Compare observations to expected results 4.4 Recommend modifications to the treatment program are to client or management 4.5 Present treatment program report to client or management

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPCM501A Diagnose plant health problems.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPM501 Diagnose plant health problems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research information about plant health problems, their diagnosis and remedial treatments
- differentiate between pest, disease and nutrient-associated symptoms
- identify signs and symptoms of plant health problems
- assess the severity, extent and speed of onset of health problems in a specific situation
- determine possible causes of the problem
- liaise with specialist services, clients and management
- formulate a weed, pest and disease control program
- implement treatment programs to remedy the diagnosed health problems
- evaluate treatment program and recommend modifications

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of plant health
 - chemical use, toxicity and compatibility with target plants, growth media, and environmental characteristics of the horticultural region
 - chemical, cultural and biological control methods included in the integrated pest management (IPM) strategy of the enterprise
 - enterprise and industry record keeping and reporting policies and requirements
 - evaluation procedures, including cost/benefit analysis, for plant and growth media treatments in relation to plant health, enterprise budget and performance targets
 - plant anatomy, morphology, physiology, histology, pathology, taxonomy and nomenclature

- plant nutrition issues associated with the growth media used and horticultural region for specific plant species
- sustainable horticultural practices relevant to the enterprise or horticultural region
- taxonomic descriptions, horticultural function, cultural and growth requirements, and target growth and performance characteristics of specific horticultural plants for the achievement of enterprise production and business plans
- weeds, pests and disease detection methods, taxonomic identification, life cycle stages and characteristic symptoms for the specific horticultural plants of the enterprise

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM507 Diagnose plant health problems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to determine, monitor, diagnose and remedy plant health problems and evaluate a control plan.

The unit applies to individuals who apply specialised skills and knowledge to diagnose plant health problems, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine factors that influence plant health	1.1 Identify the plant species to the lowest taxonomic level, and state its region of origin

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Determine plant seasonal growth stages 1.3 Record daily cultural practices used on each horticultural species 1.4 Determine the growing environment characteristics that affect the growth of a specific plant species 1.5 Identify environmental and cultural factors that predispose plants to attack by pests and diseases 1.6 Record climatic data and environmental growing conditions 1.7 Record the presence or numbers of beneficial organisms
2. Monitor and diagnose plant health problems	2.1 Identify the symptoms and signs of plant health problems using accepted nomenclature 2.2 Assess the severity and extent of the problem in a plant species 2.3 Compare observations with published data, historical records and own experience 2.4 Determine possible causes of the plant health problem 2.5 Consult with specialist services in severe, complex or rapid onset cases 2.6 Sample plant or soil specimens, and dispatch for specialist diagnosis or laboratory testing where required 2.7 Record and document plant disorders and problems in a report
3. Remedy plant health problems	3.1 Formulate and document a weed, pest and disease control plan according to workplace integrated pest management (IPM) strategy and production plan requirements 3.2 Identify a range of modifications to growing conditions for a specific situation or plant species to rectify plant health problems 3.3 Identify, cost and confirm availability of resources, tools, equipment and machinery required for work activities, and analyse benefits 3.4 Identify hazards and assess risks associated with work activities, and implement control measures according to workplace health and safety procedures 3.5 Identify and minimise environmental impacts of weed, pest and disease control plan according to environmental and biosecurity legislation, regulations and workplace procedures
4. Evaluate control plan	4.1 Monitor plants during treatment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.2 Record and analyse monitoring data 4.3 Compare observations and data to expected results 4.4 Recommend control plan modifications to client or management 4.5 Document and present control plan report to client or management

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information regarding plant growing requirements, cultural practices and factors, signs of health problems, and weed, pest and disease control
Oral communication	<ul style="list-style-type: none"> Initiate discussions with specialist services, clients or management, using clear language to communicate severe, complex or rapid onset cases, recommend control plan modifications, and present control plan report
Numeracy	<ul style="list-style-type: none"> Access and analyse climatic data, published data and historical records for input into plant disorders and problems report and weed, pest and disease control plan Calculate and analyse resources, tools, equipment and machinery costs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHPCPM507 Diagnose plant health problems	AHPCPM501 Diagnose plant health problems	Minor changes to application Major changes to performance criteria	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPM507 Diagnose plant health problems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has diagnosed plant health problems on at least two occasions, and has:

- researched information about plant health problems, their diagnosis and remedial treatments
- differentiated between pest, disease and nutrient associated symptoms
- identified signs and symptoms of plant health problems
- assessed the severity, extent and speed of onset of health problems in a specific situation
- determined possible causes of the problem
- liaised with specialist services, clients and management
- formulated and documented a weed, pest and disease control plan
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- implemented a control plan to remedy the diagnosed health problems
- evaluated a control plan and recommended modifications.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of plant health, including:
 - chemical use, toxicity and compatibility with target plants, growth media and environmental characteristics of the horticultural region
 - chemical, cultural and biological control methods
 - evaluation procedures, including cost and benefit analysis, for plant and growth media treatments in relation to plant health, workplace budget and performance targets

- plant anatomy, morphology, physiology, histology, pathology, taxonomy and nomenclature
- plant nutrition issues associated with the growth media used and the horticultural region for specific plant species
- sustainable horticultural practices relevant to the workplace or horticultural region
- taxonomic descriptions, horticultural function, cultural and growth requirements, and target growth and performance characteristics of specific horticultural plants for the achievement of workplace production and business plans
- weeds, pests and disease detection methods, taxonomic identification, lifecycle stages and characteristic symptoms for the specific horticultural plants of the workplace
- workplace and industry record-keeping and reporting procedures and requirements
- workplace integrated pest management (IPM) strategy and production plan requirements
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to diagnosing plant health problems.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - published data and historical records relevant to diagnosing plant health problems
 - workplace IPM strategy and production plan requirements
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to diagnosing plant health problems
 - workplace and industry record-keeping and reporting procedures and requirements
- relationships:
 - specialist services, clients or management
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM508 Develop an integrated pest management program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop an integrated pest management (IPM) program, including determining IPM strategy, designing control measures, documenting the IPM program, and monitoring program activities and control procedures.

The unit applies to individuals who apply specialised skills and knowledge to develop an IPM program, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine IPM	1.1 Identify weed, pest and disease infestations, considering

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
strategy	workplace requirements 1.2 Define weed, pest and disease relationships and vectors as key factors in developing the integrated pest management (IPM) program 1.3 Develop a system to assess the size and extent of any infestation 1.4 Assess business implications and urgency of action according to published data, workplace procedures and economic threshold 1.5 Identify and report conditions likely to impact on business viability 1.6 Determine the economic threshold for the crops grown
2. Design control measures for weeds, pests or diseases	2.1 Determine the appropriate method to control any weed, pest or disease issue that ensures limited impact on beneficial organisms and minimises the possibility of weeds, pests or diseases developing resistance 2.2 Develop strategies to ensure minimal or no risk of resistance developing in the range of weeds, pests or diseases identified 2.3 Confirm control measures account for the damage threshold of the particular crop and that product still conforms to market access and workplace requirements 2.4 Develop a weed, pest or disease prevention program where possible to minimise, limit or remove risk factors 2.5 Identify and cost resources, tools, equipment and machinery required for IPM strategy 2.6 Document IPM program according to workplace procedures
3. Monitor IPM program activities and control procedures	3.1 Monitor IPM program activities and identify thresholds for remedial action 3.2 Undertake and document remedial action or contingency plan where necessary 3.3 Confirm control procedures reflect sound implementation of IPM strategy and program, marketing objectives and business imperatives 3.4 Monitor control procedures and undertake remedial action where necessary

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information from a range of sources to identify relevant and key information about IPM strategy requirements and key factors in program development
Numeracy	<ul style="list-style-type: none"> Calculate resources, tools, equipment and machinery costs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHPCPM508 Develop an integrated pest management program	AHPCPM506 Develop an integrated pest management program	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM508 Develop an integrated pest management program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed an integrated pest management (IPM) program on at least one occasion, and has:

- determined IPM strategy
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- determined business and crop economic threshold
- developed and documented an IPM program based on analysis of weed, pest or disease presence
- tracked costs of IPM program against budget requirements
- reported on IPM program activities and control procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to developing an IPM program
- principles and practices for developing integrated pest management programs, including:
 - application techniques for chemical and non-chemical treatments
 - concept and principles of IPM
 - cost and benefit analysis relevant to selection of weed, pest and disease control measures
 - crop and plant scouting and monitoring
 - ecological impacts of different control treatments
 - integration of weed, pest and disease control measures
 - lifecycles of hosts, predators and pests and diseases

- sustainable horticultural practices
- weeds and pests of specific horticultural workplaces.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - published data, crop and business economic thresholds, workplace marketing objectives, business imperatives and sustainable horticultural practice information relevant to developing an IPM program
 - industry publications and internet sources of information relevant to developing an IPM program
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to developing an IPM program.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM509 Apply knowledge of plant physiology to horticultural practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to research plant structures, investigate plant growth and responses to horticultural practices, and analyse plant reproduction for horticultural practices.

The unit applies to individuals who apply specialist skills and knowledge to apply knowledge of plant physiology to horticultural practices, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research plant	1.1 Identify and categorise plant cell structures, the organisation of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
structures	<p>cells into primary tissues and plant structural features</p> <p>1.2 Determine the functions of plant cells, primary tissues and plant structural features and their relation to plant growth</p> <p>1.3 Explain the physiological processes of photosynthesis, cellular respiration, transpiration and translocation in plants, including their role in plant function</p>
2. Investigate plant growth responses to horticultural practices	<p>2.1 Analyse physiological plant responses to physical and environmental conditions and the horticultural practices that may impact on plant functioning</p> <p>2.2 Examine the role of plant growth regulators on plant growth and function</p> <p>2.3 Evaluate information on plant growth responses and the addition of plant growth regulators, and the implications for horticultural practices</p> <p>2.4 Research and describe methods to manipulate the physical and environmental conditions to achieve desired plant growth responses in horticultural practices</p>
3. Analyse plant reproduction for horticultural practices	<p>3.1 Identify the physiological processes of asexual and sexual reproduction of plants</p> <p>3.2 Describe the methods of seed and propagule dispersal used by plants</p> <p>3.3 Research and evaluate plant reproduction information for a range of plants</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding botanical and biological references and information relevant to plant physiology and horticultural practices

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to explain the physiological processes of photosynthesis, cellular respiration, transpiration and translocation in plants, including their role in plant function, and describe the manipulation of physical and environmental factors to achieve desired plant growth responses and optimum plant health

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHPCPM509 Apply knowledge of plant physiology to horticultural practices	Not applicable	The unit has been created to address an emerging skill required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM509 Apply knowledge of plant physiology to horticultural practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has applied knowledge of plant physiology to horticultural practices on at least two occasions, and has:

- researched plant internal and external structures, including cell structures, primary tissues, and plant structural features
- investigated and described plant growth responses to horticultural practices
- applied knowledge of plant responses to physical and environmental conditions to manipulate plants for desired horticultural outcomes
- analysed plant reproduction, including asexual and sexual reproduction of plants and methods of seed and propagule dispersal
- researched and evaluated plant reproduction information for a range of plants.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- botanical and biological references and publications relevant to plant physiology, including:
 - the International Code of Botanical Nomenclature (ICBN)
 - the International Code of Nomenclature for Cultivated Plants (ICNCP)
- plant cell structures and components, including:
 - cell wall
 - cell membrane
 - nucleus
 - vacuole
 - cytoplasm
 - mitochondrion

- chloroplasts
- other organelles
- plant primary tissues, including:
 - xylem
 - phloem
 - cuticle
 - epidermis
 - cortex
 - vascular cambium
 - vascular rays
 - stomata
 - parenchyma
 - sieve tubes
 - meristem
- plant structural features, including:
 - roots
 - stems
 - leaves
 - flowers
 - fruit
- plant functions, including:
 - diffusion
 - osmosis
 - photosynthesis
 - respiration
 - transpiration
 - translocation
- physical and environmental conditions that may impact on plant function, including:
 - light quantity, quality and duration
 - availability of water
 - temperature range
 - frost
 - wind
 - air quality
 - soil conditions, including availability of a range of mineral nutrients, compaction and drainage
 - presence of competing plants, diseases and pests
 - influence of building, walls and paving
- horticultural practices that may impact on plant function, including:
 - the selection, growing, management and maintenance of plants

- the manipulation and management of growing environments
- plant protection
- propagating and disbudding
- pruning techniques, including crown reduction, thinning and root pruning
- creation of artificial microclimates and growing environments
- use of soil ameliorants and mulches
- fertilising and watering regimes
- location of plants in relation to light, moisture, air pollutants and competition with other plants
- the role of plant growth regulators in plant responses
- the manipulation of physical and environmental conditions for desired plant growth outcomes
- the asexual reproduction of plants through natural vegetative reproduction and the propagation of plants through horticultural practices, including stem, leaf and root:
 - cuttings
 - division
 - grafting
 - layering
- sexual reproduction of plants, including:
 - the development of gametes
 - pollination
 - fertilisation and embryo development
 - seed
 - fruit
- the range of dispersal characteristics of seeds and other propagule, including:
 - size
 - shape structure
 - wind, water or vector dispersal
- the application of plant reproduction processes for use in horticultural practices.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to a wide range of plants that grow in a range of horticultural settings
 - microscope
 - computer

- industry publications and internet sources of information relevant to applying knowledge of plant physiology to horticultural practices
- specifications:
 - botanical and biological references and publications relevant to plant physiology
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM510 Collect and classify plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to collect and classify plants, including preparing for plant collection, collecting plant specimens, preserving specimens and identifying plant specimens using taxonomic keys.

The unit applies to individuals who apply specialised skills and knowledge to the collection and classification of plants, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for plant collecting	1.1 Confirm purpose and objectives for collecting a range of plants

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Define area, location and habitat for collecting 1.3 Determine and prepare resources to assist in locating and identifying plants 1.4 Determine and prepare equipment required for collecting and preserving specimens 1.5 Obtain licences or permission to collect specimens from landowner or managing agency 1.6 Assess range of likely operating conditions, hazards and difficult or sensitive environments for impact on collecting and preserving specimens 1.7 Identify workplace health and safety hazards associated with plant collecting, assess risks and implement controls
2. Collect plant specimens	2.1 Observe collection ethics when selecting specimens for picking 2.2 Enter into a field note book relevant information about the specimen, its characteristics and occurrence, and note location coordinates 2.3 Confirm specimen collected provides adequate material for identification and preserving 2.4 Tag and store specimens for later identification 2.5 Follow appropriate work health and safety requirements and work practices
3. Preserve specimens	3.1 Preserve specimen while still fresh 3.2 Clean and prepare specimen for preserving 3.3 Preserve specimen using either pressing or drying techniques 3.4 Mount dried specimen and label with information from note book
4. Identify plant specimen	4.1 Use relevant plant key to identify plant 4.2 Identify and document basic characteristics of a plant 4.3 Confirm plant identity against botanical description of species 4.4 Document plant identity on label according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding the collection of plants and the botanical description and plant key of plant specimens
Numeracy	<ul style="list-style-type: none"> Record specimen collection date and location coordinates into field note book

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM510 Collect and classify plants	AHCPCM502 Collect and classify plants	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPM510 Collect and classify plants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has collected and classified a variety of plants on at least three occasions, and has:

- prepared for plant collection
- noted the location, characteristics and occurrence of specimens at the point of collection
- cleaned, preserved, mounted and labelled specimens
- used a plant key to identify plants against the botanical description of the species.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of plant classification,
 - herbarium collection techniques and ethics
 - physical and biological habitat types, including vegetation associations and communities, where appropriate
 - plant anatomy, physiology, morphology, taxonomy and nomenclature
- specimen license or permission granting processes
- environmental conditions and hazards that impact upon plant specimen collection and preservation.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - plants
 - plant specimen collection and preservation equipment and materials
 - field note book
- specifications:
 - plant key
 - herbarium collection techniques and ethics
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM511 Specify plants for landscapes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop a client brief, select and specify landscape plants, and present a report.

The unit applies to individuals who apply specialised skills and knowledge to specify plants for landscapes, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a client brief	1.1 Discuss and clarify client needs and objectives 1.2 Identify purposes of the landscape and client expectations

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Establish plant selection criteria 1.4 Consult with client to finalise agreement of the brief
2. Determine the suitability of a plant for a purpose	2.1 Inspect the site and determine planting area 2.2 Select species and cultivars according to the size and aspect of the site 2.3 Consider and apply environmental conditions to the functional characteristics of the plant 2.4 Determine the suitability of the soil for the plants selected 2.5 Evaluate and document plant selection and rationale
3. Select plants	3.1 Select plants according to client brief and their suitability for the intended purpose 3.2 Determine plant function for the precise location within the plan 3.3 Make recommendations for soil improvements for the selected plant species 3.4 Match species and cultivars according to plant selection criteria for species-specific characteristics 3.5 Identify plant species appropriate for the site 3.6 Research relevant reference sources 3.7 Recommend plant species or cultivars for replacement or new plantings 3.8 Document plant selections, selection criteria and notes on quality expectations and specifications
4. Specify plants	4.1 Evaluate selection criteria for mature plants against capability and availability of transplanted plants 4.2 Assess final selections against the specified soil, site location and client brief, and confirm with client 4.3 Assess selected plants for quality and quantities outlined in the specifications 4.4 Check materials, soils and growing media for specified quality 4.5 Record quality checks on delivered plants and product
5. Correlate and present a report	5.1 Gather and correlate records for client report 5.2 Document and present client report to the client

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding plant species, cultivars growing requirements, environmental conditions and functional characteristics
Writing	<ul style="list-style-type: none"> Document client brief
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client, using clear language to discuss and clarify client needs, objectives and expectations, finalise brief, confirm plant selections and present client report
Numeracy	<ul style="list-style-type: none"> Calculate quantity of plants, products, soil and growing media for input into plant selection and specifications

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM511 Specify plants for landscapes	AHCPCM503 Specify plants for landscapes	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM511 Specify plants for landscapes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has specified plants for landscapes on at least one occasion, and has:

- developed a client brief on client needs, objectives and expectations, the purpose of the landscape and plant selection criteria
- conducted site inspections and site assessments
- compiled a database of plant specimens and characteristics
- evaluated and determined plant selections
- identified and selected from a range of plants appropriate to the site
- researched plant reference sources
- documented plant selection and specifications
- used comparative techniques
- assessed quality and quantity of plants and materials meet specifications
- selected and checked soils and growing media
- recorded plant and product quality checks
- documented and presented client report.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of specifying plants for landscapes, including:
 - basic physiology and life cycle of pests and diseases
 - botany, plant morphology, physiology, taxonomy and nomenclature
 - methods of data capture
 - plant identification techniques
 - soil characteristics, particularly in relation to the local region

- soil and growing media selection techniques
- symptoms of plant pests and diseases.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - industry publications and internet sources of information on plant species, cultivars growing requirements, environmental conditions and functional characteristics
- relationships:
 - client
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM512 Design specialised landscape

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop a design brief, consider factors that may influence plant performance, and develop design specifications for specialised landscape design.

The unit applies to individuals who apply specialised skills and knowledge to design specialised landscapes, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a design brief	1.1 Consult with client to establish the purpose and requirements of the design

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Inspect site and note the physical elements and features of the site</p> <p>1.3 Conduct a functional analysis of the site</p> <p>1.4 Develop design criteria and design brief, and consult with client to finalise agreement of the brief</p>
2. Design with plants as a main focus of the design project	<p>2.1 Categorise plant families and genera, species and cultivars suitable for the design</p> <p>2.2 Identify a wide range of plants for different design criteria and requirements, which include the use of aesthetic, ornamental, productive and economic plant groups</p> <p>2.3 Determine and select plants according to design criteria</p> <p>2.4 Use botanical nomenclature when documenting plants</p>
3. Consider a range of factors that may influence plant performance	<p>3.1 Determine the implications of climate and environment on plant selection and design</p> <p>3.2 Select plants that are adaptive to microclimates and mesoclimates in domestic and small to moderate-scale public spaces</p> <p>3.3 Report on the cultural techniques required to establish and maintain plants in specialised environments</p> <p>3.4 Identify soil types and condition, and make recommendations for appropriate soil management techniques</p> <p>3.5 Identify organic and inorganic fertilisers, and make recommendations</p> <p>3.6 Identify common plant disorders and make recommendations</p>
4. Develop design specifications	<p>4.1 Incorporate instructions on the use and production of compost</p> <p>4.2 Define propagation and planting techniques to be used</p> <p>4.3 Specify situations where staking and guying would be required</p> <p>4.4 Define pruning and shaping techniques to be used</p> <p>4.5 Outline the biological, organic and inorganic plant and plant pest management techniques to be used</p> <p>4.6 Seek expert advice on irrigation requirements for the design</p> <p>4.7 Develop a weed management plan</p> <p>4.8 Document and present the design plan to the client</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding plant species, cultivars, growing requirements, environmental conditions and functional characteristics
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client, using clear language to discuss and establish design purpose, finalise design brief, and present design plan
Numeracy	<ul style="list-style-type: none"> Calculate quantity of plants, products, soil and growing media according to design criteria

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHPCCM512 Design specialised landscape	AHPCCM504 Design specialised landscape	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPM512 Design specialised landscape

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has designed a specialised landscape on at least one occasion, and has:

- developed a design brief in consultation with client to establish design purpose and requirements
- identified plant species and cultivars using botanical nomenclature
- identified and selected plants appropriate to the design criteria
- used botanical nomenclature when selecting plants
- identified the implications of climate and environment on plant selection and design
- identified and designed with plants appropriate for use in controlled environments where required
- identified and recommended soils and plant nutrition requirements
- identified biological, organic and inorganic plant and plant pest management techniques to be used
- identified weeds and recommended appropriate weed management
- provided garden design solutions
- compiled the recommendations and documented and presented a design plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of specialised landscape design, including:
 - aesthetic, ornamental, productive and economic plant groups
 - allied horticultural, environmental and conservation industries and movements
 - botanical geography, including plant families, geographic distribution and links
 - botany, including plant structures and physiology

- ethno-botany, including sustainability and the stories of plants
- horticultural media, information and knowledge-based resources
- how to determine suitability of plants for different environments, such as green buildings, rooftops, conservatories, glass houses and atriums
- irrigation and current progress in new irrigation techniques
- plant families and detailed knowledge of species and cultivars used in garden design, horticulture industry and other ornamental, productive and economic plant industries
- plant taxonomy and nomenclature
- principles and processes of plant culture
- the use and development of plants through history
- turf culture
- types, properties and characteristics of a wide range of soils and growing media.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - industry publications and internet sources of information on plant species, cultivars growing requirements, environmental conditions and functional characteristics
- relationships:
 - client
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM513 Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to conduct an environment and food safety risk assessment of plant nutrition and soil fertility programs, including maintaining currency, evaluating risks, developing a plant nutrient and soil fertility program, and identifying and communicating best practice.

The unit applies to individuals who apply specialised skills and knowledge to diagnose plant health problems, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Maintain currency of environment and food safety information relating to fertilisers and soil ameliorants	<p>1.1 Research and document community, government and agricultural industry concerns and legislative requirements relevant to fertiliser and soil ameliorant environmental stewardship, and define initiatives to address them</p> <p>1.2 Communicate with local organisations to identify and document local information relevant to nutrient management, particularly in a catchment or regional context</p> <p>1.3 Research and document national and local information and standards relevant to food safety associated with fertiliser and soil ameliorant use</p> <p>1.4 Research and document information and standards relevant to transporting, handling, storing and applying fertilisers and soil ameliorants</p>
2. Evaluate environmental risks and develop a plant nutrition and soil fertility management program	<p>2.1 Identify and document environmentally significant features of fertiliser, soil ameliorants, soil, landscape and climate that are likely to influence environmental risks associated with plant nutrition and soil fertility programs</p> <p>2.2 Identify and document agronomic and operational activities associated with fertiliser and soil ameliorant programs and associated environmental risk categories</p> <p>2.3 Evaluate and prioritise environmental risks and impacts associated with agronomic and operational activities</p> <p>2.4 Identify and evaluate management options to address environmental risks</p> <p>2.5 Develop and document a plant nutrition and soil fertility management program, and present to the land owner or manager</p> <p>2.6 Advise client of management options to address environmental risks, and gain agreement</p> <p>2.7 Use nutrient management tools in conjunction with land owner or manager to monitor effectiveness of management decisions over time</p> <p>2.8 Identify opportunities to improve efficiency and effectiveness of plant nutrition and soil fertility program, including use of fertilisers and soil ameliorants, and modify operational and agronomic recommendations accordingly</p>
3. Identify and communicate best practice in transport,	3.1 Identify key environmental product stewardship issues in transport, handling and storage of fertilisers and soil ameliorants relevant to the plant nutrition and soil fertility program, codes of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
handling and storage for environmental stewardship to land owner or manager	practice and legislation 3.2 Develop and document a key environmental stewardship issues report, and present to the land owner or manager

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding environment and food safety relating to fertilisers and soil ameliorants requirements, and developing a plant nutrition and soil fertility management program
Oral communication	<ul style="list-style-type: none"> Initiate discussions with local organisations, client, land owner or management using clear language to discuss information relating to nutrient management options to address environmental risks, gain agreement and present reports
Numeracy	<ul style="list-style-type: none"> Access and analyse published data for input to plant nutrition and soil fertility management program, and key environmental stewardship issues report Calculate areas, ratios, proportions and application rates Estimate treatment and product quantities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM513 Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs	AHCPCM505 Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM513 Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted environment and food safety risk assessments of plant nutrition and soil fertility programs on at least one occasion, and has:

- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- researched, identified and documented community, government and agricultural industry information, concerns and requirements in relation to fertiliser and soil ameliorant use and environmental stewardship
- researched, identified and documented information and standards relating to transporting, handling, storing and applying fertilisers and soil ameliorants
- identified and evaluated probability and severity of identified environmental risks associated with plant nutrition and soil fertility programs
- liaised with managers and landowners, and local and national organisations
- developed a plant nutrition and soil fertility management program, and key environmental stewardship issues report
- monitored effectiveness of plant nutrition and soil fertility management decisions over time
- identified opportunities to improve efficiency and effectiveness of plant nutrition and soil fertility program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to conducting environment and food safety risk assessment of plant nutrition and soil fertility programs

- principles and practices of food safety risk assessment, including:
 - environmental implications of soil amendment and fertiliser use, which may include nutrient mining, run-off, nutrient loading of soil and water, toxicity, noise and dust
 - food safety issues relating to the use of fertilisers and soil ameliorants
 - law of the minimum, and importance of nutrient interactions
 - methods and pathways of nutrient uptake by plants, and loss from soil
 - nutrient cycling and its practical relevance to specific plants and soils encountered in local area, including role of soil biology
 - nutrients required by plants grown within workplace, and effects of nutrient deficiency and toxicity on individual plant species and varieties
 - relationship between soil characteristics and the availability of nutrients, including macro and micro elements, to plants
 - single nutrient and complete fertiliser products encountered in local area, including physical attributes, nutrient analysis, solubility, salt index, application rates and costs, and appropriate application techniques and equipment
 - soil amendments commonly used to treat local soil problems
 - soil and water sampling techniques to adapt activities and instructions to a range of environmental contexts
 - techniques for interpreting laboratory results and making fertiliser and amendment recommendations
 - techniques to assess effects of fertiliser and amendment recommendations on soil, plants and water.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - published local information relevant to nutrient management
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to conducting environment and food safety risk assessment of plant nutrition and soil fertility programs
 - legislation and standards relevant to fertiliser and soil ameliorant transportation, handling, storage, application and environmental stewardship
 - national and local information and standards relevant to food safety associated with fertiliser and soil ameliorant
- relationships:
 - land owner or manager, client and local organisations
- timeframes:

- according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM601 Develop and implement a plant health management strategy

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to gather information and advice on plant health and develop and implement a management strategy on plant health.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Plants culture and management (PCM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop a plant health and management	1.1 Identify plant health issues from published data, historical records and industry consultation

Element	Performance criteria
program	1.2 Define management issues relative to desired quality, quantity and productivity requirements of marketing and production plans 1.3 Develop a program which defines enterprise guidelines and specific responsibilities of operational elements to achieve required outcomes 1.4 Establish systems to monitor business goals 1.5 Seek professional assistance where appropriate 1.6 Assess information to determine potential key information for input to planning decisions 1.7 Consider and document the environmental implications of chemical use, alternative methods and non-chemical preventative methods 1.8 Assess information to determine potential key information for input to planning decisions
2. Determine plant health strategies	2.1 Analyse gathered information for suitable approaches to plant health management 2.2 Consider strategies in the light of their impacts 2.3 Determine strategies for plant health management to integrate the most suitable methods with the proposed plants and the existing soil types 2.4 Establish environmental controls and include in the plan 2.5 Identify workplace health and safety hazards, assess risks and incorporate suitable controls into the plan
3. Provide input to other planning processes	3.1 Use details regarding plant health management strategies as input to other organisational planning processes 3.2 Collect and use information regarding other planning processes to inform the plant health management planning process 3.3 Communicate information about the range of planning processes verbally or in writing according to requirements and circumstances and the people involved
4. Determine scheduling and key responsibilities	4.1 Determine scheduling for plant health management, taking into consideration the range of seasonal, geographic, and resourcing factors 4.2 Determine key responsibilities for specific implementation processes 4.3 Determine record keeping requirements and put procedures in place to ensure compliance with the range of applicable regulations 4.4 Document the strategic plan, including scheduling and key responsibilities 4.5 Confirm the plan includes the type, format, frequency and detail

Element	Performance criteria
	of any reporting required by both managers and operators
5. Monitor and adjust plant health management strategies	5.1 Evaluate the effectiveness of the plant health management strategies at key points and make adjustments as necessary 5.2 Identify and monitor environmental impacts and workplace health and safety hazards relating to plant health management and assess and manage risks throughout the implementation process 5.3 Make modifications to the strategy as and when necessary for environmental, workplace health and safety, resourcing, or effectiveness reasons
6. Evaluate plant health management strategies and record result	6.1 Analyse data, observations and documentation from the implementation of the plant health management program against the plan, based on organisation guidelines 6.2 Prepare recommendations for future strategies based on the analysis of the data 6.3 Prepare a report that documents the implementation of the strategies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPCM601A Develop and implement a plant health management strategy.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM601 Develop and implement a plant health management strategy

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine plant health strategies
- determine scheduling and key responsibilities
- develop plant health management strategies
- evaluate plant health management strategies and record results
- provide input to other planning processes
- monitor and adjust plant health management strategies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of plant health management
 - environmental controls and codes of practice applicable to the business and to plant health management operations
 - environmental controls and codes of practice applicable to the enterprise
 - Integrated Pest Management (IPM)
 - management of weed, pest and disease infestations
 - management practices and processes to minimise plant health management control operations
 - planning water budgets and irrigation strategies
 - plant growth and development and growth regulators
 - plant growth processes such as photosynthesis, respiration, nutrient uptake, solute transport and metabolism, water balance and osmotic pressure
 - strategic aspects of managing plant quality, performance and nutrition

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM602 Develop and implement a plant health management strategy

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to gather information and advice on plant health, and develop, implement and evaluate a plant health management strategy.

The unit applies to individuals who apply advanced skills and knowledge to develop and implement a plant health management strategy, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse information and exercise judgement to complete a range of advanced skilled activities. They work in contexts that are subject to change, and adapt a range of fundamental principles accordingly.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a plant health management program	1.1 Identify plant health issues from published data, historical records and industry consultation 1.2 Define management issues relative to desired quality, quantity and productivity requirements according to workplace marketing and production plans 1.3 Develop and document a program that defines workplace guidelines and specific responsibilities of operational elements to achieve required outcomes 1.4 Establish systems to monitor business goals 1.5 Seek professional assistance where appropriate 1.6 Consider and document the environmental implications of chemical use, alternative methods and non-chemical preventative methods 1.7 Assess and determine potential key information for input to planning decisions
2. Determine plant health strategy	2.1 Analyse gathered information and determine plant health management approaches 2.2 Consider plant health management approaches and their impacts 2.3 Determine strategies for plant health management to integrate the most suitable methods with the proposed plants and existing soil types 2.4 Establish environmental controls according to environmental and biosecurity legislation and regulations, and include in the plan 2.5 Identify workplace health and safety hazards, assess risks and incorporate suitable controls into the plan
3. Provide input to other planning processes	3.1 Provide plant health management strategy information for consideration and input to other workplace planning processes 3.2 Collect and use information from other workplace planning processes to inform the plant health management planning process 3.3 Communicate information about the range of planning processes according to workplace requirements
4. Determine scheduling and key responsibilities	4.1 Determine scheduling for plant health management, taking into consideration the range of seasonal, geographic and resourcing factors 4.2 Determine key responsibilities for specific implementation processes

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.3 Determine record-keeping requirements and establish procedures to ensure compliance with relevant regulations</p> <p>4.4 Document strategic plant health management plan, including scheduling and key responsibilities</p> <p>4.5 Confirm the plan includes the type, format, frequency and detail of any reporting required by both managers and operators</p>
5. Monitor and adjust plant health management strategy	<p>5.1 Evaluate the effectiveness of the plant health management strategy at key points, and make adjustments as necessary</p> <p>5.2 Identify and monitor environmental impacts and workplace health and safety hazards relating to plant health management, and assess and manage risks throughout the implementation process</p> <p>5.3 Make modifications to the plan according to environmental, workplace health and safety, resourcing, or effectiveness reasons</p>
6. Evaluate plant health management strategy and record results	<p>6.1 Analyse data, observations and documentation from the implementation of the plant health management strategy against the plan</p> <p>6.2 Prepare recommendations for future strategies based on the analysis of the data</p> <p>6.3 Prepare a report that documents the implementation of the plant health management strategy</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding plant health management requirements
Oral communication	<ul style="list-style-type: none"> Initiate discussions with professionals, managers or operators, using clear language to seek assistance where required, and communicate planning processes
Numeracy	<ul style="list-style-type: none"> Analyse published data and historical records for input into planning processes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM602 Develop and implement a plant health management strategy	AHCPCM601 Develop and implement a plant health management strategy	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM602 Develop and implement a plant health management strategy

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed and implemented a plant health management strategy on at least one occasion, and has:

- developed plant health management program
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- provided input to other planning processes
- determined scheduling and key responsibilities
- documented record-keeping procedures and strategic plant health management plan
- evaluated plant health management strategy and recorded results
- monitored and adjusted plant health management strategy
- prepared recommendations for future strategies and implementation report.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of plant health management, including:
 - environmental controls and codes of practice applicable to the business and to plant health management operations
 - environmental controls and codes of practice applicable to the enterprise
 - integrated pest management
 - management of weed, pest and disease infestations
 - management practices and processes to minimise plant health management control operations
 - planning water budgets and irrigation strategies
 - plant growth and development and growth regulators

- plant growth processes such as photosynthesis, respiration, nutrient uptake, solute transport and metabolism, water balance and osmotic pressure
- strategic aspects of managing plant quality, performance and nutrition
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to developing and implementing a plant health management strategy.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - published data and historical records relevant to developing and implementing a plant health management strategy
 - workplace marketing and production plans
 - workplace planning processes relevant to developing and implementing a plant health management strategy
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to developing and implementing a plant health management strategy
- relationships:
 - professionals, managers or operators
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER212 Use and maintain garden hand tools and equipment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to use and maintain garden hand tools and equipment. It requires knowledge of the correct purpose and function of garden hand tools and equipment and their maintenance needs.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify and describe	1.1 Correctly identify garden hand tools and equipment

Element	Performance criteria
uses of tools	1.2 Describe the correct purpose of each tool and how to use it correctly 1.3 Describe the maintenance and storage requirements for the tools
2. Use tools for their designed purpose	2.1 Ensure safe work practices are complied with 2.2 Undertake tasks using garden hand tools and equipment correctly 2.3 Return tools used to the storage area and stow correctly
3. Clean, maintain and store garden hand tools and equipment	3.1 Identify tools that need repairs or maintenance 3.2 Undertake regular tool maintenance tasks 3.3 Store garden hand tools and equipment properly to ensure long service

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER212 Use and maintain garden hand tools and equipment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- describe uses of tools and equipment
- use a range of garden hand tools and equipment properly
- clean, maintain and store garden hand tools and equipment

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to garden tool use and maintenance
- principles of sustainable horticultural practices
- ergonomics
- garden hand tools and equipment used in permaculture systems, such as:
 - spades and shovels
 - forks
 - trowels
 - rakes
 - scythes and sickles
 - hand mowers
 - secateurs & loppers
 - picks & mattocks
 - pruning saws and bow saws
 - club hammer and sledge hammer
- maintaining tools and equipment in good condition, such as:

- replacing dulled blades
- replacing broken handles
- lubricating moving parts
- adjusting mechanisms
- sharpening and honing blades
- storage techniques for hand tools and equipment
- carrying and transporting hand tools and equipment safely

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD101 Support gardening work

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide support for gardening work.

This unit applies to individuals who work alongside a supervisor in most situations and exercise limited autonomy within established and well known parameters. They identify and seek help with simple problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare materials, tools and equipment for gardening work	1.1 Identify required materials, tools and equipment according to lists provided and supervisor's instructions 1.2 Conduct checks on all materials, tools and equipment and tell supervisor if there are insufficient or faulty items 1.3 Use correct manual handling techniques when loading and

Element	Performance criteria
	unloading materials and minimise damage to the load and the vehicle 1.4 Use suitable personal protective equipment (PPE) selected as directed by supervisor and ensure correct fit 1.5 Tell supervisor if any risks are identified
2. Undertake gardening work as directed	2.1 Follow instructions and directions provided by supervisor and ask for clarification when necessary 2.2 Communicate with other staff and clients in a professional manner 2.3 Handle and dispose of materials 2.4 Tell supervisor of there are problems or difficulties in completing work to required standards or timelines 2.5 Undertake gardening work in a safe and environmentally appropriate manner
3. Handle materials and equipment	3.1 Store waste material and debris produced during gardening work in a designated area 3.2 Handle and transport materials, equipment and machinery 3.3 Maintain a clean and safe work site while undertaking landscaping activities
4. Clean up on completion of gardening work	4.1 Return materials to store or disposed of as required 4.2 Clean, maintain and store tools and equipment 4.3 Restore site 4.4 Tell supervisor of work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD101A Support gardening work.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD101 Support gardening work

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- prepare materials, tools and equipment
- handle materials and equipment
- follow safe work practices and safety directions
- undertake gardening work as directed
- clean up on completion of gardening work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of gardening work
 - garden tools and equipment
 - maintenance practices for planted areas
 - planting techniques
 - repair and maintenance of garden features
 - safe work practices

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD102 Support gardening work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to undertake routine gardening work under direct supervision and to support the gardening work of others.

The unit applies to individuals who support gardening work while working alongside a supervisor, exercising limited autonomy within established and well known parameters. They identify and seek help with simple problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for gardening work	1.1 Collect required materials, tools and equipment according to lists provided and supervisor instructions 1.2 Fit and use personal protective equipment (PPE) applicable to job requirements 1.3 Use correct manual handling techniques when loading and unloading materials

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Check and report faulty or unsafe tools, equipment and PPE to supervisor 1.5 Recognise and report workplace hazards to supervisor
2. Undertake gardening work as directed	2.1 Follow instructions and directions provided by supervisor, and seek clarification when necessary 2.2 Interact with staff and customers in a professional manner 2.3 Handle and dispose of materials according to workplace practices and procedures 2.4 Maintain a clean and safe work site while undertaking gardening activities 2.5 Undertake gardening work in a safe and environmentally appropriate manner 2.6 Report problems or difficulties in completing work to required standards or timelines to supervisor
3. Handle materials and equipment	3.1 Handle and transport materials, tools and equipment according to supervisor instructions and workplace procedures 3.2 Store, recycle or dispose of waste material and debris according to supervisor instructions
4. Clean up on completion of gardening work	4.1 Restore site according to supervisor instructions 4.2 Clean and store materials, tools and equipment according to supervisor instructions 4.3 Report work outcomes and faults, wear or damage of tools to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, wear or damage to tools

Skill	Description
	<ul style="list-style-type: none"> Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD102 Support gardening work	AHCPGD101 Support gardening work	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD102 Support gardening work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supported gardening work on at least two occasions, and has:

- prepared tools and equipment
- applied safe work practices in gardening work, including fitted and used personal protective equipment (PPE)
- handled materials and equipment
- undertaken gardening work as directed
- cleaned up on completion of gardening work
- reported work outcomes and faulty, worn or damage of tools.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of gardening work, including:
 - garden tools and equipment
 - maintenance practices for planted areas
 - planting techniques
- safe work practices used in gardening work.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - work instructions and workplace procedures applicable to supporting gardening work
 - gardening materials, tools and equipment
 - PPE applicable to supporting gardening work
- relationships:
 - supervisor, staff and customers
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD201 Plant trees and shrubs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manually plant trees and shrubs and other containerised and bare-rooted plants.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for planting operations	1.1 Identify work health and safety hazards and tell the supervisor 1.2 Select and use personal protective equipment (PPE) and ensure correct fit 1.3 Use and maintain tools and equipment for planting 1.4 Mark site out as directed

Element	Performance criteria
	1.5 Control competing plants 1.6 Modify soil as directed
2. Prepare trees and shrubs for planting	2.1 Excavate planting holes 2.2 Water trees and shrubs prior to planting 2.3 Confirm root ball is damp 2.4 Remove trees and shrubs from containers
3. Inspect plants and report problems	3.1 Inspect plant and root ball 3.2 Report dry, water repellent and loose root balls 3.3 Report the presence of symptoms of pests or disease 3.4 Apply root treatments as directed
4. Install trees, shrubs and/or other plants	4.1 Place plants in prepared hole 4.2 Back-fill planting hole and consolidate soil 4.3 Water plants to eliminate air pockets 4.4 Apply mulch as directed
5. Complete work	5.1 Dispose of or recycle soil and waste material from the site to minimise damage to the environment 5.2 Clean and store all tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD201A Plant trees and shrubs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD201 Plant trees and shrubs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- prepare for planting operations
- apply root treatments
- excavate planting holes
- inspect root ball condition
- install plants
- use tools and equipment for planting

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for planting trees and shrubs
 - basic plant structure and the physical and nutritional requirements of plants
 - botany and plant physiology as it applies to planting trees and shrubs
 - factors affecting the timing and method of tree or shrub planting
 - initial establishment needs of young plants
 - mulches and fertilisers
 - planting techniques relating to specific species
 - soil amelioration techniques
 - the effect of adverse outdoor climatic conditions
 - the impact of planting activities on the surrounding environment

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PGD202 Prepare and maintain plant displays

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare and maintain a plant display.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare the display site	1.1 Prepare the display site as instructed 1.2 Select and use materials, tools, equipment and machinery 1.3 Identify hazards and report to supervisor 1.4 Select and use suitable personal protective equipment (PPE)

Element	Performance criteria
2. Install plants	2.1 Place plants in the pattern specified by the plan 2.2 Choose accessories and materials specified in the plan
3. Maintain plants	3.1 Monitor the health of the plants to ensure they retain optimum appearance 3.2 Fertilise and water plants to maintain optimum health and appearance 3.3 Replace plants when no longer at optimum health and appearance 3.4 Remove rubbish, litter and decaying material from plants, pots and surrounds to maintain optimum appearance of display

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD202A Prepare and maintain plant displays.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD202 Prepare and maintain plant displays

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- use hand tools and machinery for preparation of plant displays
- interpret planting plans
- calculate quantities of plants and materials
- complete plant display in a timely manner
- use fertilisers and chemicals for maintenance

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of plant display maintenance
 - common problems occurring with display plants
 - maintenance techniques for annuals and/or indoor displays
 - planting techniques for annual bed displays
 - remedial action required for display plants displaying health problems

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD203 Prune shrubs and small trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prune shrubs and small trees that are less than three meters in height while standing on the ground.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify pruning requirements	1.1 Identify work health and safety hazards and report to the supervisor 1.2 Select and use personal protective equipment (PPE) and ensure correct fit 1.3 Select appropriate pruning tools and equipment for the location,

Element	Performance criteria
	access and size of material to be pruned 1.4 Identify plants that require pruning and confirm with supervisor 1.5 Confirm with the supervisor pruning method to be used
2. Undertake pruning of shrubs and small trees	2.1 Carry out pre-operational and safety checks on pruning tools and equipment 2.2 Operate machinery, equipment and tools as required 2.3 Carry out pruning as directed 2.4 Use correct manual handling techniques when lifting or moving heavy loads 2.5 Record and report work outcomes to the supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD203A Prune shrubs and small trees.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD203 Prune shrubs and small trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- identify pruning requirements
- identify and report site and tree hazards
- recognise plants, shrubs and trees
- prune shrubs and small trees
- use appropriate tools, equipment and safety equipment
- minimise environmental disturbance

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of pruning
- basic botany and physiology as they apply to pruning
- correct and safe use and care of tools and equipment
- effects of pruning on plant growth and habit
- plant health principles
- plant names and growth habits
- use of hygienic practices
- AS4373-2007 Pruning of amenity trees

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD204 Transplant small trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to transplant small trees and shrubs without the use of lifting machinery or equipment.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for tree or shrub removal	1.1 Confirm transplanting instructions confirmed with the supervisor 1.2 Identify work health and safety hazards and report to the supervisor 1.3 Locate all underground services as outlined by supply authorities 1.4 Prepare and use tools and equipment appropriate to the task being

Element	Performance criteria
	undertaken 1.5 Select and use suitable personal protective equipment (PPE)
2. Prepare tree or shrub and undertake earthworks for removal	2.1 Prepare crown as required by the species and time of removal 2.2 Clear and water site prior to transplanting 2.3 Confirm root ball width and depth with the supervisor to ensure the root system can colonise new ground, depending on the needs of the species and size of the specimen
3. Remove tree or shrub from original site	3.1 Excavate the soil around the root zone 3.2 Prune tree roots where required to meet the appropriate Australian Standard 3.3 Stabilise tree as the root system is undercut and apply anti-transpirants as a root soak or foliar spray to ensure viability of the plant is maintained 3.4 Bind root ball with appropriate material to ensure adequate soil is retained and kept moist prior to transportation and installation 3.5 Lift tree and secure for potential storage or transportation using safe lifting techniques 3.6 Prepare and handle tree or shrub to minimise damage during handling and transportation
4. Replant tree or shrub in new environment	4.1 Provide appropriate drainage to ensure root system survival is maintained according to the needs of the species and conditions of the planting site 4.2 Modify soil according to the cultural requirements of the species 4.3 Plant tree or shrub in prepared hole 4.4 Install plant support devices as instructed
5. Complete transplant operation	5.1 Maintain transplanted plant with regular aftercare activities appropriate to the requirements of the species 5.2 Clean, maintain and store tools and equipment 5.3 Collect waste and dispose of or recycle to minimise damage to the external environment 5.4 Maintain records of transplant

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD204A Transplant small trees.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD204 Transplant small trees

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- identify and report site and tree hazards
- prepare for tree or shrub removal
- prepare crown, root ball and earthworks
- prune roots where appropriate
- use tools and equipment in a safe and effective manner
- remove tree or shrub from original site
- transplant tree or shrub in selected site
- maintain transplanted specimen
- install support devices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of transplanting trees
 - causes of damage or drying-out of trees and shrubs, and prevention methods
 - factors affecting the timing and method of lifting trees and shrubs
 - techniques of securing and anchoring transplanted trees and shrubs
 - the effect of adverse outdoor climatic conditions, such as rain, hail, or very high ultraviolet radiation, which may prevent or impede transplanting operations
 - transference of soil or root-borne diseases
 - transplanting practices associated with different soil types and relationships to plant care
 - trees and shrubs that are most suited to transplanting

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PGD206 Conduct visual inspection of park facilities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out routine visual inspections of park and recreational facilities to identify visible hazards and existing and potential risks.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for visual inspection	1.1 Interpret site plans and inspection checklists and clarify requirements with the supervisor 1.2 Clarify the specific terminology used in checklists 1.3 Identify park site to be inspected and locate on the site plan

Element	Performance criteria
	1.4 Identify park facilities, equipment and services on site from checklist descriptions and site plan
2. Undertake visual inspection	2.1 Inspect park facilities, equipment and services and compare to enterprise presentation standards and workplace health and safety requirements 2.2 Identify work health and safety hazards and adverse environmental impacts and record on the appropriate form 2.3 Report situations requiring urgent action to supervisor
3. Submit report	3.1 Confirm that inspection activity reports and checklists are concise and accurate and comply with enterprise standards 3.2 Forward checklist and report promptly to supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD206A Conduct visual inspection of park facilities.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD206 Conduct visual inspection of park facilities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- prepare for visual inspection of park facility
- carry out a visual inspection of park facility
- determine the extent of problems
- evaluate serious issues that may be present
- identify environmental risks and impacts from site facilities
- rate the condition of facilities
- rate the hazards and associated environmental implications of malfunctioning facilities, equipment and services
- report urgent situations
- complete and submit inspection activity checklist and report

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of park facility visual inspection
 - cleaning, servicing and hygiene requirements of public conveniences
 - hazards investigation and risk assessment
 - effective maintenance and repair work particularly in relation to end use of the facilities and equipment, and the safety of users
 - recognition of the range of park facilities, equipment and services relevant to the enterprise
 - reporting requirements, procedures and materials for use in park inspection
 - terminology used to describe different components of the range of facilities, equipment and services relevant to the enterprise

- the effect of adverse outdoor climatic conditions, such as rain, hail, wind, or very high ultraviolet radiation, on park facilities inspection activities
- hazards that are likely to be encountered by visitors using the park facilities and equipment
- the practical application of site plans, checklist descriptions and presentation standards to locate and effectively assess facilities and equipment against the required parameters
- the relevant Australian Standards

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD207 Plant trees and shrubs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to manually plant trees and shrubs and other containerised and bare-rooted plants, including preparing, inspecting and planting trees and shrubs and completing planting work.

The unit applies to individuals who plant trees and shrubs under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for planting operations	1.1 Confirm tree and shrub planting activities with supervisor 1.2 Identify workplace health and safety hazards, assess risks and report to supervisor 1.3 Prepare and use tools and equipment according to supervisor instructions 1.4 Select, fit and use personal protective equipment (PPE) applicable

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	to the task 1.5 Mark out site as directed 1.6 Control competing plants as required
2. Prepare trees and shrubs for planting	2.1 Water trees and shrubs prior to planting where appropriate 2.2 Confirm root ball is damp 2.3 Remove trees and shrubs from containers
3. Inspect plants and report problems	3.1 Inspect plant and root ball condition 3.2 Report dry, water repellent and loose root balls 3.3 Report the presence of symptoms of pests or disease 3.4 Apply root treatments as directed
4. Install trees, shrubs and/or other plants	4.1 Excavate planting holes 4.2 Apply soil treatments and amendments according to supervisor instructions 4.3 Place plants in prepared hole 4.4 Back-fill planting hole and consolidate soil 4.5 Water plants to eliminate air pockets and prevent dehydration 4.6 Install plant protection, stakes and ties as directed 4.7 Apply mulch as directed
5. Complete work	5.1 Dispose of or recycle soil and waste material from site 5.2 Clean, maintain and store materials, tools and equipment 5.3 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Oral communication	<ul style="list-style-type: none"> • Use clear language to report malfunctions, faults, wear or damage to tools • Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD207 Plant trees and shrubs	AHCPGD201 Plant trees and shrubs	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD207 Plant trees and shrubs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planted trees and shrubs on at least three occasions including at least two of the following:

- bare rooted, tube stock, potted or bagged plants

and has:

- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- prepared, used and maintained tree and shrub planting tools, equipment, material and plants
- inspected plant and root ball condition
- excavated planting holes
- applied soil treatments and amendments
- installed plant protection, stakes and ties
- applied mulch
- cleaned up the site and disposed of or recycled waste
- reported tree and shrub planting operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for planting trees and shrubs, including:
 - basic plant structure, physical and nutritional requirements of plants
 - basic botany and plant physiology applicable to planting trees and shrubs
 - factors affecting the timing and method of tree or shrub planting
 - initial establishment needs of young plants

- common plant and root ball problems
- types and use of plant protection
- mulches and fertilisers
- planting techniques relating to specific species
- soil and root ball amelioration techniques
- effects of environmental conditions on plant growth
- methods of disposing of waste to minimise damage to the environment
- the impact of planting activities on the surrounding environment
- workplace requirements applicable to health and safety in the workplace for planting trees and shrubs, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - materials, tools and equipment applicable to planting trees and shrubs
 - trees and shrubs
 - tree protection material
 - PPE applicable planting trees and shrubs
- specifications:
 - workplace requirements applicable to health and safety in the workplace and planting trees and shrubs
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD208 Prepare and maintain plant displays

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare and maintain a plant display, including preparing the site, installing and maintaining plants, and completing work.

The unit applies to individuals who prepare and maintain plant displays under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare the display site	1.1 Confirm plant display activities with supervisor 1.2 Identify workplace health and safety hazards, assess risks and report to supervisor 1.3 Prepare and use materials, tools, equipment and machinery according to supervisor instructions 1.4 Select, fit and use personal protective equipment (PPE) applicable

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	to the task 1.5 Prepare the display site according to planting plan and supervisor instructions 1.6 Check site irrigation as instructed
2. Install plants	2.1 Place plants in pattern specified by planting plan 2.2 Plant stock as directed by supervisor 2.3 Select and install accessories and materials according to planting plan 2.4 Water in plants
3. Complete installation work	3.1 Remove and dispose of or recycle rubbish and plant waste material 3.2 Clean, maintain and store materials, tools, equipment and machinery 3.3 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor
4. Maintain plant display	4.1 Monitor plant health 4.2 Apply fertiliser and water to meet needs of plants and ensure optimum appearance 4.3 Maintain plant display appearance, including weeding, dead heading and shaping according to supervisor instructions 4.4 Replace plants when no longer at optimum health and appearance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> • Use clear language to report malfunctions, faults, wear or damage to tools • Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD208 Prepare and maintain plant displays	AHCPGD202 Prepare and maintain plant displays	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD208 Prepare and maintain plant displays

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared one plant display and maintained the plant display on at least three occasions and has:

- prepared plant display site
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- prepared, used and maintained tools, equipment, material and machinery for preparation of plant displays
- interpreted planting plans
- applied fertilisers, control measures and water to maintain plant health and appearance
- cleaned up the site and disposed of or recycled waste
- reported plant display preparation and maintenance operations and unserviceable tools and equipment
- maintained plant display appearance, including mulching, weeding, dead heading and shaping, and replacing plants.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of plant display maintenance, including:
 - common problems occurring with display plants
 - maintenance techniques for annuals and perennial plants
 - planting techniques for annual bed displays
 - remedial action required for display plants displaying health problems
 - methods of disposing of waste to minimise damage to the environment

- workplace requirements applicable to health and safety in the workplace for preparing and maintaining plant displays, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - materials, tools and equipment applicable to preparing and maintaining plant displays
 - plants
 - PPE applicable to preparing and maintaining plant displays
- specifications:
 - workplace requirements applicable to health and safety in the workplace and preparing and maintaining plant displays
 - planting plan
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD209 Prune shrubs and small trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prune shrubs and small trees that are less than three meters in height, including identifying pruning requirements, undertaking pruning and completing pruning work.

The unit applies to individuals who prune shrubs and small trees under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify pruning requirements	1.1 Confirm plants that require pruning and pruning method with supervisor 1.2 Identify workplace health and safety hazards, assess risks and report to supervisor 1.3 Check and confirm proximity of powerlines and obstacles with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Select, prepare and use pruning tools and equipment appropriate for the location, access and size of material to be pruned 1.5 Select, fit and use personal protective equipment (PPE) applicable to the task 1.6 Carry out pre-operational and safety checks on pruning tools and equipment
2. Undertake pruning of shrubs and small trees	2.1 Operate machinery, equipment and tools as directed 2.2 Carry out pruning as directed 2.3 Use correct manual handling techniques when lifting or moving heavy loads
3. Complete work	3.1 Remove and dispose of or recycle rubbish and plant waste material 3.2 Clean, maintain and store tools and equipment 3.3 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, wear or damage to tools Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD209 Prune	AHCPGD203 Prune	Minor changes to	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
shrubs and small trees	shrubs and small trees	application Major changes to performance criteria Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD209 Prune shrubs and small trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has pruned at least three different shrubs and small trees using the following:

- secateurs
- loppers or extension loppers
- shears
- pruning or pole saws

and has:

- identified plant pruning requirements
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- prepared, used and maintained shrubs and small trees pruning tools and equipment
- cleaned up the site and disposed of or recycled waste
- reported tree and shrub planting operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of pruning, including:
 - basic botany and physiology applicable to pruning shrubs and small trees
 - correct and safe use and care of tools and equipment
 - effects of pruning on plant growth and habit
 - plant health principles applicable to pruning shrubs and small trees
 - plant names and growth habits
 - AS4373-2007 Pruning of amenity trees

- workplace requirements applicable to health and safety in the workplace for pruning shrubs and small trees, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - materials, tools and equipment applicable to pruning shrubs and small trees
 - shrubs and small trees
 - PPE applicable to pruning shrubs and small trees
- specifications:
 - workplace requirements applicable to health and safety in the workplace and pruning shrubs and small trees
 - AS4373-2007 Pruning of amenity trees
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD210 Transplant shrubs and small trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to transplant shrubs and small trees without the use of lifting machinery or equipment, including preparing for shrub or small tree removal, removing and replanting shrub or small tree, and completing work.

The unit applies to individuals who transplant shrubs and small trees under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for tree or shrub removal	1.1 Confirm transplanting instructions and activities with supervisor 1.2 Identify workplace health and safety hazards, assess risks and report to supervisor 1.3 Confirm with supervisor location of underground and above ground services 1.4 Prepare and use tools and equipment appropriate to the task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select, fit and use personal protective equipment (PPE) applicable to the task
2. Prepare tree or shrub and undertake earthworks for removal	2.1 Prepare crown as required by species and time of removal 2.2 Clear and water site prior to transplanting 2.3 Confirm root ball width and depth with supervisor to ensure root system can colonise new ground
3. Remove tree or shrub from original site	3.1 Excavate soil around the root zone 3.2 Prune tree roots where required 3.3 Stabilise tree as root system is undercut and apply anti-transpirants as a root soak or foliar spray to ensure viability of plant is maintained 3.4 Bind root ball with appropriate material to ensure adequate soil is retained and kept moist prior to transportation and installation 3.5 Lift tree and secure for potential storage or transportation using safe manual lifting techniques 3.6 Prepare and handle tree or shrub to minimise damage during handling and transportation
4. Replant tree or shrub in new environment	4.1 Provide appropriate drainage to ensure root system survival is maintained according to the needs of the species and conditions of planting site 4.2 Modify soil according to the cultural requirements of species 4.3 Plant tree or shrub in prepared hole 4.4 Install plant support devices as directed 4.5 Apply mulch as directed
5. Complete work	5.1 Maintain transplanted plant with regular aftercare activities appropriate to requirements of the species 5.2 Remove and dispose of or recycle rubbish and plant waste material 5.3 Clean, maintain and store tools and equipment 5.4 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, wear or damage to tools Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD210 Transplant shrubs and small trees	AHCPGD204 Transplant small trees	Title change Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD210 Transplant shrubs and small trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has transplanted shrubs and small trees on at least two separate occasions and has:

- prepared for tree or shrub removal
- identified and reported workplace health and safety hazards
- fitted and used personal protective equipment (PPE)
- prepared, used and maintained small tree and shrub transplanting tools and equipment
- prepared crown, root ball and earthworks
- pruned roots where appropriate
- removed tree or shrub from original site
- prepared new environment
- transplanted tree or shrub in selected site
- installed support devices
- maintained transplanted specimen
- cleaned up the site and disposed of or recycled waste
- reported tree and shrub planting operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of transplanting trees, including:
 - causes of damage or drying-out of trees and shrubs, and prevention methods
 - basic physiology applicable to transplanting shrubs and small trees
 - correct and safe use and care of tools and equipment
 - factors affecting the timing and method of lifting trees and shrubs

- techniques of securing and anchoring transplanted trees and shrubs
- transportation, manual handling and lifting techniques applicable to transplanting shrubs and small trees
- AS4373-2007 Pruning of amenity trees
- methods of disposing of waste to minimise damage to the environment
- workplace requirements applicable to health and safety in the workplace for transplanting shrubs and small trees, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - materials, tools and equipment applicable to transplanting shrubs and small trees
 - shrubs and small trees
 - PPE applicable transplanting shrubs and small trees
- specifications:
 - workplace requirements applicable to health and safety in the workplace and transplanting shrubs and small trees
 - AS4373-2007 Pruning of amenity trees
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD212 Conduct visual inspection of park facilities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to conduct routine visual inspections of park and recreational facilities to identify visible hazards and existing and potential risks.

The unit applies to individuals who conduct visual inspections of park facilities under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for visual inspection	1.1 Interpret site plans and inspection checklists and confirm inspection activities with supervisor 1.2 Clarify the specific terminology used in checklists with supervisor 1.3 Identify park elements to be inspected and locate on the site plan 1.4 Confirm park facilities, equipment and services on site

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Undertake visual inspection	2.1 Inspect park facilities, equipment and services and compare to workplace standards of presentation and workplace health and safety requirements 2.2 Identify and record workplace presentation, workplace health and safety hazards and adverse environmental impacts using appropriate form and photographs 2.3 Report situations requiring urgent action to supervisor
3. Submit report	3.1 Complete and check inspection activity reports and checklists are concise, accurate and comply with workplace standards, and include photographs where required 3.2 Forward checklist and report to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual and drawn information from site plans and checklists to identify relevant and key information about park facilities, inspection and workplace standards requirements
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to confirm inspection activities and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD212 Conduct visual inspection of park facilities	AHCPGD206 Conduct visual inspection of park facilities	Minor changes to application Minor changes to performance criteria	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD212 Conduct visual inspection of park facilities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted a visual inspection of park facilities on at least two occasions and has:

- prepared for and conducted visual inspection of park facility
- applied workplace health and safety requirements
- applied workplace standards of presentation
- compared the condition of facilities to the required workplace standard
- determined the extent of problems
- recorded and reported hazards and associated environmental implications of malfunctioning facilities, equipment and services
- reported serious issues that may be present
- completed and submitted inspection activity checklist, report and photographs.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of park facility visual inspection, including:
 - cleaning, servicing and hygiene requirements of public conveniences
 - hazard identification and reporting
 - the range of park facilities, equipment and services
 - park inspection reporting requirements, procedures and materials
 - terminology used to describe different components of the range of facilities, equipment and services relevant to the workplace
 - issues likely to be encountered by visitors using the park facilities and equipment

- the practical application of site plans, checklist descriptions and workplace standards of presentation to locate and effectively assess facilities and equipment against the required parameters
- workplace standards of presentation and Australian Standards applicable to park facilities
- workplace requirements applicable to health and safety in the workplace for inspection of park facilities.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - site plans, checklists, forms and activity reports applicable to conducting visual inspection of park facilities
 - photographic device
- specifications:
 - workplace requirements applicable to health and safety in the workplace and inspection of park facilities
 - workplace standards of presentation and Australian Standards applicable to park facilities
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD301 Implement a plant establishment program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to establish planting areas in new projects and in programs of extensive replacement and renovation works across a range of situations and environments.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to establish a planting area	1.1 Identify the planting site, planting methods and plant species and cultivars from the site plan 1.2 Select appropriate materials, tools, equipment and machinery 1.3 Carry out pre-operational and safety checks on tools, equipment

Element	Performance criteria
	<p>and machinery</p> <p>1.4 Identify work health and safety hazards, assess risks and implement controls</p> <p>1.5 Select and use suitable safety and personal protective equipment (PPE)</p> <p>1.6 Maintain a clean and safe work area throughout work</p>
2. Prepare the planting area	<p>2.1 Determine the layout of services, check depths against the site plan and report discrepancies to the supervisor and the relevant authority</p> <p>2.2 Carry out earthworks as directed</p> <p>2.3 Select and apply additives as required by site conditions</p> <p>2.4 Water the planting site where required</p> <p>2.5 Mark out the positions of plants on site</p> <p>2.6 Remove debris and pollutants from the site and dispose of in an environmentally safe manner</p>
3. Undertake planting operation	<p>3.1 Inspect all plants for health, vigour and well-established root systems prior to being planted</p> <p>3.2 Return plants with major defects to the supplier or set aside to be returned</p> <p>3.3 Trim or treat plants with minor defects to maintain health and vigour</p> <p>3.4 Space plants appropriately</p> <p>3.5 Use planting methods that comply with the growing requirements of individual plant species and cultivars</p> <p>3.6 Provide newly placed plants with post-planting care</p> <p>3.7 Prune, where necessary, according to the needs of the species and cultivar to ensure plants develop a sound framework for their growth and habit</p>
4. Review the plant establishment works	<p>4.1 Review the plant establishment program as required</p> <p>4.2 Identify, record and report plants incorrectly planted, or situations that will prevent plants from reaching their full potential</p> <p>4.3 Take remedial action to ensure all requirements of the plant establishment program are implemented</p>
5. Complete establishment works	<p>5.1 Complete earthworks and surface finishes</p> <p>5.2 Remove waste material from the planting site and dispose of in an environmentally safe manner</p> <p>5.3 Clean, maintain and store equipment, tools and machinery</p> <p>5.4 Record work outcomes and report to the supervisor</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD301A Implement a plant establishment program.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD301 Implement a plant establishment program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- prepare to establish a planting area
- interpret site plans and plant establishment specifications
- measure quantities, calculate material requirements, area, volume, ratios and application rates
- carry out planting operations
- ensure planting methods comply with plant species and cultivar growing requirements
- prune plants to ensure they develop a sound framework for their growth and habit
- inspect and determine plant quality and health
- record and report work outcomes

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of plant establishment
 - soils and soil amelioration techniques
 - the identification of pests and diseases, plant symptoms of infections, treatment threshold levels, recommended treatments, methods of application and environmental implications
 - the objectives of the plant establishment program, including finished plant forms, site appearance, end use and time constraints
 - the physiology of required plant species and cultivars, culture and planting procedures, including growth rates, main nutrient and water requirements, deficiency symptoms, recommended treatments and associated environmental implications

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD302 Plan and maintain plant displays

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan and establish plant displays either indoors or as seasonal displays of annual and perennial plants in garden beds.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare plans for plant displays	1.1 Inspect the display site for aesthetic, environmental and physical attributes 1.2 Identify occupational Health and Safety (OHS) hazards, assess risks assess and implement controls

Element	Performance criteria
	1.3 Select, use and maintain personal protective equipment (PPE) according to procedures 1.4 Identify on the display plan the location and projected life of the display 1.5 Identify on the display plan the plant types suitable for aesthetic effects, environmental and physical attributes 1.6 Identify on the display plan actions, timelines and work organisation, in consultation with the supervisor or manager. 1.7 Confirm the availability of plants, materials and services for preparing the display 1.8 Select materials, tools, equipment and machinery according to the display plan and enterprise work procedures
2. Select plants	2.1 Select plants that are healthy and vigorous and comply with enterprise specifications for quality. 2.2 Select number and size of plants according to the display plan. 2.3 Select plants that display the ability to survive in the display position for the length of the display
3. Place plants	3.1 Plants are placed in a pattern specified by the plan 3.2 Accessories and materials are chosen as specified in the plan 3.3 Work is undertaken according to OHS requirements
4. Maintain plants	4.1 Monitor the health of the plants to ensure they retain optimum appearance. 4.2 Fertilise and water plants to maintain optimum health and appearance. 4.3 Replace plants when they are no longer at optimum health and appearance. 4.4 Remove rubbish, litter and decaying material plants, pots and surrounds to maintain optimum appearance of display.

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD302A Plan and maintain plant displays.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD302 Plan and maintain plant displays

Modification History

NotReleased	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- prepare design plans and specifications
- determine spatial measurements of display site
- calculate number of plants and materials
- select plants according to the display that comply with quality specifications and the ability to survive for the length of the display.
- place the plants according to the display plan and pattern
- complete plant display in a timely manner
- maintain the plant display

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of plant display maintenance
 - aim and purpose of building plant displays
 - common problems occurring with display plants
 - design principles for plant displays
 - features and characteristics of a range of plants used for display purposes
 - growing requirements of a range of common plants used in plant displays
 - remedial action required for display plants displaying health problems

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD303 Perform specialist amenity pruning

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to perform specialist amenity pruning using specialist pruning techniques.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for specialist amenity pruning	1.1 Inspect plants and determine pruning strategy according to the plants' characteristics or desired outcome 1.2 Identify common diseases, pests and nutrition deficiencies in trees 1.3 Identify work health and safety hazards, assess risks and implement suitable controls

Element	Performance criteria
	1.4 Select and prepare pruning tools and equipment required by the pruning program 1.5 Consult references where required to determine best pruning strategies for special plants
2. Undertake specialist pruning	2.1 Undertake pruning using established and specialist pruning techniques 2.2 Adhere to site environmental procedures 2.3 Assess pruned plants to determine if pruning requirements have been met 2.4 Carry out remedial work where required
3. Complete work	3.1 Dispose of or recycle waste material from the site to minimise damage to the environment 3.2 Clean, maintain and store tools, equipment and machinery 3.3 Clean and clear site 3.4 Record completed pruning and report to supervisor or the client

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD303A Perform specialist amenity pruning.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD303 Perform specialist amenity pruning

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- prepare for pruning
- sharpen and maintain tools required for pruning
- meet pruning program requirements
- carry out pruning using specialist pruning techniques
- store and carry tools safely
- assess pruning quality
- clean and clear pruning site
- record and report completed pruning to supervisor or client

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of specialist pruning
 - anatomy and physiology of plants, shrubs and trees
 - AS4373-2007 Pruning of amenity trees
 - compartmentalisation of decay in trees (CODIT)
 - effect on plant growth and habit after pruning
 - identification of plant species and their pruning requirements
 - local government tree protection and preservation regulations
 - principles and methods of specialist pruning to achieve given objectives
 - specialist tools and equipment

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD304 Implement a landscape maintenance program

Modification History

RELEASE	COMMENTS
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to implement a landscape maintenance program of newly constructed or established landscapes.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Interpret a landscape	1.1 Determine the scope of the maintenance works from the

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
maintenance program	landscape maintenance program 1.2 Determine the frequency of maintenance works and implement 1.3 Establish landscape maintenance standards 1.4 Plan and prepare maintenance tasks 1.5 Identify health and safety hazards, assess risks and implement controls
2. Monitor and maintain landscape areas	2.1 Prepare or use a site inspection checklist 2.2 Identify remedial action, repairs, renovations, treatments and replacements required to restore site to full effectiveness 2.3 Implement maintenance tasks 2.4 Report items which are beyond the scope of the maintenance program to the nominated person 2.5 Record items requiring further action 2.6 Evaluate and record results of maintenance works

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD304 Implement a landscape maintenance program Release 2	AHCPGD304 Implement a landscape maintenance program Release 1	Minor typographical errors corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD304 Implement a landscape maintenance program

Modification History

RELEASE	COMMENTS
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- determine maintenance requirements
- implement maintenance operations
- treat diseased plants
- repair and renovate landscape structures and features
- identify any items requiring further action
- evaluate and record results of maintenance works

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of landscape maintenance
 - actions permitted in the event of variations to maintenance programs or contracts
 - horticultural practices for heritage and cultural areas
 - characteristics of a range of plants
 - common problems occurring in a range of plants
 - landscape maintenance programs or contracts
 - optimal growing conditions for a range of plants
 - principles and applications of an integrated pest management (IPM) program

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PGD305 Conduct operational inspection of park facilities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to inspect park or recreational facilities to identify hazards, existing and potential risks and non-conformities with Australian Standards and workplace health and safety requirements.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for operational inspection	1.1 Determine, from the operational request, the specific facilities and equipment to be inspected and purpose of the inspection 1.2 Select required tools and equipment for testing and inspection 1.3 Carry out pre-operational and safety checks on tools and

Element	Performance criteria
	equipment 1.4 Prepare appropriate checklists and reporting formats to suit the application 1.5 Identify the different types of facilities from checklist descriptions 1.6 Clarify specific terminology used in checklists with the supervisor 1.7 Identify workplace health and safety hazards, assess risks and implement controls 1.8 Select and use appropriate personal protective equipment (PPE)
2. Undertake operational inspection	2.1 Identify and record modes of non-conformity with Australian Standards, work health and safety guidelines and enterprise standards 2.2 Identify and record hazards and indications and signs of hidden faults 2.3 Ensure checklist entries are concise and accurate
3. Finalise the park inspection	3.1 Report to supervisors situations requiring urgent action or closure of facilities 3.2 Note recommendations to rectify non-conformities, as required 3.3 Complete an inspection report and submit to the client or supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD305A Conduct operational inspection of park facilities.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD305 Conduct operational inspection of park facilities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- determine the purpose of the inspection and the facilities and equipment to be inspected and tested
- carry out pre-operational and safety checks on tools and equipment
- clarify specific terminology used in checklists with the supervisor
- identify workplace health and safety hazard, assess risks and implement controls
- interpret design symbols and terminology
- compare actual measurements of inspected components with legal, workplace health and safety and/or enterprise standards and specifications
- determine the degree of urgency to report serious situations
- evaluate the condition of facilities
- use proforma reporting and work procedure documents

Knowledge Evidence

The candidate must demonstrate knowledge of:

- different modes of non-conformity that may be identified in reference to relevant Australian Standards and work health and safety requirements
- identification, assessment and control of hazards
- inspection procedures and techniques, and legal and enterprise reporting requirements for maintenance, repair and replacement recommendations
- principles and practices of park facility operational inspections
- terminology used to describe different components of park or recreational facilities and equipment
- operational expectations and enterprise standards for the presentation and working order of a range of park or recreational facilities and equipment

- the range, use and safety parameters of park or recreational facilities and equipment, their material construction and maintenance requirements
- work health and safety legislative requirements and codes of practice associated with public use of park facilities

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD306 Implement a maintenance program for an aquatic environment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement a maintenance program for an aquatic environment in a park or garden setting.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for maintenance activities	1.1 Identify, interpret and apply requirements for the maintenance of the aquatic environment 1.2 Select and prepare tools, equipment and machinery for use 1.3 Identify work health and safety hazards, assess risks and

Element	Performance criteria
	implement controls 1.4 Select and use appropriate personal protective equipment 1.5 Identify environmental implications associated with maintenance activities and report to supervisor
2. Maintain aquatic organisms	2.1 Identify indigenous, exotic and pest aquatic animals and plants for the specific aquatic environment 2.2 Monitor aquatic plants and animals and record and maintain relevant data and apply to aquatic plant maintenance activities 2.3 Report issues to supervisor, with recommendations for action 2.4 Implement control methods for excess aquatic animals and plants, and identified pest animals and plants 2.5 Process waste plant and animal material with regards to environmental issues
3. Maintain water quality	3.1 Monitor water quality where appropriate for the aquatic environment and the input water resource 3.2 Record monitoring data, maintain and apply to water quality maintenance activities 3.3 Remove debris and process using appropriate equipment 3.4 Report water quality issues to supervisor, with suggestions for remedial action 3.5 Discharge water, clean environment, and recharge water from the designated storage area or other input water resource

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD306A Implement a maintenance program for an aquatic environment.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD306 Implement a maintenance program for an aquatic environment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- interpret site plans and maintenance program requirements, and use proforma reporting, recording, analysis and work procedure documents
- measure materials and aquatic site dimensions
- schedule and implement monitoring activities correctly and record, interpret and apply monitoring data

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of aquatic environment maintenance
 - aquatic systems ecology
 - correct safety procedures working from boats or adjacent to large bodies of water
 - enterprise systems and procedures for the safe operation and maintenance of machinery and equipment in aquatic environments
 - food chain and nutrient cycling in aquatic systems
 - recognition, physiology and biological characteristics of animals and/or plants specific to the aquatic environment
 - regulations and industry standards for water quality requirements in association with specified use
 - relevant legislation regarding water pollution and management
 - safe systems and procedures for handling, transporting and storing chemicals and hazardous substances taking into account toxicity levels and environmental impacts
 - wildlife habitats associated with the aquatic environment

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD307 Implement a plant establishment program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to establish planting areas, including preparing, implementing, reviewing and completing plant establishment work, in new projects and in programs of extensive replacement and renovation works across a range of situations and environments.

The unit applies to individuals who implement a plant establishment program under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to establish a planting area	1.1 Identify the planting site, planting methods and plant species and cultivars from site plan and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Select materials, tools, equipment and machinery required to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	implement a plant establishment program and check for safe operation 1.4 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task 1.5 Maintain a clean and safe work area
2. Prepare the planting area	2.1 Determine the layout of services against site plan and report discrepancies to supervisor and relevant authority 2.2 Check and confirm site layout and plant stock against site plan and report discrepancies 2.3 Prepare planting site according to site plan 2.4 Select and apply additives as required by site conditions 2.5 Mark out the positions of plants on site 2.6 Remove and dispose of debris and pollutants from the site
3. Undertake planting operation	3.1 Inspect all plants for health, vigour and well-established root systems prior to being planted 3.2 Return plants with major defects to supplier or set aside to be returned 3.3 Trim or treat plants with minor defects to maintain health and vigour 3.4 Space plants appropriately 3.5 Use planting methods that comply with growing requirements of individual plant species and cultivars 3.6 Apply water to planting site where required 3.7 Provide newly placed plants with post-planting care 3.8 Prune plants, where necessary, according to needs of species and cultivar to ensure plants develop a sound framework for their growth and habit
4. Review the plant establishment works	4.1 Review plant establishment program as required 4.2 Identify, record and report plants incorrectly planted, or situations that will prevent plants from reaching their full potential 4.3 Take remedial action to ensure all requirements of plant establishment program are implemented
5. Complete	5.1 Complete surface finishes including mulch

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
establishment works	5.2 Dispose of or recycle waste material from the planting site 5.3 Clean, maintain and store tools, equipment and machinery 5.4 Identify and report unserviceable tools, equipment and machinery according to workplace procedures 5.5 Record completed plant establishment program and report to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report tool, equipment and machinery unserviceability
Numeracy	<ul style="list-style-type: none"> Estimate area, volume and ratios, and calculate application rates Apply numerical information to determine quantities, material and application rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD307 Implement a plant establishment program	AHCPGD301 Implement a plant establishment program	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD307 Implement a plant establishment program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a plant establishment program on at least one occasion and has:

- interpreted site plans and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools, equipment and machinery required for implementing a plant establishment program
- checked and confirmed site plan and plant stock
- measured quantities, calculated material requirements, area, volume, ratios and application rates
- carried out planting operations
- inspected and determined plant quality and health
- ensured planting methods comply with plant species and cultivar growing requirements
- pruned plants to ensure they develop a sound framework for their growth and habit
- reviewed site establishment program
- reported unserviceable tools, equipment and machinery
- recorded and reported work outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of plant establishment, including:
 - soils and soil amelioration techniques

- the identification of pests and diseases, plant symptoms of infections, treatment threshold levels, recommended treatments, methods of application and environmental implications
- the objectives of the plant establishment program, including finished plant forms, site appearance, end use and time constraints
- selection and calculation of stock requirements
- site planning
- the physiology of required plant species and cultivars, culture and planting procedures, including growth rates, main nutrient and water requirements, deficiency symptoms, recommended treatments and associated environmental implications
- workplace requirements applicable to health and safety in the workplace for implementing a plant establishment program, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to implementing a plant establishment program
 - materials, tools, equipment and machinery applicable to implementing a plant establishment program
 - plants
 - PPE applicable to implementing a plant establishment program
- specifications:
 - workplace requirements applicable to health and safety in the workplace for implementing a plant establishment program
 - site plans and specifications applicable to implementing a plant establishment program
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD308 Plan and maintain plant displays

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to plan and establish plant displays, including preparing, selecting, placing and maintaining plants either indoors or as seasonal displays of annual and perennial plants in garden beds and completing work.

The unit applies to individuals who plan and maintain plant displays under broad direction and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for plant displays	1.1 Confirm display plan requirements with supervisor or manager 1.2 Inspect the display site for aesthetic, environmental and physical attributes 1.3 Identify potential hazards and risks, and implement safe working practices to manage risks 1.4 Select, fit, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>applicable to the task</p> <p>1.5 Identify location and projected life of display</p> <p>1.6 Check site irrigation system</p> <p>1.7 Identify plant types suitable for aesthetic effects, environmental and physical attributes</p> <p>1.8 Identify actions, timelines and organise work, in consultation with supervisor or manager</p> <p>1.9 Confirm the availability of plants, materials and services for preparing display</p> <p>1.10 Select materials, tools, equipment and machinery according to the display plan and workplace procedures</p> <p>1.11 Record display requirements</p>
2. Select plants	<p>2.1 Select healthy and vigorous plants according to workplace quality specifications</p> <p>2.2 Select number and size of plants according to display requirements</p> <p>2.3 Select plants that display ability to survive in display position for length of display</p>
3. Install plants	<p>3.1 Place plants according to pattern specified in display plan requirements</p> <p>3.2 Plant stock</p> <p>3.3 Select accessories and materials according to display plan requirements</p>
4. Maintain plants	<p>4.1 Check irrigation system where applicable</p> <p>4.2 Monitor plant health</p> <p>4.3 Maintain plant display appearance, including weeding, dead heading and shaping</p> <p>4.4 Fertilise and water plants to maintain optimum health and appearance</p> <p>4.5 Replace plants where required</p>
5. Complete plant installation and maintenance work	<p>5.1 Remove and dispose of or recycle rubbish and plant waste material</p> <p>5.2 Clean, maintain and store tools, equipment and machinery</p> <p>5.3 Identify and report unserviceable tools, equipment and machinery</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report tool, equipment and machinery unserviceability
Numeracy	<ul style="list-style-type: none"> Estimate area Apply numerical information to determine quantities, material and application rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD308 Plan and maintain plant displays	AHCPGD302 Plan and maintain plant displays	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD308 Plan and maintain plant displays

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned and installed one plant display, and maintained the plant display on three occasions and has:

- selected, used and maintained tools, equipment and machinery required for installing and maintaining plant displays
- determined spatial measurements of display site
- applied workplace health and safety requirements
- checked irrigation system where required
- selected plants according to the display plan and workplace quality specifications, and for their ability to survive for the length of the display
- calculated number of plants and materials
- placed plants according to the display plan
- planted stock
- maintained plant display appearance, including mulching, weeding, dead heading, and shaping, and replacing plants
- removed and disposed of or recycled waste material
- reported unserviceable tools, equipment and machinery.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for planning, installing and maintaining plant displays, including appropriate use of personal protective equipment (PPE)
- irrigation system operation
- principles and practices of plant display planning, installation and maintenance, including at least ten annual and ten perennial plant types, including their:

- features and characteristics
- growing requirements
- common health problems and remedial action
- workplace quality specifications applicable to planning, installing and maintaining plant displays
- methods of disposing of waste to minimise damage to the environment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to planning, installing and maintaining plant displays
 - materials, tools, equipment and machinery applicable to planning, installing and maintaining plant displays
 - annual and perennial plants
 - PPE applicable to planning, installing and maintaining plant displays
- specifications:
 - workplace requirements applicable to health and safety in the workplace for planning, installing and maintaining plant displays
 - workplace quality specifications applicable to planning, installing and maintaining plant displays
- relationships:
 - supervisor or manager
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD309 Perform specialist amenity pruning

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to perform specialist amenity pruning, including preparing, undertaking and completing amenity pruning work using specialist pruning techniques.

The unit applies to individuals who perform specialist amenity pruning under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for specialist amenity pruning	1.1 Identify and inspect plants and determine pruning strategy according to plant characteristics or desired outcome 1.2 Identify common diseases, pests and nutrition deficiencies in plants 1.3 Identify potential hazards and risks, and implement safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Select tools, equipment and machinery required to perform specialist pruning and check for safe operation</p> <p>1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task</p> <p>1.6 Consult references where required to determine best pruning strategies for special plants</p>
2. Undertake specialist pruning	<p>2.1 Undertake pruning using established and specialist pruning techniques</p> <p>2.2 Adhere to site environmental and disease control procedures</p> <p>2.3 Assess pruned plants to determine if pruning requirements have been met</p> <p>2.4 Carry out remedial work as required</p>
3. Complete work	<p>3.1 Dispose of or recycle waste material from the site</p> <p>3.2 Clean, maintain and store tools, equipment and machinery</p> <p>3.3 Identify and report unserviceable tools, equipment and machinery according to workplace procedures</p> <p>3.4 Report completed specialist amenity pruning activities according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report tool, equipment and machinery unserviceability

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD309 Perform specialist amenity pruning	AHCPGD303 Perform specialist amenity pruning	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD309 Perform specialist amenity pruning

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed specialist amenity pruning on at least three different plants including at least one tree using at least three of the following:

- secateurs
- loppers or extension loppers
- shears
- pruning or pole saws
- powered hedgers
- powered secateurs

and has:

- identified and inspected plants
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools, equipment and machinery required for specialist amenity pruning
- stored and carried tools safely
- carried out pruning using specialist pruning techniques
- applied site environmental and disease control procedures
- met pruning program requirements
- assessed pruning quality
- cleaned and cleared pruning site
- reported unserviceable tools, equipment and machinery
- reported work outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of specialist amenity pruning, including:
 - anatomy and physiology of plants, shrubs and trees
 - AS4373-2007 Pruning of amenity trees
 - compartmentalisation of decay in trees (CODIT)
 - effect on plant growth and habit after pruning
 - identification of plant species and their pruning requirements
 - local government tree protection and preservation regulations
 - types of plants and their pruning requirements, including; climbing plants, fruiting plants, standard plants
 - methods of specialist pruning, including; espalier, topiary, hedging, pleaching, crown lifting, pollarding, thinning out and sucker control
 - specialist pruning tools, equipment and machinery
- workplace requirements applicable to health and safety in the workplace for performing specialist amenity pruning, including appropriate use of PPE
- site environmental and disease control procedures applicable to performing specialist amenity pruning.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to performing specialist amenity pruning
 - tools, equipment and machinery applicable to performing specialist amenity pruning
 - three different plant types including at least one tree
 - PPE applicable to performing specialist amenity pruning
- specifications:
 - workplace requirements applicable to health and safety in the workplace for performing specialist amenity pruning
 - site environmental and disease control procedures applicable to performing specialist amenity pruning
 - AS4373-2007 Pruning of amenity trees
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD310 Implement a landscape maintenance program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to implement a landscape maintenance program, including interpreting the program requirements, and monitoring and maintaining landscape areas of newly constructed or established landscapes.

The unit applies to individuals who implement a landscape maintenance program under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Interpret a landscape maintenance program	1.1 Identify and apply scope of the maintenance works from the landscape maintenance program and standards 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Review site inspection checklist

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Monitor and maintain landscape areas	2.1 Complete site inspection and checklist 2.2 Identify remedial action, repairs, renovations, treatments and replacements required to restore site to full effectiveness 2.3 Determine the frequency of maintenance works and implement landscape maintenance standards 2.4 Plan and implement maintenance tasks 2.5 Report items which are beyond the scope of the maintenance program to supervisor 2.6 Record items requiring further action 2.7 Evaluate and record results of maintenance works according to workplace procedures

Foundation Skills

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report items beyond the scope of the maintenance program

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD310 Implement a landscape maintenance program	AHCPGD304 Implement a landscape maintenance program	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD310 Implement a landscape maintenance program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a landscape maintenance program on at least one occasion and has:

- applied workplace health and safety requirements
- completed general site inspection
- determined maintenance requirements
- implemented maintenance operations
- performed general plant maintenance, including:
 - weeding
 - fertilising
 - watering
 - pruning
 - pest and disease control
- repaired and renovated landscape structures and features, including:
 - tidying up
 - blowing
 - sweeping
 - cleaning
- identified any items requiring further action or cannot be completed within existing resources
- evaluated and recorded results of maintenance works.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of landscape maintenance, including:
 - actions permitted in the event of variations to maintenance programs
 - common maintenance tasks for landscapes
 - characteristics and optimal growing conditions of a range of plants
 - common problems and remedial actions of a range of plants
- workplace requirements applicable to health and safety in the workplace for a landscape maintenance program.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to implementing a landscape maintenance program
 - site inspection checklist
 - soft and hard landscape
 - materials, tools and equipment applicable to implementing a landscape maintenance program
- specifications:
 - workplace requirements applicable to health and safety in the workplace for implementing a landscape maintenance program
 - landscape maintenance program and standards
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD311 Conduct operational inspection of park facilities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to conduct operational inspections of park or recreational facilities to identify hazards, existing and potential risks and non-conformities with Australian Standards and workplace health and safety requirements.

The unit applies to individuals who conduct operational inspection of park facilities under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for operational inspection	1.1 Determine from operational request, specific facilities and equipment to be inspected and purpose of inspection 1.2 Identify potential hazards and risks of conducting inspection, and implement safe working practices to address risks 1.3 Select, tools and equipment required for testing and inspection and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>check for safe operation</p> <p>1.4 Prepare checklists and reporting formats applicable to inspection purpose</p> <p>1.5 Identify the different types of facilities from checklist descriptions</p> <p>1.6 Clarify specific terminology used in checklists with supervisor</p> <p>1.7 Select, fit, use and maintain personal protective equipment (PPE) applicable to task</p>
2. Undertake operational inspection	<p>2.1 Identify and record non-conformity with Australian standards and workplace health and safety procedures</p> <p>2.2 Identify and record damaged or unserviceable infrastructure</p> <p>2.3 Identify and record site hazards and indications or signs of hidden faults</p> <p>2.4 Maintain accurate and concise checklist entries and photographic records according to workplace procedures</p>
3. Finalise the park inspection	<p>3.1 Report and record areas or situations requiring urgent action or closure of facilities to supervisor</p> <p>3.2 Secure or isolate areas requiring urgent action</p> <p>3.3 Record recommendations to rectify non-conformities as required</p> <p>3.4 Complete inspection report, including photographs where required and submit to client or supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual and drawn information to identify relevant and key information about park facilities, and inspection and workplace standards requirements
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to report situations requiring urgent action or closure of facilities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD311 Conduct operational inspection of park facilities	AHCPGD305 Conduct operational inspection of park facilities	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD311 Conduct operational inspection of park facilities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted an operational inspection of two different park facilities and has:

- determined the purpose of the inspection and the facilities and equipment to be inspected and tested
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools and equipment required for operational testing and inspection of park facilities
- clarified specific terminology used in checklists with the supervisor
- compared actual measurements of inspected components with Australian standards, workplace health and safety requirements, and workplace specifications
- evaluated the condition of facilities
- determined and reported urgent and serious situations
- completed and submitted proforma inspection report, photographs and workplace procedure documents.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of park facility operational inspection, including:
 - different areas of non-conformity that may be identified in relevant Australian standards and health and safety in the workplace requirements
 - identification, assessment and control of hazards
 - inspection procedures and techniques, and workplace reporting requirements for maintenance, repair and replacement recommendations

- principles and practices of park facility operational inspections
- terminology used to describe different components of park or recreational facilities and equipment
- operational expectations and workplace requirements for the presentation and working order priorities of a range of park or recreational facilities and equipment
- the range, use and safety parameters of park or recreational facilities and equipment, their material construction and maintenance requirements
- legislative requirements and codes of practice applicable to public use of park facilities
- workplace requirements applicable to health and safety in the workplace for conducting an operational inspection of park facilities, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to conducting an operational inspection of park facilities
 - materials, tools and equipment applicable to conducting an operational inspection of park facilities
 - checklists, forms and inspection report proformas applicable to conducting an operational inspection of park facilities
 - photographic device
 - PPE applicable to conducting an operational inspection of park facilities
- specifications:
 - workplace requirements applicable to health and safety in the workplace for conducting an operational inspection of park facilities
 - workplace requirements and Australian standards applicable to park facilities and conducting an operational inspection of park facilities
 - legislation and codes of practice applicable to public use of park facilities and conducting an operational inspection of park facilities
- relationships:
 - client or supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD312 Implement a maintenance program for an aquatic environment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to implement a maintenance program for an aquatic environment, including preparing for maintenance activities, and maintaining aquatic organisms and water quality, in a park or garden setting.

The unit applies to individuals who implement a maintenance program for an aquatic environment under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for maintenance activities	1.1 Identify and apply requirements for maintenance of aquatic environment 1.2 Identify potential hazards and risks, and implement safe working practices to address risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Select and prepare tools, equipment and machinery for use 1.4 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task 1.5 Identify environmental implications associated with maintenance activities and report to supervisor
2. Maintain aquatic organisms	2.1 Identify indigenous, exotic and pest aquatic animals and plants for specific aquatic environment 2.2 Monitor aquatic plants and animals and record and maintain relevant data and apply to aquatic plant maintenance activities 2.3 Report issues to supervisor, with suggestions for action 2.4 Implement control methods for excess aquatic animals and plants, and identified pest animals and plants 2.5 Process waste plant and animal material with regards to environmental issues
3. Maintain water quality	3.1 Monitor aquatic environment water quality and input water resource 3.2 Record and maintain monitoring data, and apply to water quality maintenance activities 3.3 Remove and process debris using appropriate equipment 3.4 Report water quality issues to supervisor, with suggestions for remedial action 3.5 Discharge water, clean environment, and recharge water from designated storage area or other input water resource

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report environmental, organism or water quality issues and recommend suggestions for remedial action

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD312 Implement a maintenance program for an aquatic environment	AHCPGD306 Implement a maintenance program for an aquatic environment	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD312 Implement a maintenance program for an aquatic environment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a maintenance program for an aquatic environment on at least one occasion and has:

- interpreted site plans and maintenance program requirements, and used proforma reporting, recording, analysis and work procedure documents
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools, equipment and machinery required for implementing a maintenance program for an aquatic environment
- scheduled and implemented monitoring activities correctly and recorded, interpreted and applied monitoring data.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of aquatic environment maintenance, including:
 - aquatic systems ecology
 - correct safety procedures working from boats or adjacent to large bodies of water
 - enterprise systems and procedures for the safe operation and maintenance of machinery and equipment in aquatic environments
 - food chain and nutrient cycling in aquatic systems
 - recognition, physiology and biological characteristics of animals and/or plants specific to the aquatic environment
 - regulations and industry standards for water quality requirements in association with specified use
 - relevant legislation regarding water pollution and management

- safe systems and procedures for handling, transporting and storing chemicals and hazardous substances taking into account toxicity levels and environmental impacts
- wildlife habitats associated with the aquatic environment
- workplace requirements applicable to health and safety in the workplace for implementing a maintenance program for an aquatic environment, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - workplace procedures applicable to implementing a maintenance program for an aquatic environment
 - materials, tools, equipment and machinery applicable to implementing a maintenance program for an aquatic environment
 - PPE applicable to implementing a maintenance program for an aquatic environment
- specifications:
 - workplace requirements applicable to health and safety in the workplace for implementing a maintenance program for an aquatic environment
 - site plans and maintenance program requirements applicable to implementing a maintenance program for an aquatic environment
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD401 Design plant displays

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design plant displays in a wide range of locations and situations, buildings and structures. It applies to permanent, semi-permanent and temporary displays of plant life under a range of gardening, exhibition, visual merchandising, marketing and commercial leasing and hiring activities.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop the design	1.1 Consult with client to establish the purpose and requirements of

Element	Performance criteria
concept plan	the design 1.2 Evaluate site or location for aesthetic, environmental and physical attributes 1.3 Determine timelines for display and incorporate into the plan 1.4 Clarify budget parameters for concept plan with client or manager 1.5 Develop concept plan using common horticultural conventions
2. Ensure compliance with the design plan	2.1 Present concept plan to client and negotiate agreement on design 2.2 Develop final design plan documentation 2.3 Inspect plants and display materials prior to installation to ensure they meet required quality standard 2.4 Inspect plant display to ensure compliance with design plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD401A Design plant displays.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD401 Design plant displays

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- develop maintenance programs
- evaluate sites or locations to determine the effect of aesthetic, environmental and physical attributes on nature of display
- research and analyse information about plant and materials specifications, cultural requirements and environmental requirements
- consult with clients

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of plant display design
- characteristics of a range of plants used in plant displays
- growth and maintenance requirements of plants in natural and artificial environments
- horticultural conventions for design plans
- plant selection
- principles of design
- processes and techniques for preparing, costing and documenting plans for plant displays
- plants commonly used in plant displays

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD402 Plan a plant establishment program

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to develop a plant establishment program and a relevant site plan and specifications.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Elements	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out preliminary planning activities for the plant establishment	1.1 Consult with client and clarify preferences and requirements for the plant establishment program

Elements	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
program	<p>1.2 Research plant species and cultivars; and local by-laws and restrictions that may affect the plant establishment program</p> <p>1.3 Identify environmental implications of the planned program and, if necessary, report to relevant personnel for further research</p> <p>1.4 Develop a concept plan that reflects client preferences and requirements and takes into account site factors and any identified environmental requirements</p> <p>1.5 Present the concept plan to the client for discussion and approval</p>
2. Determine requirements of the plant establishment program	<p>2.1 Identify plant species and cultivars appropriate to the site and consistent with the agreed concept plan</p> <p>2.2 Calculate and cost the required quantity and confirm availability with suppliers</p> <p>2.3 Select plant establishment procedures that suit the characteristics of available plant materials, the resources and equipment available and environmental factors that would affect the success of the plant establishment program</p> <p>2.4 Identify post-planting care requirements</p> <p>2.5 Identify and cost resources, tools, equipment and machinery required for planting and post-planting care and confirm availability confirmed with suppliers, contractors and appropriate personnel</p> <p>2.6 Identify work health and safety hazards, assess risks and develop controls, estimate costs and documented in the plan</p> <p>2.7 Outline staged implementation and development, where appropriate, and provide access for future works provided</p> <p>2.8 Determine timelines for preparations, planting and post-planting care, taking into account the needs of the plant species and cultivars, site conditions, and any other planning requirements</p>
3. Prepare and document the plant establishment program and specification	<p>3.1 Produce a scaled site plan which can be readily interpreted and understood by on-site personnel</p> <p>3.2 Develop and document detailed on-site procedures and schedules required for the planting of the site and post-planting care of plants</p> <p>3.3 Prepare detailed plan, specifications and quotation based on the requirements of the program, and present to the client for acceptance</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD402 Plan a plant establishment program Release 2	AHCPGD402 Plan a plant establishment program Release 1	Minor typographical error corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD402 Plan a plant establishment program

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- plan a plant establishment program
- consult with clients
- document plans, specifications and work procedures
- comply with legislative requirements
- write plans and reports that staff, clients and contractors can understand
- calculate the cost and spatial and logistical requirements of components of the plant establishment program.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- identification, propagation and establishment techniques of specific plant species and cultivars
- the advantages and disadvantages of a range of plant establishment procedures
- maintenance requirements and practices for specific plant species and cultivars, prior to and after initial establishment
- processes and techniques for preparing, costing and documenting plans for and scheduling plant establishment activities
- processes and techniques for scheduling plant establishment activities.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD403 Design plant displays

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to design plant displays, including developing the design concept plan and ensuring compliance with the design plan in a wide range of locations and situations, buildings and structures. It applies to permanent, semi-permanent and temporary displays of plant life under a range of gardening, exhibition, visual merchandising, marketing and commercial leasing and hiring activities.

The unit applies to individuals who apply specialist skills and knowledge to design plant displays. This includes applying and communicating non routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop the design	1.1 Consult with client to establish purpose and requirements of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
concept plan	design 1.2 Evaluate site or location for aesthetic, environmental and physical attributes 1.3 Identify hazards and assess risks in workplace, and implement control measures to manage risks according to workplace health and safety procedures 1.4 Determine timelines for display and incorporate into plan 1.5 Clarify budget parameters for concept plan with client or manager 1.6 Develop concept plan using common horticultural conventions
2. Ensure compliance with the design plan	2.1 Present concept plan to client and negotiate agreement on design 2.2 Develop final design plan documentation 2.3 Inspect plants and display materials prior to installation to ensure they meet required quality standard 2.4 Inspect plant display to ensure compliance with design plan

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client, using clear language to discuss design requirements, budget and concept plan, and negotiate design agreement

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD403 Design plant displays	AHCPGD401 Design plant displays	Minor changes to application	Not equivalent

		Additional performance criteria and Performance Evidence requirements Foundation skills added Assessment requirements updated	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD403 Design plant displays

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has designed two different plant displays and has:

- consulted with clients
- evaluated sites or locations to determine the effect of aesthetic, environmental and physical attributes on nature of display
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- determined timelines and budget constraints
- researched and analysed information about plant and materials specifications and cultural requirements
- developed concept plan, design plan and specifications.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of plant display design, including:
 - characteristics of a range of plants used in plant displays
 - growth and maintenance requirements of plants in natural and artificial environments
 - horticultural conventions for design plans
 - plant selection
 - principles of design
 - processes and techniques for preparing, costing and documenting plans for plant displays
 - client consultation and negotiation techniques
 - plants commonly used in plant displays
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to designing plant displays.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - industry publications, internet and in house sources of information relevant to designing plant displays
 - plant display
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to designing plant displays
- relationships:
 - clients
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD404 Plan a plant establishment program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to plan and document a plant establishment program, including a site plan, work procedures, schedules, and specifications.

The unit applies to individuals who apply specialist skills and knowledge to design plant displays. This includes applying and communicating non routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out preliminary planning activities for plant establishment	1.1 Consult with client to establish preferences and requirements for plant establishment program 1.2 Research plant species and cultivars, local by-laws and restrictions

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
program	<p>that may affect the plant establishment program</p> <p>1.3 Identify environmental implications of planned program and, if necessary, report to relevant personnel for further research</p> <p>1.4 Develop a concept plan that reflects client preferences and requirements and takes into account site factors and identified requirements</p> <p>1.5 Present concept plan to client for discussion and approval</p>
2. Determine requirements of plant establishment program	<p>2.1 Identify plant species and cultivars appropriate to site and consistent with agreed concept plan</p> <p>2.2 Calculate and cost required quantity and confirm availability with suppliers</p> <p>2.3 Determine plant establishment procedures that suit the characteristics of available plant materials, resources and equipment available and environmental factors that would affect the success of the plant establishment program</p> <p>2.4 Identify post-planting care requirements</p> <p>2.5 Identify and cost resources, tools, equipment and machinery required for planting and post-planting care and confirm availability with suppliers, contractors and appropriate personnel</p> <p>2.6 Identify hazards and assess risks in workplace, and implement control measures to manage risks according to workplace health and safety procedures, estimate costs and document in plan</p> <p>2.7 Outline staged implementation and development, where appropriate, and provide access for future works provided</p> <p>2.8 Determine timelines for preparations, planting and post-planting care, taking into account needs of plant species and cultivars, site conditions, and any other planning requirements</p>
3. Prepare and document plant establishment program and specification	<p>3.1 Produce a scaled site plan which can be readily interpreted and understood by on-site personnel</p> <p>3.2 Develop and document detailed on-site procedures and schedules required for planting of site and post-planting care of plants</p> <p>3.3 Prepare detailed plan, specifications and quotation based on requirements of the program, and present to client for acceptance</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for plant establishment program, site plan, work procedures, schedules, and specifications
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client, using clear language to discuss program preferences and requirements, site factors, budget and concept plan, and negotiate program agreement
Numeracy	<ul style="list-style-type: none"> Calculating quantities, measurements, costs, scaling and scheduling

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD404 Plan a plant establishment program	AHCPGD402 Plan a plant establishment program	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD404 Plan a plant establishment program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned a plant establishment program on at least one occasion and has:

- consulted with clients
- researched plant species and cultivars and local by-laws and restrictions
- complied with local by-laws and restrictions
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- developed a plant establishment program concept plan
- calculated the cost and spatial and logistical requirements of components of the plant establishment program
- documented plant establishment program, site plan, work procedures, schedules, and specifications.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of plant establishment program planning, including:
 - identification and establishment techniques of specific plant species and cultivars
 - the advantages and disadvantages of a range of plant establishment procedures
 - maintenance requirements and practices for specific plant species and cultivars, prior to and after initial establishment
 - processes and techniques for preparing, costing and documenting plans for and scheduling plant establishment activities
 - processes and techniques for scheduling plant establishment activities
- local by-laws and restrictions relevant to planning a plant establishment program

- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to planning a plant establishment program.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - industry publications, internet and in house sources of information relevant to planning a plant establishment program
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to planning a plant establishment program
 - local by-laws and restrictions relevant to planning a plant establishment program
- relationships:
 - clients
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD503 Manage parks and reserves

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to manage parks and reserves.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Implement business, financial, marketing and human resource	1.1 Identify goals and objectives for park or reserve management as well as the goals and objectives or charter of linked external agencies

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
management plans	<p>1.2 Identify the actions required to achieve the plans and determine operational objectives</p> <p>1.3 Consult with appropriate personnel to communicate the roles, responsibilities and performance targets of staff and work groups</p>
2. Implement and monitor a purchasing plan	<p>2.1 Determine the quantity, quality and timing of supply of each input and service as required by the business plan and cash flow budgets</p> <p>2.2 Confirm that the purchasing system and records facilitate the selection of suppliers and arrangement of orders</p> <p>2.3 Isolate inefficiencies, stock outs and system problems, identify solutions and modify systems as required</p> <p>2.4 Establish asset databases and prepare and present asset management reports</p> <p>2.5 Consider work health and safety requirements in all purchase decisions</p> <p>2.6 Communicate purchasing plan to responsible personnel, initiate and monitor systems and maintain inventories</p>
3. Schedule park or reserve operations	<p>3.1 Document schedules and timelines of operations in a form that is accessible and understandable to all relevant personnel</p> <p>3.2 Identify and coordinate quantity, quality and timing of supply of each input and service as required by the financial, physical and human resource requirements of the operation</p> <p>3.3 Coordinate operations to ensure that available labour matches the quantity and type of work to be completed</p> <p>3.4 Establish key performance outcomes and indicators to measure performance of all park or reserve operations and personnel</p> <p>3.5 Undertake benchmarking as required by the particular organisation</p> <p>3.6 Isolate coordination inefficiencies and problems, identify solutions and modify systems as required</p>
4. Manage enterprise office	<p>4.1 Develop and implement sound office and administrative systems and communications</p> <p>4.2 Ensure necessary office equipment is available or purchase where necessary and cost effective to do so</p> <p>4.3 Identify work health and safety hazards, assess risks and implement suitable controls</p>

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.4 Assess and implement innovations in office procedures where appropriate
5. Monitor, review and report on changing conditions	5.1 Establish systems to monitor operational objectives, identify variance from plans and adjust actions where necessary 5.2 Establish systems to monitor the immediate and related environments 5.3 Identify variances likely to affect the achievement of business, financial, marketing and human resource management goals and objectives and report to senior management 5.4 Maintain records, provide reports and document reviews
6. Recommend improvements to operation	6.1 Review operations and identify possible improvements affecting business planning, personnel morale, productivity and systems efficiency 6.2 Document recommendations for improvements to operations that are supported by appropriate evidence and reasoned arguments, and present to senior management

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD503 Manage parks and reserves Release 2	AHCPGD503 Manage parks and reserves Release 1	Minor typographical error corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD503 Manage parks and reserves

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- assess environmental impacts on the immediate and related environments and impact reduction techniques
- assess financial systems, prepare and monitor budgets and liaise effectively with consultants and other industry contacts on the spatial and logistical aspects of management systems and on-ground operations
- assign work, receive and interpret staff feedback and consultants' reports, and respond effectively to achieve management objectives
- interpret business, financial, marketing and human resource management plans
- research and consult to obtain the information required for effective maintenance and development of the park or reserve.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of park and reserve management:
 - asset and resource management
 - budgeting, monitoring systems and allocation of monetary resources
 - legislative and regulatory requirements relevant to parks and reserve land use applications and management activities including OHS, HAZCHEM, dangerous goods, duty of care and Australian Standards as they apply to Parks and Gardens - AS/NZS 4486.1:1997
 - management information systems
 - performance management and benchmarking

- policies applying across all levels of government and within the specific region, including those under catchment plans
- principles of the Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places and the Burra Charter
- sports and recreational land use applications and associated environmental implications
- staff training and development principles, practices and techniques
- technologically assisted management tools such as computing systems, software and hardware, and telecommunications equipment.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD504 Develop and implement a streetscape management plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop and implement a streetscape management plan.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Define the need for a streetscape	1.1 Identify the management plan objectives for the streetscape 1.2 Consult with client and identify brief requirements

Element	Performance criteria
management plan	1.3 Identify a planning team including specialists and consultants
2. Undertake preliminary planning activities	2.1 Identify major stakeholders 2.2 Determine the availability of specialists to assist in management planning work and prepare contracts where required 2.3 Establish timelines for development of the management plan and reporting arrangements to client 2.4 Identify required resources for developing management strategies
3. Prepare a site description	3.1 Identify and map landscape values of the area 3.2 Identify and map physical features and characteristics of the streetscape 3.3 Research land , including current, cultural and historical modifications, and determine and record their effects on the streetscape 3.4 Assess and document physical condition of site 3.5 Document the biological characteristics of the site
4. Analyse site information and description	4.1 Evaluate information in terms of core principles and objectives 4.2 Produce documents, including plans, technical reports and maps 4.3 Determine priorities and key management issues 4.4 Identify and document opportunities and constraints to meeting planning objectives and goals 4.5 Make a presentation to clients and residents and incorporate feedback into planning documentation
5. Identify management strategies	5.1 Identify management strategies that address defined objectives 5.2 Design management strategies to alleviate existing impacts or to target management action 5.3 Cost management strategies and compare to existing budgets and available resources 5.4 Plan implementation of work to prioritise outcomes and management resource allocation 5.5 Consult with clients and residents and incorporate feedback into documentation
6. Prepare the management plan	6.1 Develop a draft management plan that includes site information and management strategies 6.2 Consult with stakeholders and clients and incorporate agreed changes into the final plan 6.3 Present final plan to client

Element	Performance criteria
7. Implement the management plan	7.1 Implement the management plan within predetermined budget, and according to the schedule and strategies set out in the plan 7.2 Modify the implementation strategy to address on-going feedback from clients and residents 7.3 Provide reports to clients and residents on the progress of implementation works

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD504A Develop and implement a streetscape management plan.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD504 Develop and implement a streetscape management plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- define the need for a management plan
- undertake preliminary planning activities
- analyse site information and description
- identify management strategies
- prepare the management plan
- prepare a site description
- implement the management plan

Knowledge Evidence

The candidate must explain:

- principles and practices for streetscape management planning
 - basic civil design
 - community consultation processes
 - horticultural, landscape and arboricultural practices used in streetscape management
 - landscape assessment, survey and analysis techniques
 - management planning principles and issues
 - soil, plant and water testing processes and procedures, interpretation and application of results

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PGD505 Conduct comprehensive inspection of park facilities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to conduct a compliance audit of park or recreational facilities to identify non-conformities with Australian Standards, legislative and work health and safety requirements, as well as manufacturers' standards.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for comprehensive	1.1 Determine the specific facilities and equipment to be inspected as well as the purpose of the inspection as outlined in the operational

Element	Performance criteria
inspection of park facilities	request 1.2 Identify the tools and equipment for testing and inspection and confirm availability with appropriate personnel 1.3 Carry out pre-operational and safety checks on tools and equipment 1.4 Prepare appropriate checklists and reporting formats to suit the activity 1.5 Identify the types of facilities from checklist descriptions
2. Undertake comprehensive inspection of park facilities	2.1 Identify and record instances of non-conformity with Australian Standards, work health and safety guidelines and manufacturers' standards 2.2 Undertake inspections for structural integrity in an efficient and safe manner, according to enterprise policy. 2.3 Identify and detail safety risks and hazards and situations. 2.4 Ensure that checklist entries are concise and accurate. 2.5 Undertaken inspections according to OHS requirements.
3. Assess age and predict effective lifespan of existing park facilities	3.1 Identify the manufacturer of playground equipment and structures through reference to original plans and specifications 3.2 Determine and record the age and future lifespan of park facilities 3.3 Estimate and record the cost of repair or replacement of park facilities
4. Submit report and recommendations	4.1 Address situations requiring urgent action 4.2 Prepare concise and accurate reports and submit to management 4.3 Review existing management systems, particularly regarding frequency of inspection, and make improvements in consultation with management 4.4 Make recommendations for future action that are consistent with industry standards and best practice 4.5 Submit collected data and information for inclusion on the asset management system

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD505A Conduct comprehensive inspection of park facilities.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD505 Conduct comprehensive inspection of park facilities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- prepare for a comprehensive inspection of park facilities
- carry out a comprehensive inspection of park facilities
- interpret design symbols and terminology
- interpret standards, specifications and legal requirements
- determine age and calculate effective lifespan of existing park facilities
- estimate costs of repair or replacement

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of park facility inspection
 - different modes of non-conformity that may be identified in relation to specific park facilities and equipment
 - hazard identification, assessment and control
 - information management systems such as AS4456
 - hazards associated with conducting a comprehensive inspection of park facilities and equipment, and the controls necessary to remove or minimise associated risks
 - park facilities and equipment including installation methods, intended use, intended users and safety parameters
 - practical understanding of inspection and auditing procedures and techniques, and legal and enterprise reporting requirements for recommendations on maintenance, repair and replacement of park facilities
 - practical understanding of the terminology used to describe different components of park facilities and equipment

- relevant national industry standards such as AS486.1, AS4422, AS1924.1 and AS1924.2)
- work health and safety legislative requirements and Codes of Practice

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD506 Manage parks and reserves

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to manage parks and reserves, including reviewing the organisation, identifying problems, researching and communicating potential solutions and their impact.

The unit applies to individuals who apply specialist skills and knowledge to manage parks and reserves, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review organisation	1.1 Identify goals and objectives, including cultural for park and reserve management

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Identify external agencies requirements and objectives for parks and reserves management</p> <p>1.3 Review asset database, condition reports and service levels</p> <p>1.4 Consult with appropriate personnel to review strengths, weaknesses, opportunities and threats, and best communication methods for staff, community, and user groups</p>
2. Identify problem	<p>2.1 Determine quantity, quality, and timing of supply of each input and service as required by business plan and cash flow budgets</p> <p>2.2 Determine new or potential problems that would affect delivery of identified goals and objectives</p> <p>2.3 Determine inefficiencies, stock outs and system problems</p>
3. Research solutions	<p>3.1 Identify solutions and their impact if adopted</p> <p>3.2 Confirm that purchasing system and records enable selection of suppliers and arrangement of orders</p> <p>3.3 Review improvements affecting business planning, personnel, morale, productivity, and systems efficiency</p> <p>3.4 Establish key performance outcomes and indicators to measure performance of all park or reserve operations and personnel</p> <p>3.5 Undertake benchmarking according to workplace requirements</p>
4. Communicate solutions and their impact	<p>4.1 Develop and implement communication methods</p> <p>4.2 Seek feedback from staff, community, and user groups</p> <p>4.3 Document recommendations for improvements to operations that are supported by appropriate evidence and reasoned arguments, and present to senior management</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding goals, objectives and requirements of park or reserve management plans
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff community and user groups, using clear language and standard industry terminology to identify problems, research and communicate solutions and their impact

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD506 Manage parks and reserves	AHCPGD503 Manage parks and reserves	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD506 Manage parks and reserves

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed a park or reserve on at least one occasion and has:

- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- liaised effectively with consultants and other industry contacts on management systems and on-ground operations
- assessed and monitored budgets and allocation of monetary resources
- interpreted business, financial, cultural, marketing and human resource management plans
- assessed environmental impacts of management decisions on the immediate and related environments
- researched and obtained information required for effective maintenance and development of the park or reserve
- assigned work, received and interpreted staff feedback and consultant reports, and responded effectively to achieve management objectives
- identified, documented and recommended improvements to operations and presented to senior management.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of park and reserve management, including:
 - asset and resource management
 - budgeting, monitoring systems and allocation of monetary resources

- legislative and regulatory requirements relevant to parks and reserve land use applications and management activities including hazardous chemicals, dangerous goods, duty of care and Australian standards relevant to parks and reserves management
- management information systems
- performance management and benchmarking
- policies applying across all levels of government and within the specific region, including those under catchment plans relevant to managing parks or reserves
- principles of the Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places and the Burra Charter
- sports and recreational land use applications and associated environmental implications
- staff training and development principles, practices and techniques
- computer software and hardware, and telecommunications equipment relevant to managing parks or reserves
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to managing parks or reserves.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources:
 - park or reserve business, financial, marketing and human resource management plans
 - computer software and hardware, and telecommunications equipment relevant to managing parks or reserves
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to managing parks or reserves
 - legislative and regulatory requirements relevant to parks and reserve land use applications and management activities including hazardous chemicals, dangerous goods, duty of care and Australian standards relevant to parks and reserves management
 - policies applying across all levels of government and within the specific region, including those under catchment plans relevant to managing parks or reserves
 - Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places and the Burra Charter
 - sports and recreational land use applications
- relationships:

- staff, consultants and senior management
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD507 Manage plant cultural practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to manage a plant cultural program, including defining site requirements, developing the site program, managing the implementation of the program, and monitoring, reviewing and documenting the program.

The unit applies to individuals who apply specialist skills and knowledge to managing plant cultural programs, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Define the plant cultural requirements of	1.1 Survey and record the range of plant life areas and plant species 1.2 Determine personnel and resources required for implementation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
the site	<p>and maintenance</p> <p>1.3 Identify hazards and assess risks associated with work activities, and implement control measures according to workplace health and safety procedures</p> <p>1.4 Assess staff capability, skills and knowledge against implementation and maintenance requirements</p> <p>1.5 Implement staff training and development as required to bridge gaps</p>
2. Develop a plant cultural program for the site	<p>2.1 Determine plant cultural practices over the duration of a documented planning period</p> <p>2.2 Allocate resources and develop budgets for the implementation period</p> <p>2.3 Source and contract required specialist cultural practice services</p> <p>2.4 Develop a schedule of operations for the implementation period</p> <p>2.5 Allow for environmental and cultural contingencies in the site program according to environmental and biosecurity legislation, regulations and workplace procedures</p>
3. Manage the implementation of the program	<p>3.1 Allocate and supervise staff and routine and contracted services</p> <p>3.2 Sample, prepare and test soil types and growing media using staff field tests and laboratory tests by specialist services</p> <p>3.3 Interpret test results and ameliorate soils and growing media where required</p> <p>3.4 Confirm that materials and equipment are used according to workplace health and safety procedures</p> <p>3.5 Log progress reports detailing on-going results of the plant cultural program</p>
4. Monitor, review and document the program	<p>4.1 Itemise daily workplace records, weekly or monthly expenses, and other information relevant to the plant cultural program in registers or diaries</p> <p>4.2 Evaluate and document costs and expenditure against budgets</p> <p>4.3 Monitor and appraise staff performance</p> <p>4.4 Monitor, and evaluate routine and contracted services and record performance audits</p> <p>4.5 Compare the plant cultural program to previous programs and</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	make appropriate adjustments 4.6 Document results in a report covering all items of recorded information in the program

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Calculate and budget for costs of material, machinery and equipment resources Calculate and budget for costs of labour, including staff, sub-contractors, specialist contracted services and staff training requirements
Oral communication	<ul style="list-style-type: none"> Use clear language to train and assess staff capabilities, and appraise staff performance

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD507 Manage plant cultural practices	AHCPGD501 Manage plant cultural practices	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD507 Manage plant cultural practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed plant cultural practices on at least one occasion and has:

- allocated resources
- contracted specialist services
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- determined and implemented staff training and development where required
- determined plant cultural requirements
- developed a plant cultural program and budget documentation
- planned and scheduled of operations
- managed contingencies
- supervised, monitored and appraised the performance of work team and contracted services
- completed plant cultural program report.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of plant cultural practice management, including:
 - budgeting and planning
 - operation and maintenance of irrigation systems
 - plant anatomy, physiology, morphology, taxonomy and nomenclature relevant to program
 - plant cultural practices
 - plant identification and selection

- plant nutrition requirements and practices
- soil types, properties, field tests and sampling techniques
- staff and contractor supervision and performance appraisal
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to managing plant cultural practices.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources:
 - soil and growing media sampling and testing equipment
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to managing plant cultural practices
- relationships:
 - staff, contractors and specialist sub-contractors
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD508 Plan the restoration of parks and gardens

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to plan the restoration of parks and gardens of historical or cultural significance, develop a comprehensive restoration program of works and develop a relevant site plan, specifications and work procedures.

The unit applies to individuals who apply specialist skills and knowledge to planning the restoration of parks and gardens, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out preliminary planning activities for	1.1 Discuss and clarify client preferences and requirements for park or garden

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
restoration works	<p>1.2 Assess site for biophysical factors, historical and cultural attributes, services and site modifications</p> <p>1.3 Research legal requirements and local by-laws and restrictions that may affect plan for restoration works</p> <p>1.4 Identify and minimise environmental impact of planned restoration works according to environmental and biosecurity legislation, regulations and workplace procedures, and, if necessary, report to relevant personnel for further research</p> <p>1.5 Develop concept plan that reflects client preferences and requirements and takes into account heritage issues, site factors and any identified environmental requirements</p> <p>1.6 Present concept plan to client for discussion and approval</p> <p>1.7 Consult with other professionals to assist in research and planning of restoration works to meet legislative requirements</p>
2. Determine requirements of restoration works	<p>2.1 Identify plants appropriate to site, consistent with agreed concept plan and original design philosophy, taking into consideration historical and cultural values</p> <p>2.2 Calculate and cost quantity of plants and confirm availability and genetic integrity with suppliers</p> <p>2.3 Select restoration procedures consistent with agreed concept plan, and account for characteristics of available plant materials, resources and equipment and environmental factors affecting the success of the restoration works</p> <p>2.4 Include maintenance of softscape and hardscape components of park or garden</p> <p>2.5 Identify and cost resources, tools, equipment and machinery required for planting and ongoing maintenance of restoration works and confirm availability with suppliers, contractors and appropriate personnel</p> <p>2.6 Identify hazards and assess risks associated with work activities, and implement control measures according to workplace health and safety procedures</p> <p>2.7 Outline staged implementation and development, where appropriate, including providing access for future works as required by client and site requirements</p> <p>2.8 Determine timelines for preparations, planting and maintenance, taking into account the needs of restoration species, softscape and</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	hardscape components, site conditions, and other relevant planning requirements
3. Prepare and document the restoration plan and specifications	<p>3.1 Prepare detailed plan, specifications and quotation based on horticultural conventions, original design philosophy and requirements of restoration works, and present to client for acceptance</p> <p>3.2 Produce scaled site plan which can be readily interpreted and understood by on-site personnel</p> <p>3.3 Develop and document detailed on-site procedures and schedules required for restoration and ongoing maintenance of park or garden</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client and other professionals, using clear language and standard industry terminology to discuss restoration preferences and requirements, and legal and legislative requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD508 Plan the restoration of parks and gardens	AHCPGD502 Plan the restoration of parks and gardens	<p>Minor changes to application</p> <p>Minor changes to performance criteria</p> <p>Foundation skills added</p> <p>Assessment requirements updated</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD508 Plan the restoration of parks and gardens

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has planned the restoration of parks and gardens on at least one occasion and has:

- consulted with clients
- determined requirements of the restoration work
- complied with legislative requirements
- researched and evaluated information
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- calculated the cost and spatial and logistical requirements of components of the restoration works
- selected restoration procedures that are consistent with the agreed concept plan, appropriate to the site and account for historical and cultural values, available resources and relevant environmental factors
- prepared and documented the restoration plan and specifications.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of park and garden restoration, including:
 - construction procedures, plant selection and cultural practices for historically or culturally significant parks and gardens
 - growth habits and cultural requirements of specific plants under a range of soil and environmental conditions
 - historic parks and gardens management principles and guidelines
 - legislation and regulations relating to heritage sites and restoration works

- maintenance requirements and practices for specific plants prior to and after initial establishment
- principles of the Australian Natural Heritage Charter, the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places and the Burra Charter
- role of project briefs and client consultation processes in planning restoration works
- site evaluation techniques, including methods of analysing the condition of soils, plants and waterways for restoration activities
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to planning the restoration of parks and gardens.
-

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources:
 - computer software and hardware relevant to planning the restoration of parks and gardens
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to planning the restoration of parks and gardens
 - legislative and regulatory requirements relevant to planning the restoration of parks and gardens
 - Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places and the Burra Charter
- relationships:
 - clients, other professionals
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD509 Develop and implement a streetscape management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to develop and implement a streetscape management plan, including defining the needs of the streetscape management plan, undertaking preliminary planning activities, preparing site description, analysing information, identifying management strategies, preparing and implementing the plan.

The unit applies to individuals who apply specialist skills and knowledge to develop and implement streetscape management plans, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to a range of complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Define the need for a streetscape management plan	1.1 Discuss and clarify client preferences and brief requirements 1.2 Identify streetscape management plan objectives 1.3 Identify a planning team including specialists and consultants
2. Undertake preliminary planning activities	2.1 Identify major stakeholders 2.2 Determine availability of specialists to assist in management planning work 2.3 Establish timelines for development of management plan and reporting arrangements to client 2.4 Identify required resources for developing management strategies
3. Prepare a site description	3.1 Identify and map landscape values of area 3.2 Identify and map physical features and characteristics of streetscape 3.3 Research land, including current, cultural and historical modifications, and determine and record effects on the streetscape 3.4 Assess and document physical condition of site 3.5 Document biological characteristics of site
4. Analyse site information and description	4.1 Evaluate information in terms of core principles and objectives 4.2 Produce documents, including plans, technical reports and maps 4.3 Determine priorities and key management issues 4.4 Identify and document opportunities and constraints to meeting planning objectives and goals 4.5 Make presentation to clients and residents and incorporate feedback into planning documentation
5. Identify management strategies	5.1 Identify management strategies that address defined objectives 5.2 Design management strategies to alleviate existing impacts or to target management action 5.3 Cost management strategies and compare to existing budgets and available resources 5.4 Plan implementation of work to prioritise outcomes and management resource allocation 5.5 Consult with clients and residents and incorporate feedback into documentation
6. Prepare the	6.1 Develop draft management plan that includes site information and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
management plan	management strategies 6.2 Consult with stakeholders and clients and incorporate agreed changes into final plan 6.3 Document and present final plan to client
7. Implement the management plan	7.1 Implement management plan within predetermined budget, and according to schedule and strategies set out in the plan 7.2 Modify implementation strategy to address on-going feedback from clients and residents 7.3 Provide reports to clients and residents on progress of implementation works

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Access and analyse data for input to site description and streetscape management plan

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD509 Develop and implement a streetscape management plan	AHCPGD504 Develop and implement a streetscape management plan	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD509 Develop and implement a streetscape management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed and implemented a streetscape management plan on at least one occasion and has:

- consulted with clients, planning team, major stakeholders and residents
- defined the need for a management plan
- undertaken preliminary planning activities
- prepared a site description
- analysed site information and description
- identified and costed management strategies
- prepared and documented the management plan
- implemented the management plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for streetscape management planning, including:
 - basic civil design
 - client and stakeholder consultation processes
 - horticultural, landscape and arboriculture practices used in streetscape management
 - landscape assessment, survey and analysis techniques
 - management planning principles and issue identification strategies
 - site description and management plan documentation and reporting
 - plants commonly used in streetscapes and their growing requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources:
 - soil, plant and water test results
 - sources of information on current, cultural and historical modifications relevant to the development and implementation of a streetscape management plan
- relationships:
 - clients, planning team, major stakeholders and residents
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD510 Conduct comprehensive inspection of park facilities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to conduct a comprehensive inspection of park or recreational facilities to identify non-conformities with Australian standards, legislation and workplace health and safety requirements, as well as industry and manufacturer specifications.

The unit applies to individuals who apply specialist skills and knowledge to conducting comprehensive inspections of park or recreational facilities, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to a range of complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Parks and Gardens (PGD)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for	1.1 Determine from operational request, specific facilities and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
comprehensive inspection of park facilities	<p>equipment to be inspected and purpose of inspection</p> <p>1.2 Identify potential hazards and risks, and implement safe working practices to manage risks</p> <p>1.3 Determine and select tools and equipment for testing and inspection and check for safe operation</p> <p>1.4 Gather and prepare checklists and reporting formats to suit facility</p> <p>1.5 Identify types of facilities from checklist descriptions</p>
2. Undertake comprehensive inspection of park facilities	<p>2.1 Identify and record instances of non-conformity with Australian standards, workplace health and safety guidelines, industry and manufacturer specifications</p> <p>2.2 Undertake inspections for non-conformity and safety according to workplace procedures and workplace health and safety requirements</p> <p>2.3 Identify and record safety risks and hazards</p> <p>2.4 Maintain accurate and concise checklist and report entries, and photographic records</p>
3. Assess age and predict effective lifespan of existing park facilities	<p>3.1 Identify manufacturer of playground equipment and structures through reference to original plans and specifications</p> <p>3.2 Determine and record age and future lifespan of park facilities</p> <p>3.3 Estimate and record cost of repair or replacement of park facilities</p>
4. Submit report and recommendations	<p>4.1 Address situations requiring urgent action</p> <p>4.2 Prepare concise and accurate reports, including photographs where required and submit to management</p> <p>4.3 Review existing management systems, including frequency of inspection, and make improvements in consultation with management</p> <p>4.4 Make recommendations for future action consistent with industry and workplace specifications</p> <p>4.5 Submit collected data and information for inclusion on asset management system</p>

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPGD510 Conduct comprehensive inspection of park facilities	AHCPGD505 Conduct comprehensive inspection of park facilities	Minor changes to application Minor changes to performance criteria Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD510 Conduct comprehensive inspection of park facilities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted a comprehensive inspection of three different park facilities and has:

- prepared for and undertaken a comprehensive inspection of park facilities
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- selected, used and maintained tools and equipment required for testing and comprehensive inspection of park facilities
- interpreted Australian standards, workplace health and safety and workplace standards, industry and manufacturer specifications
- interpreted plans, design symbols and terminology
- determined age and calculated effective lifespan of existing park facilities
- estimated costs of repair or replacement of existing park facilities
- completed inspection records and reports, including photographs where required and submitted to management
- made improvements to inspection documentation or practice
- made recommendations to management.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of park facility inspection, including:
 - different modes of non-conformity that may be identified in relation to specific park facilities and equipment
 - hazard identification, assessment and control
 - information management systems relevant to park facilities inspection

- software and hardware relevant to park facilities inspection
- hazards associated with conducting a comprehensive inspection of park facilities and equipment, and the controls necessary to remove or minimise associated risks
- park facilities and equipment including installation methods, intended use, intended users and safety parameters
- practical understanding of inspection and auditing procedures and techniques, legal and workplace reporting requirements for recommendations on maintenance, and estimating cost of repair and replacement of park facilities
- practical understanding of the terminology used to describe different components of park facilities and equipment
- Australian standards relevant to park facilities
- legislative requirements and codes of practice applicable to public use of park facilities
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to conducting a comprehensive inspection of park facilities.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources:
 - workplace procedures applicable to conducting a comprehensive inspection of park facilities
 - materials, tools and equipment applicable to conducting a comprehensive inspection of park facilities
 - site plans applicable to conducting a comprehensive inspection of park facilities
 - information management system, software and hardware applicable to park facilities inspection
 - photographic device
- specifications:
 - workplace requirements applicable to health and safety in the workplace for conducting a comprehensive inspection of park facilities
 - industry and workplace specifications, and Australian standards, applicable to park facilities and conducting a comprehensive inspection of park facilities
 - legislation and codes of practice applicable to public use of park facilities and conducting a comprehensive inspection of park facilities
- relationships:
 - management
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT102 Support horticultural production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to undertake routine horticultural production work under direct supervision and to support the horticultural production work of others.

The unit applies to individuals who support horticultural production work while working alongside a supervisor, exercising limited autonomy within established and well-known parameters. They identify and seek help with simple problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare materials, tools and equipment for horticultural production work	1.1 Collect required materials, tools and equipment according to lists provided and supervisor instructions 1.2 Check materials, tools and equipment required to carry out routine horticultural production work 1.3 Fit and use personal protective equipment (PPE) applicable to job

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.4 Demonstrate correct manual handling techniques when loading and unloading materials 1.5 Report faulty or unsafe tools, equipment or PPE to supervisor 1.6 Provide horticultural production work support according to work health and safety requirements and supervisor instruction 1.7 Recognise and report workplace hazards to supervisor
2. Undertake horticultural production work as directed	2.1 Follow instructions and directions provided by supervisor, and seek clarification when necessary 2.2 Interact with other staff and customers in a professional manner 2.3 Follow workplace policy and procedures in relation to workplace practices, handling and disposal of materials 2.4 Report problems or difficulties in completing work to required standards or timelines to supervisor
3. Clean up on completion of work	3.1 Store materials and dispose of waste materials according to supervisor instructions 3.2 Clean, maintain and store tools and equipment according to supervisor instructions 3.3 Report work outcomes and malfunctions, faults, wear or damage of tools to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> • Use clear language to report malfunctions, faults, wear or damage to tools • Participate in verbal exchanges to respond to questions and clarify information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPTH102 Support horticultural production	AHCPTH101 Support horticultural production	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT102 Support horticultural production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supported horticultural production work on at least two occasions, and has:

- prepared materials, tools and equipment for horticultural production work
- applied safe work practices
- undertaken routine horticultural production work as directed, including the safe use and operation of farm tools and equipment
- cleaned up and disposed of waste material on completion of work, consistent with environmental and workplace requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for supporting production of horticultural crops:
 - planting, picking, packing, loading and transporting techniques support work
 - safe work practices used in horticultural production work
 - use of horticultural tools and equipment, including the safe use and operation of farm tools and equipment
- workplace health and safety requirements and environmental protection legislation applicable to supporting horticultural production.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to supporting horticultural production work
 - horticultural production materials, tools and equipment
 - personal protective equipment applicable to supporting horticultural production work
- relationships:
 - supervisor, staff and customers
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPTH204 Undertake field budding and grafting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to bud and graft trees, shrubs, vines and other plant types in nurseries or in-field situations.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare parent material for budding and grafting	1.1 Follow workplace hygiene practices to ensure tools and equipment are clean 1.2 Prepare plant material and use a suitable method of taking budding or grafting material 1.3 Select and use appropriate tools

Element	Performance criteria
2. Prepare budding and grafting materials	2.1 Select budding/grafting material for propagation 2.2 Use appropriate storage methods to maintain viability of materials 2.3 Dispose of discarded material 2.4 Prepare stock according to species guidelines 2.5 Handle budding/grafting materials and stock in a way that prevents damage
3. Bud/graft scion	3.1 Select budding/grafting method according to species guidelines 3.2 Seal bud/graft is sealed according to instructions 3.3 Affix labels and identification 3.4 Complete records accurately and timely 3.5 Identify, rectify or report out-of-specification process and equipment performance
4. Complete budding/grafting activities	4.1 Clean tools and equipment 4.2 Dispose of or store unused grafting material 4.3 Collect, treat, dispose of or recycle waste generated by both the grafting and cleaning procedures

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPTH204A Undertake field budding and grafting.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT204 Undertake field budding and grafting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- select and prepare stock for budding and grafting
- demonstrate a range of budding and grafting techniques
- maintain labels and records of the budding and grafting operation
- store unused grafting material
- treat plants after budding/grafting

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for field budding and grafting
 - cleaning requirements of work area and equipment
 - common problems and corrective action required
 - environmental issues and controls
 - importance of selection and use of rootstock
 - maintenance requirements of equipment
 - operation, components and purpose of budding/grafting and equipment
 - plant features and processes relevant to budding and grafting
 - procedures and responsibilities for reporting problem
 - recording requirements and procedures
 - root stocks and scion stock
 - stages of the budding/grafting procedure and their purpose

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT210 Assist with protected cropping water sampling and testing

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to assist with protected cropping water sampling and testing.

The unit applies to individuals who assist with protected cropping water sampling and testing under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect water sample	1.1 Confirm with supervisor crop water to be sampled 1.2 Identify and select water sample tools and materials 1.3 Identify environmental and biosecurity implications associated with sampling and testing crop water and minimise impact 1.4 Recognise workplace hazards and report safety concerns

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select, fit, use and maintain personal protective equipment applicable to the task and workplace safety requirements 1.6 Take samples as instructed 1.7 Assist with labelling and recording samples as required
2. Perform basic tests on water sample	2.1 Identify content features of the water sample 2.2 Assist with testing and inspecting physical properties of water sample 2.3 Assist with testing chemical properties of water sample 2.4 Relate water test results to suitability of water for growing crops 2.5 Record water test results according to workplace procedures
3. Complete sampling and testing activities	3.1 Dispose of waste material according to workplace procedures 3.2 Clean and return tools and material to required location 3.3 Report water test results to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations and products
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare water test results
Oral Communication	<ul style="list-style-type: none"> Use clear language to confirm crop to be sampled and report water test results and report tool and material unserviceabilities
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Get the work done	<ul style="list-style-type: none"> Take responsibility for routine decisions about water sampling and testing and reflect on outcomes to identify effectiveness of decisions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT210 Assist with protected cropping water sampling and testing	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT210 Assist with protected cropping water sampling and testing

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has sampled and tested protected crop water on at least two occasions and has:

- selected and used protected crop water sampling tools and material
- minimised environmental impacts associated with testing protected crop water
- followed industry and workplace biosecurity procedures
- applied workplace health and safety requirements
- collected and described water samples using descriptive terms
- assisted with the use of simple water testing equipment
- recorded and reported water testing results
- disposed of waste material, including test water and testing material.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- crop water sampling and testing tools operating instructions
- environmental impacts associated with testing protected crop water
- industry and workplace biosecurity procedures
- workplace requirements applicable to health and safety in the workplace for testing protected crop water
- principles and practices for recognising protected crop water properties, including:
 - basic water tests
 - water chemical properties
 - water physical properties
 - water and plant relationship
 - water sampling techniques.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - crop water sampling and testing tools and materials
 - personal protective equipment applicable to protected crop water sampling and testing
- specifications:
 - crop water sampling and testing tools operating instructions
 - workplace requirements applicable to health and safety in the workplace, and sampling and testing protected crop water
 - industry and workplace biosecurity procedures applicable to sampling and testing protected crop water
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT211 Maintain crop

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to maintain crop including preparing to maintain crop, maintaining crop and completing crop maintenance activities.

The unit applies to individuals who maintain crops under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to maintain crop	1.1 Confirm with supervisor crop to be maintained 1.2 Select tools and equipment appropriate for crop to be maintained 1.3 Identify environmental and biosecurity implications associated with maintaining crop and minimise impact 1.4 Recognise workplace hazards and report safety concerns 1.5 Select, fit, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	according to the task and workplace safety requirements
2. Maintain crop	2.1 Evaluate crop growth and maintenance requirements 2.2 Identify appropriate starting point for crop maintenance activities 2.3 Position tools and equipment correctly at commencement and during crop maintenance activities 2.4 Use plant training techniques appropriate to crop 2.5 Use crop maintenance techniques appropriate to crop requirements and conditions 2.6 Record crop maintenance activities according to workplace procedures
3. Complete crop maintenance activities	3.1 Remove and dispose of waste material according to workplace and biosecurity requirements 3.2 Clean and return tools and equipment to required location 3.3 Identify and report unserviceable tools and equipment according to workplace procedures 3.4 Report crop maintenance activities to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations and products
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare crop maintenance activity records
Oral Communication	<ul style="list-style-type: none"> Use clear language to confirm crop to be maintained and report crop maintenance activities and tool and equipment unserviceabilities
Navigate the world of	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Skill	Description
work	
Get the work done	<ul style="list-style-type: none"> Take responsibility for routine decisions about maintenance of crops and reflect on outcomes to identify effectiveness of decisions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT211 Maintain crop	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT211 Maintain crop

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has maintained a crop on at least two occasions and has:

- selected, positioned, used and maintained crop maintenance tools and equipment
- minimised environmental impacts associated with maintenance of crops
- followed industry and workplace biosecurity procedures
- applied workplace health and safety requirements
- evaluated crop growth and maintenance requirements
- applied plant training techniques, including:
 - twisting
 - layering where appropriate
 - de-leafing
- used the appropriate crop maintenance techniques
- recorded and reported crop maintenance activities and unserviceable tools and equipment
- removed and disposed of waste material.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- crop maintenance tools and equipment operating instructions
- environmental impacts associated with maintenance of crops
- industry and workplace biosecurity procedures workplace requirements applicable to health and safety in the workplace for maintenance of crops
- crop evaluation and maintenance techniques
- plant training:
 - purpose
 - techniques

- tools and equipment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - crop maintenance tools and equipment
 - personal protective equipment applicable to crop maintenance
- specifications:
 - crop maintenance equipment operating instructions
 - workplace requirements applicable to health and safety in the workplace and maintenance of crops
 - industry and workplace biosecurity procedures relevant to maintenance of crops
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT212 Perform manual pollination of crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to manually pollinate crops including preparing for pollination, pollination of crop and completion of pollination activities.

The unit applies to individuals who manually pollinate crops under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to pollinate crop	1.1 Confirm with supervisor crop to be pollinated 1.2 Select appropriate tools and equipment for crop to be pollinated 1.3 Identify environmental and biosecurity implications associated with manual pollination and minimise impact 1.4 Recognise workplace hazards and report safety concerns 1.5 Select, fit, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	applicable to the task and workplace safety requirements
2. Pollinate crop	2.1 Identify appropriate starting point for pollination activity 2.2 Position tools and equipment correctly at commencement and during pollination activity 2.3 Use manual pollination techniques appropriate to crop
3. Complete pollination activities	3.1 Clean and return tools and equipment to required location 3.2 Identify and report unserviceable tools and equipment according to workplace procedures 3.3 Record pollination activity according to workplace procedures 3.4 Report pollination activities to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations and products
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare pollination activity records
Oral Communication	<ul style="list-style-type: none"> Use clear language to confirm crop to be pollinated and report safety concerns, pollination activities and tool and equipment unserviceabilities
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Get the work done	<ul style="list-style-type: none"> Take responsibility for routine decisions about manual pollination of crops and reflect on outcomes to identify effectiveness of decisions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT212 Perform manual pollination of crops	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT212 Perform manual pollination of crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has manually pollinated a crop on at least two occasions and has:

- selected, positioned, used and maintained manual pollination tools and equipment
- minimised environmental impacts associated with manual pollination of crops
- followed industry and workplace biosecurity procedures
- applied workplace health and safety requirements
- applied manual pollination equipment operating instructions
- used appropriate crop manual pollination technique.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- manual pollination:
 - purpose
 - optimum flowering and pollination conditions
 - techniques
 - tools and equipment
- environmental impacts associated with manual pollination of crops
- industry and workplace biosecurity procedures
- workplace requirements applicable to health and safety in the workplace for manual pollination of crops
- manual pollination equipment operating instructions.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - manual pollination tools and equipment
 - personal protective equipment applicable to manual pollination
- specifications:
 - manual pollination equipment operating instructions
 - workplace requirements applicable to health and safety in the workplace and manual pollination of crops
 - industry and workplace biosecurity procedures applicable to manual pollination of crops
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT213 Perform plant blocking on

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to block on plants including preparing and completing blocking on activities.

The unit applies to individuals who block on plants under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to block on plants	1.1 Confirm plant block on activities and substrate with supervisor 1.2 Select tools, equipment, substrate and materials appropriate to task 1.3 Identify environmental and biosecurity implications associated with blocking on and minimise impact 1.4 Recognise workplace hazards and report safety concerns 1.5 Select, fit, use and maintain personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	applicable to the task and workplace safety requirements
2. Block on plants	2.1 Position plant in blocking on substrate 2.2 Flood substrate with water 2.3 Check plant health, substrate water flow and drainage 2.4 Adjust substrate water flow
3. Complete blocking on activities	3.1 Remove and dispose of waste material 3.2 Clean and return tools and equipment to required location 3.3 Identify and report unserviceable tools and equipment according to workplace procedures 3.4 Record blocking on activities according to workplace procedures 3.5 Report blocking on activities to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations and products
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare blocking on activity records
Oral Communication	<ul style="list-style-type: none"> Use clear language to confirm and report blocking on activities and report tool and equipment unserviceabilities
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Get the work done	<ul style="list-style-type: none"> Take responsibility for routine decisions about blocking on activities and reflect on outcomes to identify effectiveness of decisions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT213 Perform plant blocking on	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT213 Perform plant blocking on

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed plant blocking on, on at least three occasions and has:

- selected, positioned, used and maintained plant blocking on tools, equipment, substrate and materials
- minimised environmental impacts associated with plant blocking on
- followed industry and workplace biosecurity procedures
- applied workplace health and safety requirements
- flooded block on substrate, checked plant health and adjusted water flow
- recorded and reported plant blocking on activities and unserviceable tools and equipment
- removed and disposed of waste material.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of blocking on substrate, including:
 - clay aggregate
 - coco coir
 - perlite
 - rockwool
 - vermiculite
- plant blocking on tools and equipment operating instructions
- purpose and procedures for plant blocking on
- environmental impacts associated with blocking on plants
- industry and workplace biosecurity procedures

- workplace requirements applicable to health and safety in the workplace for blocking on plants.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plant blocking on tools, equipment, substrate and materials
 - personal protective equipment applicable to plant blocking on
- specifications:
 - plant blocking on equipment operating instructions
 - workplace requirements applicable to health and safety in the workplace and blocking on of plants
 - industry and workplace biosecurity procedures applicable to blocking on of plants
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT214 Support horticultural crop harvesting

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to support horticultural crop harvesting, including preparing equipment for harvesting, harvesting crops and transporting crops.

The unit applies to individuals who support horticultural crop harvesting under general supervision and exercise limited autonomy or accountability for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for harvest	1.1 Carry out pre-operational and safety checks on tools, equipment and machinery 1.2 Recognise workplace hazards and report safety concerns 1.3 Select, fit, use and maintain personal protective equipment applicable to the task and workplace safety requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Harvest the crop	2.1 Estimate readiness of crop for picking according to supervisor instructions 2.2 Apply harvesting processes that minimise crop damage 2.3 Carry out basic sorting and grading according to workplace procedures 2.4 Clean and maintain harvesting tools, equipment and machinery according to industry standards 2.5 Report harvesting problems to supervisor
3. Transport the crop	3.1 Use safe manual handling when handling containers 3.2 Move and stack containers to minimise damage to the crop 3.3 Maintain temperature of the harvested crop 3.4 Transport harvested crop to the processing or storage area 3.5 Maintain containers in good working order according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to report harvesting problems
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT214 Support horticultural crop harvesting	AHCPHT203 Support horticultural crop harvesting	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT214 Support horticultural crop harvesting

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has supported horticultural crop harvesting on at least two occasions and has:

- applied workplace health and safety requirements
- estimated the readiness of crop for picking
- harvested the crop using the correct procedure
- selected and graded produce at picking where required
- stacked produce in containers without causing damage or losses
- transported produce according to enterprise requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for harvesting horticultural crops
- workplace requirements applicable to health and safety in the workplace and horticultural crop harvesting
- the effect of adverse climatic conditions which may downgrade the quality of affected crop, prevent or impede harvest operations or severely influence the time taken to complete the harvest program, such as:
 - rain
 - hail
 - extreme wind with dust
 - very high ultraviolet radiation
- recognition of crop maturity and readiness for picking
- enterprise quality procedures
- grading characteristics of each crop

- the importance of maintaining quality of produce, including cooling requirements and quick transport to processing areas.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - horticultural crop harvesting tools, equipment and machinery
 - personal protective equipment applicable to horticultural crop harvesting
- specifications:
 - workplace requirements applicable to health and safety in the workplace and horticultural crop harvesting
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT215 Plant horticultural crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plant horticultural crops in the annual, vegetable and flower growing industries, including preparing for crop planting, preparing site and plant material for planting and completing planting operations.

The unit applies to individuals who plant horticultural crops under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for crop planting operations	1.1 Confirm crop planting activities and instructions with supervisor 1.2 Select tools, equipment and machinery appropriate for crop planting 1.3 Identify workplace health and safety hazards, and report to supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Select and maintain personal protective equipment (PPE) according to workplace health and safety requirements 1.5 Fit and use PPE applicable to the task being undertaken
2. Prepare the site and plant material for planting	2.1 Prepare soil or growing media according to instructions 2.2 Carry out crop protection measures according to instructions 2.3 Apply pre-planting treatments according to instructions where required 2.4 Store planting material to required location
3. Carry out planting operations	3.1 Operate soil preparation tools, equipment and machinery where required according to instructions and manufacturer instructions 3.2 Locate planting material according to instructions 3.3 Store, handle and transport planting materials to the site 3.4 Plant crop according to instructions 3.5 Identify environmental and biosecurity implications associated with planting crops, and minimise impact
4. Complete planting operations	4.1 Water plants in and apply post-planting treatments 4.2 Clean and return tools, equipment and machinery to required location 4.3 Identify and report unserviceable tools, equipment and machinery according to workplace procedures 4.4 Record and report planting operations according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about planting of horticultural crops

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to record planting activity
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm and report planting operations and report tool, equipment and machinery unserviceability to supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT215 Plant horticultural crops	AHCPHT201 Plant horticultural crops	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT215 Plant horticultural crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed horticultural crop planting on at least one occasion, and has:

- selected, used and maintained crop planting tools and equipment
- applied workplace health and safety requirements
- applied treatments under supervision where required
- operated and maintained crop planting machinery where required according to manufacturer specifications
- located planting material
- minimised environmental impacts associated with crop planting
- followed industry and workplace biosecurity procedures
- recorded and reported planting operations and unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for planting horticultural crops, including:
 - basic preparation of soil and growing media
 - importance of correct timing and procedures for crop planting
 - importance of field hygiene and quality control in regard to crop planting
 - nutritional, water and other requirements of the crop
 - basic principles of pest, weed and disease control
 - pre-planting soil and plant treatments and their importance
 - basic soil structure and health
- workplace requirements applicable to health and safety in the workplace for planting horticultural crops

- horticultural crop planting tools, equipment and machinery operating instructions and manufacturer specifications
- environmental impacts associated with planting horticultural crops
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - crop planting tools, equipment and machinery
 - pre-planting soil and plant treatment material
 - personal protective equipment applicable to planting horticultural crops
- specifications:
 - horticultural crop planting tools, equipment and machinery operating instructions and manufacturer specifications
 - workplace requirements applicable to health and safety in the workplace and planting horticultural crops
 - industry and workplace biosecurity procedures applicable to planting horticultural crops
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT216 Carry out canopy maintenance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare for crop canopy maintenance, and carry out and complete maintenance and pruning on crop canopies.

The unit applies to individuals who carry out crop maintenance under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for canopy maintenance activities	1.1 Confirm canopy maintenance activities and instructions with supervisor 1.2 Select tools and equipment appropriate to canopy maintenance 1.3 Identify workplace health and safety hazards, and report to supervisor 1.4 Select and maintain personal protective equipment (PPE) according to workplace health and safety requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Fit and use PPE applicable to the task being undertaken
2. Carry out basic canopy maintenance	2.1 Identify and prune unwanted growth 2.2 Remove pruned material out of the canopy 2.3 Perform post-pruning treatments on the canopy 2.4 Shape, support or position canopy according to supervisor instructions 2.5 Use control measures to regulate exposure of the crop to sun and protect crop from damage 2.6 Operate and maintain tools and equipment according to instructions and manufacturer instructions
3. Complete canopy maintenance activities	3.1 Clean, sharpen and return tools and equipment to required location 3.2 Identify and report unserviceable tools and equipment according to workplace procedures 3.3 Dispose of pruned material according to supervisor instructions 3.4 Record and report canopy maintenance activities according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about canopy maintenance
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to record crop maintenance activity
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm and report canopy maintenance activities and report tool and equipment unserviceability to supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT216 Carry out canopy maintenance	AHCPT202 Carry out canopy maintenance	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT216 Carry out canopy maintenance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed canopy maintenance on at least two occasions, and has:

- interpreted instructions and confirmed with supervisor
- selected, used and maintained crop canopy maintenance tools and equipment
- applied workplace health and safety requirements
- applied basic crop maintenance techniques including shaping, supporting and positioning according to supervisor instruction
- removed and disposed of pruning waste material
- recorded and reported canopy maintenance activities according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of canopy maintenance, including:
 - basic canopy maintenance techniques and their importance in relation to the desired quality of fruit
 - the difference between fruiting and non-fruiting wood
 - the effect of different climatic conditions on canopy maintenance requirements
 - the importance of hygiene and quality control when performing basic canopy maintenance activities
- workplace requirements applicable to health and safety in the workplace for crop canopy maintenance.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - crops with canopies
 - canopy maintenance tools and equipment
 - personal protective equipment applicable to crop canopy maintenance
- specifications:
 - workplace requirements applicable to health and safety in the workplace and crop canopy maintenance
 - work instructions and workplace procedures applicable to crop canopy maintenance
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT217 Undertake field budding and grafting

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare parent material and budding and grafting materials for budding and grafting, and bud and graft trees, shrubs, vines and other plant types in nurseries or in-field situations.

The unit applies to individuals who undertake field budding and grafting under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare parent material for budding and grafting	1.1 Confirm budding and grafting activities with supervisor 1.2 Clean tools and equipment according to workplace procedures 1.3 Prepare plant material and use appropriate method for taking budding or grafting material 1.4 Select and use tools and equipment appropriate to field budding and grafting

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select and maintain personal protective equipment (PPE) according to workplace health and safety requirements 1.6 Fit and use PPE applicable to the task being undertaken
2. Prepare budding and grafting materials	2.1 Select budding and grafting material for propagation 2.2 Use appropriate storage methods to maintain viability of materials 2.3 Dispose of discarded material according to workplace procedures 2.4 Prepare stock according to species guidelines 2.5 Handle budding and grafting materials and stock in a way that prevents damage
3. Bud and graft scion	3.1 Select budding and grafting method according to species guidelines 3.2 Seal bud and graft according to workplace procedures 3.3 Affix labels and identification
4. Complete budding and grafting activities	4.1 Clean, maintain and return tools and equipment to required location 4.2 Identify and report unserviceable tools and equipment according to workplace procedures 4.3 Return materials to store and dispose of waste and unused grafting material according to supervisor instructions 4.4 Record and report budding and grafting activities according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about field budding and grafting
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to record budding and grafting activity

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm and report budding and grafting activities and report tool and equipment unserviceability to supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT217 Undertake field budding and grafting	AHCPT204 Undertake field budding and grafting	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT217 Undertake field budding and grafting

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has undertaken field budding and grafting on at least three occasions, and has:

- selected, cleaned, used and maintained field budding and grafting tools and equipment
- selected and prepared stock for budding and grafting
- applied workplace health and safety requirements
- stored, removed or disposed of unused grafting material
- applied budding and grafting techniques applicable to plant species
- treated plants after budding and grafting
- recorded and reported budding and grafting activities according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for field budding and grafting, including:
 - cleaning requirements of work area and equipment
 - common problems and corrective action required
 - environmental issues and controls
 - importance of selection and use of rootstock
 - maintenance requirements of equipment
 - operation, components and purpose of budding and grafting equipment
 - plant features and processes relevant to budding and grafting
 - procedures and responsibilities for reporting problems
 - recording requirements and procedures
 - rootstock and scion stock

- stages of the budding and grafting procedure and their purpose
- workplace requirements applicable to health and safety in the workplace for field budding and grafting.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plants, rootstock, and budding and grafting material
 - budding and grafting tools and equipment
 - personal protective equipment applicable to plant budding and grafting
- specifications:
 - workplace requirements applicable to health and safety in the workplace, and for field budding and grafting
 - work instructions and workplace procedures applicable to field budding and grafting
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT218 Carry out post-harvest operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to carry out post-harvest operations, including preparing for post-harvest operations, transporting, packing and storing harvested produce.

The unit applies to individuals who carry out post-harvest operations under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for post-harvest operations	1.1 Identify post-harvest treatments, operations to be performed and client specifications with supervisor 1.2 Select materials, tools, equipment and machinery according to post-harvest operations requirements 1.3 Carry out pre-operational and safety checks on tools, equipment and machinery

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify the Hazard Analysis and Critical Control Points (HACCP) and food safety requirements applicable to crop under cultivation</p> <p>1.5 Identify site quarantine protocols and farm and personal hygiene requirements</p>
2. Transport harvested produce	<p>2.1 Transport produce to post-harvest processing or storage area</p> <p>2.2 Maintain required temperature of harvested produce</p> <p>2.3 Maintain containers, materials and equipment in good working order according to workplace requirements</p>
3. Grade, label, treat, weigh and pack produce	<p>3.1 Grade and label produce according to client specifications</p> <p>3.2 Apply post-harvest treatments according to produce requirements</p> <p>3.3 Identify quality parameters of produce and specifications for packaging materials, containers, filling techniques and labelling</p> <p>3.4 Select packaging materials and containers for specific produce</p> <p>3.5 Weigh filled containers, record weight and repack to correct weight</p> <p>3.6 Use required filling techniques for specific containers and produce</p> <p>3.7 Apply wraps and lids, and label containers according to client specifications</p>
4. Store produce in a facility	<p>4.1 Place containers onto pallets or racks to ensure stability and optimum airflow</p> <p>4.2 Transport and arrange pallets or racks in storage facility</p> <p>4.3 Read storage facility monitoring gauges, and report abnormal readings to supervisor</p> <p>4.4 Check condition of stored produce, and remove damaged produce and containers from storage facility</p> <p>4.5 Clean storage facility and packing containers</p> <p>4.6 Record and report post-harvest operations according to workplace requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about post-harvest operations
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to prepare produce labels and record post-harvest operations
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm post-harvest operations and client specifications and report to abnormal gauge readings and post-harvest operations to supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT218 Carry out post-harvest operations	AHCPHT205 Carry out post-harvest operations	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT218 Carry out post-harvest operations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has carried out post-harvest operations on at least two occasions, and has:

- identified post-harvest treatments and operations to be performed
- applied client specifications and workplace requirements applicable to post-harvest operations
- used a range of equipment for handling and transporting produce
- identified the Hazard Analysis and Critical Control Points (HACCP) and applicable food safety requirements
- transported, graded, treated, packed and stored harvested produce according to market requirements, client specifications and workplace requirements
- labelled produce accurately and correctly
- read storage facility monitoring gauges, and reported abnormal readings
- minimised handling damage to produce
- maintained records of post-harvest operations to allow traceability
- reported on post-harvest operations to supervisor.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- client specifications and workplace requirements applicable to post-harvest operations
- HACCP and applicable food safety requirements
- principles and practices of post-harvest operations, including:
 - attributes of workplace produce in relation to desired quality of produce to be presented to client
 - characteristics and procedures for the use of cool rooms

- cool chain principles and practices
- correct storage temperatures for a range of enterprise produce
- disposal of waste materials to minimise damage to external environment
- environmental effects of post-harvest treatments
- humidity levels and the effect of humidity on quality of enterprise produce
- hygiene issues in the handling and storage of plant produce
- industry standards for packaging
- produce handling and cooling requirements
- relationship between quality attributes of produce and packing techniques and packaging
- storage methods for different workplace produce.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - post-harvest tools, equipment and machinery
- specifications:
 - client specifications and workplace requirements applicable to post-harvest operations
 - HACCP and applicable food safety requirements
 - principles and practices of post-harvest operations
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT219 Handle and move mushroom boxes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to handle and move mushroom boxes, including distributing empty boxes, collecting and moving filled boxes, and finalising handing and moving tasks.

The unit applies to individuals who handle and move mushroom boxes under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Distribute boxes for filling to picking rooms	1.1 Select, assemble and position materials, trolleys, tools and equipment appropriate for handling and moving mushroom boxes 1.2 Carry out pre-operational and safety checks on trolleys, tools and equipment 1.3 Follow site quarantine protocols and farm and personal hygiene requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify workplace health and safety hazards, and report to supervisor 1.5 Identify environmental and biosecurity implications associated with work, and minimise impact 1.6 Distribute empty boxes to pickers in a timely and efficient manner
2. Collect and move filled boxes	2.1 Coordinate collection of filled boxes with delivery of empty boxes 2.2 Stack filled boxes on trolleys to the recommended height 2.3 Move stacked trolleys safely from picking rooms and with consideration for other traffic flow in the area 2.4 Transfer and stack filled boxes into cool room using safe work practices 2.5 Record cool room air and mushroom pulp temperatures 2.6 Report variations of temperature and anomalies, and take remedial action according to supervisor instructions
3. Finalise tasks	3.1 Clean and return trolleys, tools and equipment to required location 3.2 Identify and report unserviceable trolleys, tools and equipment according to workplace procedures 3.3 Complete daily work records legibly and accurately 3.4 Report work outcomes and seek feedback on performance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about handling and moving mushroom boxes
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to complete daily work records
Oral communication	<ul style="list-style-type: none"> Use clear language to report cool room and mushroom pulp

Skill	Description
	temperature variations and anomalies, unserviceable trolleys, tools and equipment, and work outcomes to supervisor and seek feedback
Numeracy	<ul style="list-style-type: none"> Estimate mushroom box quantities and packing rate Record cool room air and mushroom pulp temperatures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT219 Handle and move mushroom boxes	AHCPT206 Handle and move mushroom boxes	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT219 Handle and move mushroom boxes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has handled and moved mushroom boxes on at least three occasions, and has:

- selected, assembled, positioned and maintained mushroom box handling and moving materials, trolleys, tools and equipment
- applied workplace health and safety requirements
- carried out an inventory of mushroom boxes
- estimated and supplied quantities of empty boxes to mushroom pickers in a number of picking rooms
- minimised environmental impacts associated with handling and moving mushroom boxes
- followed industry and workplace biosecurity procedures
- estimated rate of packing for collection
- collected filled boxes to ensure continued smooth flow of picking and packing work
- recorded cool room air and mushroom pulp temperatures
- reported temperature variations and anomalies, and taken remedial action
- completed daily work records and reported work outcomes and unserviceable trolleys, tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for handling and moving mushroom boxes, including:
 - collection and packing procedures
 - quality requirements
 - safe manual handling techniques
 - storage requirements for mushrooms

- workplace requirements applicable to health and safety in the workplace for handling and moving mushroom boxes
- environmental impacts associated with handling and moving mushroom boxes
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - mushroom box handling and moving materials, trolleys, tools and equipment
 - mushroom boxes
 - thermometer
- specifications:
 - workplace requirements applicable to health and safety in the workplace for handling and moving mushroom boxes
 - industry and workplace biosecurity procedures applicable to handling and moving mushroom boxes
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT220 Perform mushroom substrate process tasks

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to perform mushroom substrate process tasks, including preparing and assisting with each process stage and finalising substrate processes.

The unit applies to individuals who perform mushroom substrate process tasks under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for each process stage	1.1 Identify substrate process requirements with supervisor 1.2 Select and prepare tools, equipment and machinery 1.3 Report and fix faults or variations from required settings 1.4 Identify site quarantine protocols, workplace and personal hygiene requirements and food safety requirements when preparing for substrate process stages

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.5 Identify workplace health and safety hazards, and report to supervisor</p> <p>1.6 Identify environmental and biosecurity implications associated with work, and minimise impact</p>
2. Fill units with mushroom substrate	<p>2.1 Operate filling equipment at a speed that maintains continuous operation</p> <p>2.2 Fill units with mushroom substrate according to workplace procedures</p>
3. Assist with spawning processes	<p>3.1 Inspect and report any abnormalities found in spawn</p> <p>3.2 Mix spawn into mushroom substrate</p> <p>3.3 Check spawn usage rate and report variations according to workplace procedures</p> <p>3.4 Apply and mix supplement as required</p> <p>3.5 Install spawned mushroom substrate in spawn run rooms</p> <p>3.6 Take samples of mushroom substrate according to workplace procedures</p> <p>3.7 Check mushroom substrate for presence of pests, and take remedial action as required</p>
4. Prepare and apply casing mixture	<p>4.1 Assemble and check required quantities of pesticides, peat, limestone and additives for casing</p> <p>4.2 Blend casing ingredients according to workplace procedures</p> <p>4.3 Take samples of prepared casing and mushroom substrate before casing has been added</p> <p>4.4 Apply and mix supplement as required</p> <p>4.5 Check casing depth, structure and consistency, and report variations according to workplace procedures</p>
5. Finalise mushroom substrate processes	<p>5.1 Clean and return tools, equipment and machinery to required location</p> <p>5.2 Identify and report unserviceable tools, equipment and machinery according to workplace procedures</p> <p>5.3 Clean up at the end of each process stage</p> <p>5.4 Complete records legibly and accurately</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.5 Report work outcomes and seek feedback on performance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about processing mushroom substrate
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to complete work records
Oral communication	<ul style="list-style-type: none"> Use clear language to report spawn usage rate variations, and casing depth, structure and consistency variations Use clear language to report work outcomes and unserviceable tools and equipment to supervisor and seek feedback
Numeracy	<ul style="list-style-type: none"> Calculate pesticide, peat, limestone and additive quantities for casing Measure casing depth

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT220 Perform mushroom substrate process tasks	AHCPT207 Perform mushroom substrate process tasks	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT220 Perform mushroom substrate process tasks

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed mushroom substrate process tasks on at least three occasions, and has:

- selected, prepared and maintained mushroom substrate processing tools, equipment and machinery
- maintained site quarantine protocols and personal hygiene
- applied workplace health and safety requirements
- minimised environmental impacts associated with mushroom substrate process tasks
- followed industry and workplace biosecurity procedures
- filled units with mushroom substrate
- applied spawn into mushroom substrate
- reported spawn usage rate variations, and casing depth, structure and consistency variations
- calculated pesticide, peat, limestone and additive quantities
- prepared and applied casing mixture
- measured casing depth
- completed work records and reported work outcomes and unserviceable tools and equipment to supervisor and sought feedback.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of mushroom substrates, including:
 - food safety standards, hazards and critical control points, quality systems and emergency procedures

- the impact on the rest of the mushroom production cycle of deviations of mushroom substrate quality from workplace standards for substrate
- the mushroom production cycle
- substrate production
- site quarantine protocols
- workplace requirements applicable to health and safety in the workplace for mushroom substrate process tasks
- environmental impacts associated with mushroom substrate process tasks
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - mushroom substrate processing tools, equipment and machinery
 - mushroom substrate and spawn
 - pesticide, peat, limestone, additive and casing mixture
- specifications:
 - food safety standards relevant to mushroom substrate preparation
 - workplace requirements applicable to health and safety in the workplace for mushroom substrate process tasks
 - industry and workplace biosecurity procedures applicable to mushroom substrate process tasks
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT221 Water mushroom crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare and operate watering equipment and complete watering operations for mushroom crops.

The unit applies to individuals who water mushroom crops under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to use watering equipment	1.1 Identify mushroom watering requirements with supervisor 1.2 Assemble and connect watering equipment components to water supply 1.3 Add chemicals to water according to supervisor instructions 1.4 Read and record water meter for the area to be watered

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Identify rooms requiring watering and required watering pattern
2. Operate watering equipment	2.1 Follow site quarantine protocols, workplace and personal hygiene requirements for watering operation 2.2 Check and adjust water pressure to ensure correct spray or droplet pattern is achieved 2.3 Provide and distribute water evenly in the correct quantity and pressure 2.4 Report and fix faults or variations in watering operations 2.5 Identify workplace health and safety hazards, and report to supervisor 2.6 Identify environmental and biosecurity implications associated with work, and minimise impact
3. Finalise watering operations	3.1 Read water meter for area, and record amount of water used 3.2 Disconnect watering equipment and return to storage area 3.3 Identify and report unserviceable watering equipment according to workplace procedures 3.4 Report work outcomes and seek feedback on performance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about watering mushroom crops
Oral communication	<ul style="list-style-type: none"> Use clear language to report water equipment faults, variations, unserviceable equipment and work outcomes to supervisor and seek feedback
Numeracy	<ul style="list-style-type: none"> Measure chemical quantities Record water meter reading Calculate and record amount of water used

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT221 Water mushroom crops	AHCPT208 Water mushroom crops	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT221 Water mushroom crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has watered mushroom crops on at least three occasions, and has:

- assembled, connected and maintained watering equipment
- measured correct doses of additives for water
- delivered water to the mushroom crop at required rate and pressure
- estimated flow rate of water by the range of watering equipment in use
- applied workplace health and safety requirements
- minimised environmental impacts associated with watering mushroom crops
- followed industry and workplace biosecurity procedures
- recorded water use
- reported work outcomes and unserviceable tools and equipment to supervisor and sought feedback.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for watering mushroom crops, including:
 - effect on mushrooms of under-watering, overwatering, insufficient evaporation, late watering and moisture imbalance
 - effects of water on casing structure, mycelium, yields and quality
 - factors affecting effective operation of watering tree or other equipment used
 - how panning occurs
 - light, medium and heavy water and when each type is used
 - safe and effective use of fungicides and other water additives

- workplace requirements applicable to health and safety in the workplace for watering mushroom crops
- environmental impacts associated with watering mushroom crops
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - mushroom watering equipment
 - water additives
- specifications:
 - workplace requirements applicable to health and safety in the workplace for watering mushroom crops
 - industry and workplace biosecurity procedures applicable to watering mushroom crops
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT222 Produce trellis dried grapes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to produce trellis dried grapes, including summer pruning, emulsion application, crown bunch removal, harvesting and post-harvest drying.

The unit applies to individuals who produce trellis dried grapes under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Summer prune grape crop for trellis drying	1.1 Reduce leaf coverage on fruiting canes to assist cutting, emulsion application and drying 1.2 Cut canes according to workplace requirements 1.3 Leave replacement canes intact and undamaged to ensure next year fruiting 1.4 Spray grapes requiring emulsion treatment to ensure full and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	complete coverage
2. Prepare for harvesting trellis dried grapes	<p>2.1 Recognise workplace hazards and report safety concerns</p> <p>2.2 Select, fit, use and maintain personal protective equipment according to the task and workplace requirements</p> <p>2.3 Identify and hang uncut grapes and cut crown bunches on trellis without causing damage for drying or removal</p> <p>2.4 Sample crop and test for moisture content and fruit maturity</p> <p>2.5 Select harvest tools, equipment and machinery appropriate to harvesting operations</p> <p>2.6 Carry out pre-operational and safety checks on harvesting machinery and ancillary equipment</p>
3. Harvest trellis dried grapes	<p>3.1 Operate harvesting machinery and ancillary equipment according to workplace requirements in a safe manner and at speeds to suit crop conditions</p> <p>3.2 Maximise crop quality by implementing and maintaining standards that meet processor and workplace requirements</p> <p>3.3 Remove, store and treat full bulk bins as soon as possible to minimise deterioration of crop quality</p> <p>3.4 Clean and return harvest tools, equipment and machinery to required location</p>
4. Carry out post-harvest drying	<p>4.1 Select and check drying tools, equipment and machinery</p> <p>4.2 Carry out post-harvest drying as directed to meet processor requirements</p> <p>4.3 Monitor moisture and temperature of crop during drying, and return to bulk bins after appropriate cool down has occurred</p> <p>4.4 Identify and report unserviceable tools, equipment and machinery according to workplace procedures</p> <p>4.5 Report harvest and post-harvest activities to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about trellis dried grape production
Oral communication	<ul style="list-style-type: none"> Use clear language to report harvest and post-harvest activities and unserviceable tools, equipment and machinery to supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT222 Produce trellis dried grapes	AHCPHT209 Produce trellis dried grapes	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT222 Produce trellis dried grapes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has produced trellis dried grapes on at least one occasion, and has:

- summer pruned vines according to workplace requirements
- identified parts of the vine
- selected, used and maintained trellised grape harvesting and drying tools, equipment and machinery
- applied workplace health and safety requirements
- carried out post-harvest drying
- reported harvest and post-harvest activities, and unserviceable tools, equipment and machinery.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for producing trellis dried grapes, including:
 - crown and cordon bunch picking or removal requirements and procedures
 - environmental impact issues
 - hazard identification and control
 - processor quality standards and requirements
 - summer pruning requirements and procedures
 - year-round preparation required for trellis drying
- workplace requirements applicable to health and safety in the workplace for producing trellis dried grapes.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - trellis dried grape crops
 - crop harvesting and drying tools, equipment and machinery
 - personal protective equipment applicable to producing trellis dried grapes
- specifications:
 - workplace requirements applicable to health and safety in the workplace and producing trellis dried grapes
 - work instructions and workplace procedures applicable to producing trellis dried grapes
- relationships:
 - supervisors
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPTH301 Carry out a crop regulation program

Modification History

Not applicable.

Application

This unit of competency describes the skills and knowledge required to carry out a crop regulation program in which thinning and pruning of flower, fruit or vegetable crops is undertaken to control yield and quality.

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for the crop regulation program	1.1 Identify the site and operational requirements of the program 1.2 Select crop regulation tools and equipment 1.3 Carry out pre-operational and safety checks on tools, equipment and machinery 1.4 Calibrate and adjust tools, equipment and machinery
2. Implement the crop regulation program	2.1 Identify and organise work teams and contractors 2.2 Co-ordinate work in a sequential, timely and effective manner 2.3 Plan work in an efficient, sequential and co-ordinated manner 2.4 Monitor crop regulation tasks and undertake remedial action where necessary to achieve program objectives
3. Complete crop regulation activities	3.1 Remove and dispose of waste material 3.2 Clean, maintain and store tools, equipment and machinery 3.3 Record or report work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

This unit is equivalent to AHCPTH301A Carry out a crop regulation program.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT301 Carry out a crop regulation program

Modification History

Release	TP Version	Comment
1	AHC v1.1	Initial release

Performance Evidence

The candidate must demonstrate evidence of their ability to satisfy holistically all of the requirements of unit. Performance should be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess the effects on plant growth, habit and production levels of thinning and pruning operations
- co-ordinate work groups
- prepare for crop regulation activities
- carry-out crop thinning procedures as required
- use a range of methods to achieve crop regulation goals
- record or report activities
- store and maintain equipment and materials

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of crop regulation
 - effects on plant growth, habit and production levels of thinning and pruning operations in relation to the market goals of the enterprise
 - enterprise quality procedures and characteristics of a crop relative to varying market requirements
 - environmental impacts of crop regulation and disposal of waste
 - principles of thinning and pruning and the methods used to achieve crop regulation goals
 - safe work procedures for use of machinery and equipment
 - types of crop regulation materials
 -

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT302 Prepare raw materials and compost feedstock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare and mix raw materials into a suitable feedstock mixture, monitor the composting process, conduct quality control inspection and clean up.

The unit applies to individuals who prepare raw materials and compost feedstock under broad direction, and take responsibility for their own work and for the quality of the work of others.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Organise for processing	1.1 Determine processing requirements from job specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Select required materials, equipment and machinery, and check for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	safe operation
2. Prepare raw materials and compost the feedstock mixture	2.1 Identify and collect raw materials and additives, and check for physical contamination 2.2 Confirm composting technology and methods to be used according to raw material types and workplace product requirements 2.3 Pre-process raw materials into suitable forms for composting 2.4 Mix pre-processed raw materials into suitable feedstock mixtures for composting 2.5 Handle feedstock mixtures for composting according to technology, appropriate method and industry best practice 2.6 Assign batch numbers or codes, and create batch documentation to enable tracking of batch
3. Monitor composting process	3.1 Monitor composting batch by observing and using field testing equipment 3.2 Maintain processing and operations records for process control and to track batch through the compost production cycle 3.3 Identify and report faults or variations to supervisor, and take remedial action to maintain effective and consistent compost production
4. Conduct quality control inspection	4.1 Inspect and assess finished compost for compliance according to workplace product requirements 4.2 Report faults or variations in compost product 4.3 Adjust and reprocess non-compliant product 4.4 Confirm compliance of compost batch according to workplace product requirements 4.5 Complete batch documentation for compliant compost product 4.6 Inform sales and operational staff members that product is suitable for sale or preparation of value-added products
5. Clean up area	5.1 Clean and secure load-shift machinery and other processing equipment according to workplace procedures 5.2 Clear away raw materials and finished compost products to designated areas, and clean processing site

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about raw material and compost feedstock preparation
Oral communication	<ul style="list-style-type: none"> Use clear language to report compost production faults or variations to supervisor
Numeracy skills	<ul style="list-style-type: none"> Calculate quantities and ratios of raw materials and feedstock mixtures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT302 Prepare raw materials and compost feedstock	AHCPHT307 Prepare raw materials and compost feedstock	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT302 Prepare raw materials and compost feedstock

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared raw materials and compost feedstock on at least three occasions, and has:

- applied workplace health and safety requirements
- prepared raw materials for composting according to workplace product requirements
- established, maintained and completed compost batch documentation
- prepared batches for composting according to defined compost recipes
- conducted and interpreted basic field test results to confirm effective processing and defined intervention required to rectify composting processes
- maintained processing operations records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for preparing composting raw materials, including:
 - Australian composting standards
 - batch documentation techniques
 - characteristics of a range of raw materials
 - compost production cycle
 - compost quality standards
 - fundamental characteristics of compost quality
 - key process control stages critical to consistent compost production
 - overview of systems and technologies used in compost production
 - principles of commercial compost production
 - range and characteristics of categories of compost product

- steps in pre-processing compost materials
- workplace requirements applicable to health and safety in the workplace for preparing raw materials and compost feedstock.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - commercial composting materials, equipment and machinery, and load-shift machinery
 - raw compost materials and feedstock mixtures
 - field testing equipment
- specifications:
 - workplace requirements applicable to health and safety in the workplace for preparing raw materials and compost feedstock
- relationships:
 - supervisor, sales and operational staff members
- timeframes:
 - according to job specification requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPTH305 Regulate crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to regulate crops by thinning and pruning flower, fruit or vegetable crops to control yield and quality.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for crop regulation	1.1 Select crop regulation tools, equipment and machinery 1.2 Carry out pre-operational and safety checks on crop regulation tools, equipment and machinery 1.3 Select and prepare chemicals to be used for crop regulation 1.4 Select, use and maintain personal protective equipment (PPE)

Element	Performance criteria
2. Undertake crop regulation	2.1 Identify the plant material to be thinned or pruned 2.2 Undertake the crop regulation program 2.3 Operate crop regulation tools, equipment and machinery safely and effectively 2.4 Record and report signs of diseases and pests
3. Complete crop regulation	3.1 Dispose of waste material removed from the site 3.2 Follow correct manual handling techniques when lifting or moving heavy loads 3.3 Clean, maintain and store tools, equipment and machinery 3.4 Maintain a clean and safe work area 3.5 Record or report work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPTH305A Regulate crops.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT305 Regulate crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- carry out pre-operational and safety checks on crop regulation tools, equipment and machinery
- assess the effects on plant growth, habit and production levels of thinning and pruning operations
- interpret requirements for pruning or thinning and work to instructions
- use and maintain a range of plant thinning or pruning tools
- remove and dispose of waste material
- report signs of diseases and pests
- operate crop regulation tools, equipment and machinery

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of crop regulation
 - effect of weather which may prevent or impede crop regulation activities
 - effects on plant growth, habit and production levels of thinning and pruning operations in relation to the market goals of the enterprise
 - enterprise quality procedures and characteristics of a crop relative to varying market requirements
 - principles of thinning and pruning and the methods used to achieve crop regulation goals
 - safe work procedures for use of machinery and equipment
 - tools, equipment and machinery used for crop regulation
 - types of crop regulation materials

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPTH306 Establish horticultural crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to establish horticultural crops by seed, seedlings or other vegetative means.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare machinery and equipment for use	1.1 Select and prepare machinery and equipment and confirm against the work plan 1.2 Attach and calibrate equipment for operation 1.3 Identify workplace hazards, assess and control risks
2. Prepare for	2.1 Monitor soil and weather conditions for optimal seeding

Element	Performance criteria
horticultural crop establishment	<p>conditions</p> <p>2.2 Recognise and confirm soil conservation and sustainable land management practices and procedures</p> <p>2.3 Confirm and prepare seeding/planting, fertiliser, and pest and weed control requirements</p>
3. Sow/plant the crop	<p>3.1 Undertake seeding/planting and fertiliser applications out</p> <p>3.2 Coordinate pest and weed control treatment with seeding/planting and fertiliser applications</p>
4. Complete seeding/planting operations	<p>4.1 Maintain seeding/planting, machinery and equipment operation records</p> <p>4.2 Report machinery and equipment damage, malfunctions or irregular performance</p> <p>4.3 Clean, secure and store machinery and equipment</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPTH306A Establish horticultural crops.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT306 Establish horticultural crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- carry out ground preparation and apply pre-planting treatments
- prepare and service machinery and equipment
- carry out sowing/planting operations and fertiliser application
- monitor the environmental impacts of establishing the crop
- clean, secure and store machinery and equipment
- keep records of the sowing/planting operation

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for establishing crops
 - crop types, preparation of seeds/plants, seeding/planting methods and application techniques
 - effects of weather conditions on seeding/planting and fertilising applications
 - enterprise policies for seeding/planting operations and recording and reporting routines
 - fertiliser types, rates of application and crop nutrient requirements
 - operating principles and operating methods for machinery and equipment
 - positive environmental practices, negative environmental impacts and minimisation measures associated with seeding operations
 - personal protective equipment (PPE) and when and how it should be used
 - pre-operational and safety checks, servicing and maintenance procedures for seeding/planting machinery and equipment
 - principles of weight distribution with regard to load shifting and vehicle movement

- procedures for cleaning, securing and storing machinery, equipment and materials
- relevant legislation, regulations and codes of practice with regard to workplace health and safety and the use and control of hazardous substances
- sustainable land management and soil conservation techniques

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPTH307 Prepare raw materials and compost feedstock

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare and mix raw materials into a suitable feedstock mixture for commercial-scale composting and compost feedstock mixtures to manufacture compost products.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Organise for processing	1.1 Review job sheet to identify all processing requirements 1.2 Check machinery, equipment and materials for serviceability and safe operation 1.3 Identify and assess workplace hazards and take action to

Element	Performance criteria
	minimise risk to self and others
2. Prepare raw materials and compost the feedstock mixture	2.1 Identify, collect and check raw materials and additives for physical contamination 2.2 Confirm composting technology and methods to be used as appropriate to raw material types and enterprise product requirements 2.3 Pre-process raw materials into suitable forms for composting 2.4 Mix pre-processed raw materials into suitable feedstock mixtures for composting 2.5 Handle feedstock mixtures for composting according to technology, appropriate method and industry best practice 2.6 Assign batch numbers or codes and create batch documentation to enable tracking of batch
3. Monitor composting process	3.1 Monitor composting batch by observing and using field testing equipment 3.2 Maintain processing and operations records for process control and to track batch through the compost production cycle 3.3 Report to supervisor faults or variations observed at any stage of the process and take remedial action to maintain effective and consistent compost production
4. Conduct quality control inspection	4.1 Inspect and assess finished compost for compliance with enterprise product requirements 4.2 Report faults or variations 4.3 Reprocess non-compliant product with necessary adjustments 4.4 Confirm compliance of compost batch with product requirements 4.5 Complete batch documentation for compliant compost product 4.6 Inform sales and operational staff members that product is suitable for sale and/or preparation of value-added products
5. Clean up area	5.1 Clean loading-shifting machinery and other processing equipment 5.2 Clear away raw materials and finished compost products to designated areas and clean processing site

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPTH307A Prepare raw materials and compost the feedstocks.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT307 Prepare raw materials and compost feedstock

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- conduct and interpret basic field test results to confirm effective processing and define intervention required to rectify composting processes
- establish and maintain appropriate compost batch documentation accurately and promptly
- prepare batches for composting according to defined compost recipes
- prepare raw materials for composting according to enterprise product requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for preparing composting raw materials
 - Australian composting standards
 - batch documentation techniques
 - characteristics of a range of raw materials
 - compost production cycle
 - compost quality standards
 - fundamental characteristics of compost quality
 - key process control stages critical to consistent compost production
 - overview of systems and technologies used in compost production
 - principles of commercial compost production
 - range and characteristics of categories of compost product
 - steps in pre-processing compost materials

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT310 Coordinate horticultural crop harvesting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to coordinate crop harvesting activities.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for crop harvesting	1.1 Identify the crop to be harvested and the requirements and procedures to assure crop quality 1.2 Determine crop maturity by experience, specification charts, aids or devices and according to client, enterprise and industry quality assurance specifications

Element	Performance criteria
	1.3 Identify that suitable weather conditions for picking are established according to enterprise work procedures 1.4 Select tools, equipment and machinery according to harvest requirements 1.5 Carry out pre-operational and safety checks on tools, equipment and machinery
2. Coordinate harvesting activities	2.1 Inform seasonal labour of the harvest plan/strategy 2.2 Assign daily work tasks to harvest staff 2.3 Ensure work program allows for contingencies caused by weather or other interruptions 2.4 Monitor the harvest and coordinate changes to work activities as required
3. Monitor crop quality throughout harvest	3.1 Ensure harvesting procedures and the harvested crop comply with specifications 3.2 Ensure crop is handled in a way that minimises damage 3.3 Ensure sorting and grading of the crop complies with specifications 3.4 Minimise post-harvest deterioration in crop storage according to enterprise work procedures 3.5 Transport the crop with minimum damage 3.6 Calculate and record picking tallies or harvest yields
4. Deliver crop to specified destination	4.1 Confirm delivery details including quantity, timing and destination 4.2 Deliver crop with damage levels that are within specifications 4.3 Ensure crop complies with client, enterprise and industry quality assurance specifications 4.4 Complete delivery documentation accurately

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPTH310A Coordinate horticultural crop harvesting.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT310 Coordinate horticultural crop harvesting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- coordinate a work group
- maintain harvest requirements
- monitor crop quality
- prepare for crop harvesting activities

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for
 - effect of adverse climatic conditions (e.g., rain, hail, extreme wind, or very high ultraviolet radiation), which may prevent or impede crop harvesting operations, or severely influence the time taken to complete the tasks necessary to fulfil the operation
 - enterprise quality procedures and characteristics of a crop relative to varying market requirements
 - grading characteristics of each crop
 - importance of maintaining quality of produce including cooling requirements and quick transport from field to processing areas
 - industry wage rates and conditions, contractors services, conditions and rates
 - licensing requirements for use of forklifts, trucks and machinery
 - recognition of the maturity parameters of a range of crops

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT311 Install and maintain vertical hanging trellis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to install and maintain vertical hanging trellis.

The unit applies to individuals who install and maintain vertical hanging trellis under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to install and maintain vertical hanging trellis	1.1 Clarify requirements of the installation and maintenance work with supervisor 1.2 Identify and select tools, equipment and material resource requirements according to scope of work and supervisor instructions 1.3 Recognise workplace hazards and report safety concerns 1.4 Identify environmental and biosecurity implications associated with installation and maintenance work, and minimise impact

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select, fit, use and maintain personal protective equipment applicable to the task and workplace safety requirements
2. Install vertical hanging trellis	2.1 Identify appropriate starting point for installation activities 2.2 Position equipment and materials at commencement and during installation activities to ensure they are ready for use 2.3 Identify appropriate suspension point for vertical hanging trellis 2.4 Attach vertical hanging trellis to suspension point 2.5 Attach base of plant to vertical hanging trellis using loose overhand knot or trellis clip
3. Maintain vertical hanging trellis and plants	3.1 Inspect trellis for signs of disrepair 3.2 Rectify and report disrepair according to workplace procedures 3.3 Evaluate plant growth and attach vertical hanging trellis to new plant growth using trellis clip or twisting method 3.4 Lower and lean plants where appropriate
4. Complete installation and maintenance activities	4.1 Remove and dispose of waste material according to workplace procedures 4.2 Clean and return tools and equipment to required location 4.3 Identify and report unserviceable tools and equipment according to workplace procedures 4.4 Record installation activities according to workplace procedures 4.5 Report installation and maintenance activities to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations and products

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare installation and maintenance activity records
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm and report installation and maintenance activities, and report safety concerns and tool and equipment unserviceability
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Get the work done	<ul style="list-style-type: none"> Take responsibility for routine decisions about installing and maintaining vertical hanging trellis, and reflect on outcomes to identify effectiveness of decisions

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Vertical hanging trellis must include at least one of the following:	<ul style="list-style-type: none"> plastic trellis trellis twine or string trellis netting.
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT311 Install and maintain vertical hanging trellis	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT311 Install and maintain vertical hanging trellis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has installed and maintained two different vertical hanging trellis on at least two occasions, and has:

- selected, positioned, used and maintained vertical hanging trellis tools equipment and materials
- applied workplace health and safety requirements
- minimised environmental impacts associated with installing and maintaining vertical hanging trellis
- followed industry and workplace biosecurity procedures
- evaluated vertical hanging trellis and plant growth maintenance requirements
- applied plant maintenance techniques, including:
 - clipping or twisting
 - lowering and leaning where appropriate
- removed and disposed of waste material
- recorded and reported installation and maintenance activities and unserviceable tools and equipment

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- vertical hanging trellis installation and maintenance tools and equipment and operating instructions
- workplace requirements applicable to health and safety in the workplace for installing and maintaining vertical hanging trellis
- environmental impacts associated with installing and maintaining vertical hanging trellis
- industry and workplace biosecurity procedures

- vertical hanging trellis and plant maintenance:
 - purpose
 - techniques
 - tools, equipment and materials.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - vertical hanging trellis installation and maintenance tools, equipment and materials
 - personal protective equipment applicable to vertical hanging trellis installation and maintenance
- specifications:
 - vertical hanging trellis equipment operating instructions
 - workplace requirements applicable to health and safety in the workplace and installing and maintaining vertical hanging trellis
 - industry and workplace biosecurity procedures applicable to installing and maintaining vertical hanging trellis
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT312 Implement a crop regulation program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement a crop regulation program, including preparing the program and communicating, monitoring and undertaking crop regulation, and completing crop regulation activities.

The unit applies to individuals who implement a crop regulation program under broad direction, and take responsibility for their own work and the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for the crop regulation program	1.1 Identify and confirm with supervisor the crop to be regulated and operational requirements of the program 1.2 Select, tools, equipment and machinery appropriate for the crop to be regulated, and check for safe operation 1.3 Identify environmental and biosecurity implications associated with regulating crop, and minimise impact

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Select, fit, use and maintain personal protective equipment according to the task and workplace safety requirements 1.5 Calibrate and adjust tools, equipment and machinery
2. Communicate and monitor crop regulation activities	2.1 Inform work teams and contractors of the operational requirements of the regulation program and strategy 2.2 Communicate daily work tasks to work teams and contractors 2.3 Monitor crop regulation tasks and undertake remedial action where necessary to achieve program objectives
3. Undertake crop regulation	3.1 Evaluate crop growth and identify plant material to be thinned or pruned 3.2 Regulate crop using techniques appropriate to crop requirements 3.3 Operate crop regulation tools, equipment and machinery safely 3.4 Record and report signs of diseases and pests according to workplace procedures
4. Complete crop regulation activities	4.1 Remove and dispose of waste material according to workplace and biosecurity requirements 4.2 Clean, maintain and return tools, equipment and machinery to required location 4.3 Identify and report unserviceable tools, equipment and machinery according to workplace procedures 4.4 Record and report crop regulation activities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about the crop regulation program
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to record signs of diseases and pests, and complete crop

Skill	Description
	regulation activity records
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to confirm crop to be regulated and report signs of diseases and pest, crop regulation activities, and unserviceable tools, equipment and machinery Use clear language to inform work teams and contractors of crop regulation program operational requirements and strategy, and daily work tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT312 Implement a crop regulation program	AHCPT301 Carry out a crop regulation program	Redesigned unit that includes content from previous unit	Not equivalent
AHCPT312 Implement a crop regulation program	AHCPT305 Regulate crops	Redesigned unit that includes content from previous unit	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT312 Implement a crop regulation program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a crop regulation program on at least two occasions, and has:

- selected and operated crop regulation tools, equipment and machinery, and checked for safe operation
- applied workplace health and safety requirements applicable to regulating crops
- minimised environmental and biosecurity impacts associated with the crop regulation program
- used and maintained a range of plant thinning and pruning tools
- communicated and monitored the crop regulation program
- evaluated crop growth and identified plant material to be thinned or pruned
- assessed the effects of thinning and pruning operations on plant growth, habit and production levels
- used a range of methods to achieve crop regulation goals
- recorded and reported signs of diseases and pests, crop regulation activities and unserviceable tools, equipment and machinery
- removed and disposed of waste material
- cleaned, maintained and stored tools, equipment and machinery.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- crop regulation tools, equipment and machinery operating instructions and safe work procedures
- workplace health and safety requirements applicable to regulating crops
- industry and workplace environment and biosecurity procedures applicable to regulating crops

- principles and practices of crop regulation, including:
 - effect of weather on crop regulation activities
 - effects on thinning and pruning operations on plant growth, habit and production levels
 - workplace quality procedures and characteristics of crop being regulated
 - principles of thinning and pruning and the methods used to achieve crop regulation goals
 - types of crop regulation methods and materials
 - signs of pests and disease.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - crop regulation tools, equipment and machinery
 - personal protective equipment applicable to crop regulation
 - principles and practices of crop regulation
- specifications:
 - crop regulation tools, equipment and machinery operating instructions and safe work procedures
 - industry and workplace environment and biosecurity procedures applicable to regulating crops
 - workplace health and safety requirements applicable to regulating crops
- relationships:
 - team members, contractors and supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322c>

AHCPHT313 Implement a post-harvest program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement a post-harvest program for horticultural crops.

The unit applies to individuals who implement a post-harvest program under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for implementation of post-harvest operations	1.1 Identify post-harvest operations to be performed and requirements of the program 1.2 Select materials, tools, equipment and machinery according to post-harvest operations requirements, and check for safe operation 1.3 Identify the Hazard Analysis and Critical Control Points (HACCP) and food safety requirements applicable to crop under cultivation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Coordinate post-harvest work	<p>2.1 Identify work team and coordinate tasks</p> <p>2.2 Undertake post-harvest operations according to post harvest program requirements</p> <p>2.3 Follow site quarantine protocols and farm and personal hygiene requirements</p>
3. Implement post-harvest treatments	<p>3.1 Grade and label produce according to client specifications</p> <p>3.2 Identify and dispose of produce that does not meet client specifications or workplace requirements</p> <p>3.3 Select post-harvest treatments according to harvested produce requirements</p> <p>3.4 Confirm timing, rate, application method, environmental requirements and handling techniques conform to the requirements of the harvested produce</p> <p>3.5 Confirm post-harvest practices meet workplace requirements and minimise damage to produce</p> <p>3.6 Clean, maintain and return tools, equipment and machinery to required location</p> <p>3.7 Identify and report unserviceable tools, equipment and machinery according to workplace procedures</p>
4. Implement hazardous waste disposal guidelines	<p>4.1 Review waste disposal requirements and determine operational tasks</p> <p>4.2 Monitor collection and disposal of waste according to workplace procedures</p> <p>4.3 Report conditions likely to impact on business viability</p>
5. Implement packing and presentation requirements of produce	<p>5.1 Review packing and presentation specification requirements, and determine operational tasks</p> <p>5.2 Monitor and adjust packing and presentation processes</p> <p>5.3 Record packing and presentation processes</p>
6. Implement storage requirements of produce	<p>6.1 Review storage specification requirements, and determine operational tasks</p> <p>6.2 Monitor storage processes and facilities</p> <p>6.3 Record storage processes and conditions</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about post-harvest program
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to report unserviceable tools, equipment and machinery, and conditions likely to impact on business viability Use clear language to inform work teams of post-harvest program operational tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPTH313 Implement a post-harvest program	AHCPTH303 Implement a post-harvest program	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322c>

Assessment Requirements for AHCPHT313 Implement a post-harvest program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a post-harvest program on at least two occasions, and has:

- identified and coordinated post-harvest operations according to post-harvest program requirements
- applied client specifications and workplace requirements applicable to post-harvest operations
- identified the Hazard Analysis and Critical Control Points (HACCP) and applicable food safety requirements
- implemented post-harvest treatments and labelling, packing, presentation and storage requirements according to market requirements, client specifications and workplace procedures
- reported unserviceable tools, equipment and machinery, and conditions likely to impact on business viability
- monitored the collection and disposal of hazardous waste materials according to guidelines and workplace procedures
- completed packing and presentation process records, and storage processes and conditions records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- client specifications and workplace requirements applicable to post-harvest operations
- HACCP and applicable food safety requirements
- principles and practices of post-harvest treatments and processes, including:
 - attributes of produce in relation to the desired quality of produce to be presented to the client

- characteristics and procedures for the use of cool rooms
- cool chain principles and practices
- correct storage temperatures for a range of produce
- enterprise confined spaces policy and safety procedures
- environmental effects of post-harvest treatments and hazardous waste disposal methodologies, application and purpose
- humidity levels and their effect on the quality of produce
- hygiene issues in the handling and storage of plant produce
- industry standards for packaging
- relationship between the quality attributes of produce and packing techniques and packaging
- storage methods for a range of produce
- the importance of maintaining the quality of produce, including handling and cooling requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - post-harvest tools, equipment and machinery
- specifications:
 - client specifications, post-harvest program and workplace requirements applicable to post-harvest operations
 - HACCP and applicable food safety requirements
 - principles and practices of post-harvest operations
- relationships:
 - team members
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT314 Harvest horticultural crops mechanically

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare, operate and shut down machinery and related equipment used in the harvest of horticultural crops.

The unit applies to individuals who harvest horticultural crops mechanically under broad direction, and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare machinery for use	1.1 Determine work requirements from workplace instructions 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Source and interpret relevant machinery and equipment operation and maintenance manual and manufacturer instructions 1.4 Select, fit, use and maintain personal protective equipment applicable to the task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select required tools, equipment and machinery, and conduct routine pre-operational checks 1.6 Document and replace damaged or worn components according to workplace procedures 1.7 Attach ancillary equipment and check for correct operation
2. Operate machinery and equipment	2.1 Carry out pre-start and start-up procedures according to workplace procedures 2.2 Operate machinery and equipment in a safe, controlled and efficient manner, and monitor for performance efficiency 2.3 Operate machinery according to operation and maintenance manual, manufacturer specifications, task requirements and conditions 2.4 Identify environmental and biosecurity implications associated with harvesting, and undertake activities to minimise impact 2.5 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment
3. Complete work	3.1 Conduct shut-down according to workplace procedures 3.2 Perform routine operational servicing and minor maintenance 3.3 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures 3.4 Clean, store and secure harvest machinery and equipment 3.5 Record and report harvest activities and machinery use records

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about mechanical horticultural crop harvesting
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to record harvest activity

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Numeracy skills	<ul style="list-style-type: none"> Calculate quantities of machinery fluids

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT314 Harvest horticultural crops mechanically	AHCPHT304 Harvest horticultural crops mechanically	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT314 Harvest horticultural crops mechanically

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has harvested horticultural crops mechanically on at least two occasions, and has:

- applied workplace health and safety requirements
- carried out horticultural harvesting machinery and equipment pre-operational checks according to operation and maintenance manual
- operated and shut down horticultural harvesting machinery and equipment according to operation and maintenance manual, manufacturer specifications, task requirements and local conditions
- recognised and documented defects in horticultural harvesting machinery and equipment
- attached and uncoupled ancillary equipment safely
- minimised environmental impacts associated with horticultural harvesting machinery and equipment operation
- performed minor maintenance
- recorded and reported harvest activities and machinery use
- cleaned, stored and secured machinery and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for harvesting horticultural crops mechanically
- principles and practices for operating horticultural crop harvesting machinery, including:
 - basic diagnostic techniques
 - components and controls features and functions
 - crop quality assurance and hygiene requirements

- equipment characteristics, technical capabilities and limitations
- manufacturer and workplace requirements for:
 - pre-operational checks
 - machinery operation techniques
 - operator level servicing
 - planned and emergency-shut down procedures
- industry and workplace environmental and biosecurity procedures applicable to horticultural crop harvesting.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating harvest machinery
- resources, equipment and materials:
 - horticultural harvest machinery and equipment
 - horticultural crop
 - personal protective equipment applicable to operating horticultural harvesting machinery and equipment
- specifications:
 - horticultural harvest machinery and equipment operation and maintenance manuals
 - workplace requirements applicable to health and safety in the workplace for harvesting horticultural crops mechanically
 - work instructions and workplace procedures applicable to operating horticultural crop harvest machinery and equipment
 - recording procedures
 - industry and workplace environmental and biosecurity procedures applicable to horticultural crop harvesting
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT315 Establish horticultural crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to establish horticultural crops by seed, seedlings or other vegetative means.

The unit applies to individuals who establish horticultural crops under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare machinery and equipment for use	1.1 Determine work requirements from work plan 1.2 Identify potential hazards and risks and implement safe working practices to manage risks 1.3 Select required tools, equipment and machinery, and check for safe operation 1.4 Attach and calibrate equipment, and check for correct operation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Prepare for horticultural crop establishment	2.1 Monitor soil and weather conditions for optimal planting conditions 2.2 Recognise and confirm soil conservation and sustainable land management practices and procedures 2.3 Confirm and prepare seeding or planting, and fertiliser, and pest and weed control requirements
3. Sow or plant the crop	3.1 Undertake sowing or planting and fertiliser applications safely and according to work plan 3.2 Coordinate pest and weed control treatment with sowing or planting and fertiliser applications 3.3 Identify environmental and biosecurity implications associated with establishing crop, and minimise impact
4. Complete sowing or planting operations	4.1 Conduct machinery and equipment shut-down according to workplace procedures 4.2 Perform routine machinery and equipment operational servicing and minor maintenance 4.3 Identify and report tool, machinery and equipment malfunctions, faults, irregular performance or damage according to workplace procedures 4.4 Clean, store and secure tools, machinery and equipment 4.5 Record and report crop establishment activities and machinery use records

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about establishing horticultural crops
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to record crop establishment activity

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Numeracy skills	<ul style="list-style-type: none"> Calculate quantities of seeds or seedlings and machinery fluids

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT315 Establish horticultural crops	AHCPHT306 Establish horticultural crops	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT315 Establish horticultural crops

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has established horticultural crops on at least two occasions, and has:

- applied workplace health and safety requirements
- carried out tool, machinery and equipment pre-operational checks according to operation and maintenance manual
- attached and calibrated equipment safely
- carried out ground preparation and applied pre-planting treatments
- operated tools, machinery and equipment according to operation and maintenance manual, manufacturer specifications, task requirements and local conditions
- carried out sowing or planting operations, and fertiliser application
- minimised environmental and biosecurity impacts associated with establishing horticultural crops
- shut down machinery and equipment
- performed minor maintenance
- recognised and documented defects in machinery and equipment
- cleaned, stored and secured tools, machinery and equipment
- recorded and reported establishment activities and machinery use.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for establishing horticultural crops
- manufacturer and workplace requirements for seeding and planting machinery and equipment, including:

- pre-operational checks
- machinery operation techniques
- principles of weight distribution with regard to load shifting and vehicle movement
- operator level servicing
- planned and emergency shut-down procedures
- principles and practices for establishing crops, including:
 - crop types, preparation of seeds and plants, seeding and planting methods and application techniques
 - effects of weather conditions on seeding and planting and fertilising applications
 - workplace procedures for seeding and planting operations, recording and reporting
 - fertiliser types, rates of application and crop nutrient requirements
 - sustainable land management and soil conservation techniques
- environmental and biosecurity impacts associated with establishing horticultural crops, including:
 - positive environmental practices, negative environmental impacts, and minimisation measures associated with seeding operations
 - chemical handling techniques for fertiliser
 - fertiliser safety data sheets information
 - environmental impacts of fertiliser
 - use and control of hazardous substances.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating seeding and planting machinery
- resources, equipment and materials:
 - seeding and planting machinery
 - horticultural seeds and seedlings
 - personal protective equipment applicable to establishing horticultural crops
- specifications:
 - horticultural seeding and planting machinery and equipment operation and maintenance manuals
 - workplace requirements applicable to health and safety in the workplace for establishing horticultural crops

- work instructions and workplace procedures applicable to establishing horticultural crops
- recording procedures
- industry and workplace environmental and biosecurity procedures applicable to establishing horticultural crops
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT316 Supervise mushroom substrate preparation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to supervise mushroom substrate preparation (Phase II), including confirming preparation requirements, monitoring the preparation process and finalising the mushroom substrate preparation process.

The unit applies to individuals who supervise mushroom substrate preparation under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm requirements for mushroom substrate preparation	1.1 Obtain details of required quantities of substrate, dates and times to be achieved for each stage of the process, and inform work team 1.2 Determine availability, quality, serviceability and cleanliness of resources required for mushroom substrate preparation 1.3 Identify and apply site quarantine protocols, workplace and personal hygiene requirements, and food safety requirements for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	substrate preparation 1.4 Identify potential hazards and risks and implement safe working practices to manage risks 1.5 Identify environmental and biosecurity implications associated with substrate preparation, and undertake activities to minimise impact
2. Monitor mushroom substrate preparation process	2.1 Monitor mushroom substrate preparation processes 2.2 Take samples of materials and outputs according to workplace procedures 2.3 Monitor and position probes to ensure representative readings 2.4 Record production information required for Hazard Analysis and Critical Control Points (HACCP) 2.5 Report faults or variations from required settings or workplace quality standards 2.6 Monitor compost, rooms and work areas for the presence of pests, and take remedial action according to workplace procedures
3. Finalise mushroom substrate preparation process	3.1 Monitor clean-up activities at the end of each process stage 3.2 Perform routine preventative maintenance, and report faults according to workplace procedures 3.3 Clean and store tools and equipment according to workplace requirements 3.4 Record substrate preparation activities according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about mushroom substrate preparation

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to record production information and substrate preparation activity
Oral communication	<ul style="list-style-type: none"> Use clear language to inform work team of substrate preparation activity and report faults or variations from required settings and workplace quality standards, and report routine preventative maintenance faults

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT316 Supervise mushroom substrate preparation	AHCPT309 Supervise mushroom substrate preparation	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT316 Supervise mushroom substrate preparation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supervised mushroom substrate preparation on at least two occasions, and has:

- organised and communicated mushroom substrate preparation process
- maintained site quarantine protocols, and workplace and personal hygiene
- applied workplace health and safety requirements
- minimised environmental and biosecurity impacts associated with mushroom substrate preparation
- coordinated substrate preparation activities so that standards relating to productivity, workflow requirements, workplace procedures and quality are met
- recorded and reported production information and substrate preparation activities
- observed and reported non-compliance with workplace quality standards
- reported routine preventative maintenance faults.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for supervising mushroom substrate preparation, including:
 - hazard and critical control points, quality systems, emergency procedures, organisational structure and workplace communication channels and protocols
 - casing function, application, required depth and required surface structure
 - impact on mushroom production cycle of deviations of mushroom substrate quality from workplace standards for substrate
 - overview of mushroom production cycle
 - overview of Phase I and Phase II substrate production

- food safety standards, legislation and industry codes of practice relevant to mushroom substrate preparation
- site quarantine protocols
- workplace requirements applicable to health and safety in the workplace for mushroom substrate preparation
- industry and workplace environmental and biosecurity procedures applicable to mushroom substrate preparation.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - food safety standards, legislation and industry codes of practice relevant to mushroom substrate preparation
 - workplace requirements applicable to health and safety in the workplace for mushroom substrate preparation
 - industry and workplace environmental and biosecurity procedures applicable to mushroom substrate preparation
- relationships:
 - team members
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT317 Coordinate horticultural crop harvesting

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to coordinate crop harvesting activities, including preparing, coordinating and monitoring harvest activities, monitoring crop quality during harvest and delivering crop.

The unit applies to individuals who coordinate horticultural crop harvesting under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for crop harvesting	1.1 Confirm crop to be harvested and the requirements and procedures to assure crop quality 1.2 Determine crop maturity utilising specification charts, aids or devices and according to client, workplace and industry quality assurance specifications 1.3 Identify suitable weather conditions for picking according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>workplace procedures</p> <p>1.4 Select required tools, equipment and machinery according to harvest requirements, and check for safe operation</p> <p>1.5 Identify environmental and biosecurity implications associated with crop harvesting, and minimise impact</p> <p>1.6 Select, fit and use personal protective equipment applicable to the task</p>
2. Coordinate harvesting activities	<p>2.1 Inform seasonal labour of the harvest plan and strategy</p> <p>2.2 Assign daily work tasks to harvest staff</p> <p>2.3 Confirm work program allows for contingencies caused by weather or other interruptions</p> <p>2.4 Monitor the harvest and coordinate changes to work activities where required</p>
3. Monitor crop quality throughout harvest	<p>3.1 Confirm harvesting procedures and the harvested crop comply with specifications</p> <p>3.2 Confirm crop is handled in a way that minimises damage</p> <p>3.3 Confirm crop sorting and grading complies with specifications</p> <p>3.4 Minimise post-harvest deterioration in crop storage according to enterprise work procedures</p> <p>3.5 Transport the crop with minimum damage</p> <p>3.6 Calculate and record picking tallies or harvest yields</p>
4. Deliver crop to specified destination	<p>4.1 Confirm delivery details, including quantity, timing and destination</p> <p>4.2 Deliver crop with damage levels that are within specifications</p> <p>4.3 Confirm crop complies with client, workplace and industry quality assurance specifications</p> <p>4.4 Complete delivery documentation according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about coordinating horticultural crop harvesting

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT317 Coordinate horticultural crop harvesting	AHCPT310 Coordinate horticultural crop harvesting	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT317 Coordinate horticultural crop harvesting

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has coordinated horticultural crop harvesting on at least one occasion, and has:

- prepared for crop harvesting activities
- determined and complied with client, workplace and industry quality assurance specifications
- applied workplace health and safety requirements
- minimised environmental and biosecurity impacts associated with horticultural crop harvesting
- coordinated a work group
- maintained harvest requirements
- monitored crop quality
- calculated and recorded picking tallies and harvest yields
- completed crop delivery documentation.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for coordinating horticultural crop harvesting, including:
 - effect of adverse climatic conditions, including rain, hail, extreme wind, or very high ultraviolet radiation, which may prevent or impede crop harvesting operations or severely influence the time taken to complete the tasks necessary to fulfil the operation
 - workplace quality procedures and characteristics of a crop relative to varying market requirements
 - grading characteristics of each crop

- importance of maintaining quality of produce, including cooling requirements and quick transport from field to processing areas
- industry wage rates and conditions, and contractor services, conditions and rates
- licensing requirements for use of forklifts, trucks and machinery
- recognition of the maturity parameters of a range of crops
- client, workplace and industry quality assurance specifications
- crop harvesting tools, equipment and machinery operating instructions
- workplace requirements applicable to health and safety in the workplace for horticultural crop harvesting
- industry and workplace environmental and biosecurity procedures applicable to horticultural crop harvesting.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - horticultural crop harvesting tools, equipment and machinery
 - personal protective equipment applicable to horticultural crop harvesting
- specifications:
 - client, workplace and industry quality assurance specifications
 - horticultural crop harvesting equipment and machinery operating instructions
 - workplace requirements applicable to health and safety in the workplace for horticultural crop harvesting
 - industry and workplace environmental and biosecurity procedures applicable to horticultural crop harvesting
- relationships:
 - team members, client
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT318 Prepare value added compost-based products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare or blend compost with other materials or products to produce various value-added compost-based products, and conduct quality inspection.

The unit applies to individuals who prepare value-added compost-based products under broad direction, and take responsibility for their own work and for the quality of the work of others.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Organise for value-added product preparation	1.1 Identify product requirements from job specifications or work order 1.2 Identify potential hazards and risks, and implement safe working

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>practices to manage risks</p> <p>1.3 Select required equipment and machinery, and check for safe operation</p> <p>1.4 Identify environmental and biosecurity implications associated with preparing products, and minimise impact</p>
2. Prepare value-added products	<p>2.1 Confirm compost and product additives according to job specifications</p> <p>2.2 Measure and transport compost and additives to preparation area</p> <p>2.3 Monitor and check compost and additives against specifications, and identify and report variations or non-conformances</p> <p>2.4 Blend and process compost, materials and other additives</p> <p>2.5 Clean machinery, equipment and site to avoid contamination between batches according to workplace procedures</p>
3. Conduct quality inspection and readiness for sale checks	<p>3.1 Inspect and check product for compliance according to job specifications and workplace product requirements</p> <p>3.2 Document product details according to workplace procedures</p> <p>3.3 Transport product to holding bay and confirm quantity of product</p> <p>3.4 Label product according to regulatory and customer requirements</p> <p>3.5 Release product for dispatch</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about value-added compost-based products preparation
Oral communication	<ul style="list-style-type: none"> Use clear language to report compost and additive variations or non-conformance
Numeracy skills	<ul style="list-style-type: none"> Calculate and measure quantities and ratios of compost and

Skill	Description
	additives

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT318 Prepare value added compost-based products	AHCPHT308 Prepare value added compost-based products	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT318 Prepare value added compost-based products

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared value-added compost-based products on at least three occasions, and has:

- identified value-added product requirements
- interpreted job specifications and followed workplace production procedures
- applied workplace health and safety requirements
- followed industry and workplace environmental and biosecurity procedures, and minimised impacts associated with preparing value-added compost-based products
- prepared batches of value-added product according to defined batch recipes and methods
- recognised value-added products and their characteristics
- recognised, quantified and handled products.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for preparing value-added compost-based products, including:
 - Australian standards for products
 - common product contaminants
 - workplace product specifications and standards
 - environmental license requirements, aspects and management measures associated with operation of machinery and equipment
 - hazards in handling materials and additives, and appropriate risk control measures
 - identification of contaminants
 - legislation, regulations and codes of practice with regard to licensing, roads and traffic requirements
 - operating principles and methods for plant and machinery

- potential risks and hazards associated with operation of machinery and equipment
- procedures for cleaning, securing and storing machinery, equipment and materials
- product types and characteristics
- raw materials, compost and additives commonly used to manufacture value-added products
- value-added product types and characteristics
- workplace requirements applicable to health and safety in the workplace for preparing value-added compost-based products
- industry and workplace environmental and biosecurity procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - commercial compost and value-added products blending, processing and transporting equipment and machinery
 - compost and value-added products
- specifications:
 - job sheets and work orders relevant to preparing value-added compost-based products
 - workplace requirements applicable to health and safety in the workplace for preparing value-added compost-based products
 - industry and workplace environmental and biosecurity procedures relevant to preparing value-added compost-based products
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPTH402 Develop a crop regulation program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop a crop regulation program.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess crop regulation methods	1.1 Identify production targets and requirements in terms of quantity, quality and availability of specified crops 1.2 Research the characteristics and growing requirements of plant

Element	Performance criteria
	species and cultivars that may affect the crop regulation program 1.3 Assess the benefits and limitations of available crop regulation methods for specified crops 1.4 Evaluate implementation risk of available methods and record and cost risk controls 1.5 Determined the most cost-effective approach to crop regulation and submit to management for approval
2. Identify the requirements of a crop regulation program	2.1 Develop the crop regulation program to achieve the appropriate yield and quality 2.2 Identify and confirm availability of resources, tools, equipment and machinery for the program 2.3 Outline staged implementation and development according to the range of conditions over the growing cycle 2.4 Determine timelines for crop regulation activities, taking into account the needs of the crop and site conditions
3. Prepare and document the crop regulation program and specifications	3.1 Prepare a plan, specifications and quotation based on the requirements of the program 3.2 Develop and document on-site procedures and schedules for the program
4. Monitor the crop regulation program	4.1 Monitor implementation of the program to ensure requirements of the production plan are achieved 4.2 Monitor and review the program to ensure it remains responsive to changing conditions 4.3 Implement appropriate courses of action to alleviate or overcome identified shortcomings 4.4 Document and report remedial action undertaken to management

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPT402A Develop a crop regulation program.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT402 Develop a crop regulation program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess and select cost-effective techniques, resources and equipment for the regulation of horticultural crops
- develop a crop regulation program to achieve the yield and quality specified in the enterprise production plan
- document a crop regulation plan, specifications and quotation
- document detailed schedules and work procedures
- prepare a cost-benefit analysis on available crop regulation methods
- review the crop regulation program
- implement appropriate courses of action in response to identified shortcomings

Knowledge Evidence

The candidate must demonstrate knowledge of:

- crop regulation published data on the species and cultivars
- principles and practices for developing a crop regulation program
- processes and techniques for preparing, costing and documenting plans for scheduling crop regulation activities
- site evaluation techniques, including analysis of the condition of soils, plants and the site for production activities
- specific crop physiology and timing of regulation
- the characteristics of soil and other growth media types and the use of additives to enhance the available nutrition for specific plant species and cultivars
- the relationship between enterprise crop regulation methods, such as thinning, pruning and RDI, and the yield and quality of specific crops

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT404 Implement and monitor a horticultural crop harvesting program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement and monitor of a horticultural crop harvesting program.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Production horticulture [PHT]

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan for harvesting	1.1 Assess and record crop maturity and quality 1.2 Estimate best time to harvest crop

Element	Performance criteria
	1.3 Undertake pre-harvest treatments for control and eradication of pests 1.4 Determine harvesting resource requirements and estimate when to harvest
2. Coordinate the harvest strategy	2.1 Implement harvesting operations according to customer requirements, weather, equipment and staff availability 2.2 Coordinate and monitor equipment operation for maximum efficiency and effectiveness 2.3 Identify and control hazards
3. Complete harvest operation	3.1 Locate storage resources 3.2 Determine strategies for drying crops if necessary 3.3 Monitor work to ensure that crop is graded, packed and stored according to enterprise requirements 3.4 Evaluate harvesting operations and outcomes against harvest strategy 3.5 Provide feedback on performance to personnel under supervision 3.6 Document crop quality, pre-harvest treatments and outcomes of harvest for continual analysis and effective planning management

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPT404A Implement and monitor a horticultural crop harvesting program.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT404 Implement and monitor a horticultural crop harvesting program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- coordinate equipment
- document a crop harvesting report
- establish strategies for pre-harvest and harvest
- estimate crop quality and yield
- evaluate harvest operations and outcomes
- implement treatments for control and eradication of pests
- implementing safe workplace and positive environmental practices
- organise resources for the harvest

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for crop harvesting
 - crop measurement techniques and parameters
 - customer requirements
 - environmental controls and codes of practice applicable to harvesting operations
 - functions and limitations of harvesting equipment
 - location and relative skills and abilities of available staff, contractors or casual staff
 - market information and sources
 - relevant legislation and regulations relating to workplace health and safety, contractor engagement, chemical use and application, and vehicle and plant use
 - required productivity rates
 - weather or other conditions that may affect harvest

- where relevant to enterprise's production: food safety and Hazard Analysis Critical Control Point (HACCP) requirements, and requirements for export markets

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT409 Develop a crop regulation program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to assess, develop, document and monitor a crop regulation program.

The unit applies to individuals who apply specialist skills and knowledge to developing a crop regulation program. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess crop regulation methods	1.1 Identify production targets and requirements, including quantity, quality and availability of specified crops 1.2 Research the characteristics and growing requirements of plant

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>species and cultivars that may affect the crop regulation program</p> <p>1.3 Assess the benefits and limitations of available crop regulation methods for specified crops</p> <p>1.4 Identify hazards and assess risks associated with program, and develop, document and cost control measures to manage risks according to workplace health and safety procedures</p> <p>1.5 Determine cost-effective approach to crop regulation, and submit to management for approval</p>
2. Identify the requirements of a crop regulation program	<p>2.1 Develop crop regulation program to achieve appropriate yield and quality</p> <p>2.2 Identify and confirm availability of resources, tools, equipment and machinery for the program</p> <p>2.3 Outline staged implementation and development according to the range of conditions during the growing cycle</p> <p>2.4 Determine timelines for crop regulation activities, taking into account the needs of the crop and site conditions</p>
3. Prepare and document the crop regulation program and specifications	<p>3.1 Prepare and document the crop regulation plan, specifications and quotation based on the requirements of the program</p> <p>3.2 Develop and document on-site procedures and schedule of activities for the program</p>
4. Monitor the crop regulation program	<p>4.1 Communicate the crop regulation plan, specifications, on-site procedures and schedule of activities to staff</p> <p>4.2 Monitor program implementation to ensure requirements of the production plan are achieved</p> <p>4.3 Review and refine program to ensure it is responsive to changing conditions</p> <p>4.4 Identify non-compliance with documented objectives and specifications, and implement remedial actions to alleviate or overcome identified shortcomings in program</p> <p>4.5 Identify and document remediation action, and report to management</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for crop regulation program and plan
Oral communication	<ul style="list-style-type: none"> Initiate discussions with management, using clear language to discuss program requirements, quotation and crop regulation plan Initiate discussions with staff, using clear language and standard industry terminology to communicate crop regulation plan, specifications, on-site procedures and schedule of activities
Numeracy	<ul style="list-style-type: none"> Calculate labour, materials, tools, equipment and risk control cost

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT409 Develop a crop regulation program	AHCPT402 Develop a crop regulation program	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT409 Develop a crop regulation program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed a crop regulation program on at least one occasion, and has:

- assessed and selected cost-effective techniques, resources and equipment for the regulation of horticultural crops
- applied relevant workplace health and safety procedures
- prepared a cost-benefit analysis on available crop regulation methods
- developed a crop regulation program to achieve the yield and quality specified in the workplace production plan
- documented a crop regulation plan, specifications and quotation
- documented detailed schedules and work procedures
- monitored and reviewed the crop regulation program
- implemented appropriate courses of action in response to identified shortcomings.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for developing a crop regulation program, including:
 - processes and techniques for preparing, costing and documenting plans for scheduling crop regulation activities
 - site evaluation techniques, including analysis of the condition of soils, plants and the site for production activities
 - specific crop physiology and timing of regulation
 - the characteristics of soil and other growth media types, and the use of additives to enhance the available nutrition for specific plant species and cultivars

- the relationship between workplace crop regulation methods, including thinning, pruning and regulated deficit irrigation (RDI), and the yield and quality of specific crops
- crop regulation published data on the species and cultivars
- workplace requirements applicable to health and safety in the workplace for developing a crop regulation program.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - crop production plan
 - crop regulation published data on the species and cultivars
 - industry publications and internet sources of information relevant to developing a crop regulation program
- specifications:
 - workplace requirements applicable to health and safety in the workplace for developing a crop regulation program
- relationships:
 - staff and management
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT410 Develop harvesting and processing specifications to produce an olive oil

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop specifications that will produce the required quantity, style and quality of oil from an olive crop.

The unit applies to individuals who apply specialist skills and knowledge to developing harvesting and processing specifications to produce an olive oil. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Specify the style and quality desired of the	1.1 Identify desired style of olive oil 1.2 Identify desired quality of olive oil

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
olive oil	1.3 Specify desired properties of the olive oil using standard industry terminology
2. Establish the appropriate time and conditions for harvesting	2.1 Estimate maturity of fruit using informal and formal methods 2.2 Schedule harvest so that fruit picked will produce desired quality, style and quantity of olive oil 2.3 Evaluate range of harvest methods available and select the ones most likely to contribute to production of desired olive oil 2.4 Obtain and brief harvesting personnel about harvest requirements and procedures
3. Specify post-harvest handling and processing method	3.1 Specify and document post-harvest handling and treatment for olive crop using standard industry terminology 3.2 Specify and document processing using standard industry terminology 3.3 Specify and document packaging, storage and transport requirements for processed olive oil using standard industry terminology
4. Select an olive oil processor	4.1 Obtain details of available processors 4.2 Determine and apply criteria for selecting a processor 4.3 Select most suitable processor using predetermined criteria 4.4 Agree on and establish specifications and related processing requirements with selected processor, and incorporate into a contract 4.5 Document specifications and related processing requirements in a report

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for developing harvesting and processing specifications to produce an

Skill	Description
	olive oil
Writing	<ul style="list-style-type: none"> Document olive oil processor contract
Oral communication	<ul style="list-style-type: none"> Initiate discussions with harvesting personnel and olive oil processor, using clear language and standard industry terminology to communicate olive crop harvest and post-harvest requirements and procedures, and communicate and agree on olive oil specifications and processing requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT410 Develop harvesting and processing specifications to produce an olive oil	AHCPHT403 Develop harvesting and processing specifications to produce an olive oil	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT410 Develop harvesting and processing specifications to produce an olive oil

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed harvesting and processing specifications to produce olive oil on at least one occasion, and has:

- estimated and scheduled fruit maturity
- documented and communicated olive crop harvest and post-harvest requirements and procedures
- selected an appropriate style of oil that can be produced from a crop, and described it using standard industry terminology
- incorporated specifications into an olive oil processor contract
- arranged for an appropriate method of processing to produce the desired style and quality of oil
- documented olive oil specifications and related processing requirements in a report.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for developing specifications for olive oil, including:
 - how an olive oil is produced from olives
 - influence of processing on chemical composition of oil, including polyphenols, aroma and flavour compounds
 - influence of various harvesting methods on olive oil style and quality, including; bitterness, pungency, aroma and flavour
 - market preferences for styles of olive oil
 - methods of olive oil extraction and advantages/disadvantages associated with each
 - post-harvest handling, including storage and transport requirements for olive fruit intended for olive oil processing

- post-processing storage and handling requirements of olive oil.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - industry publications and internet sources of information relevant to the development of olive oil harvesting and processing specifications
- relationships:
 - harvesting personnel and olive oil processor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT411 Implement and monitor a horticultural crop harvesting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan for harvesting, and coordinate and complete a horticultural crop harvesting program.

The unit applies to individuals who apply specialist skills and knowledge to implementing and monitoring a horticultural crop harvesting program. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan for harvesting	1.1 Assess and record crop maturity and quality 1.2 Undertake pre-harvest treatments for control and eradication of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	pests 1.3 Determine harvesting resource requirements 1.4 Estimate best time to harvest crop
2. Coordinate the harvest strategy	2.1 Implement harvesting operations according to customer requirements, weather, equipment and staff availability 2.2 Coordinate and monitor equipment operation for maximum efficiency and effectiveness 2.3 Identify hazards and assess risks in the workplace, and implement control measures to manage risks according to workplace health and safety procedures 2.4 Consider the environmental implications of the crop harvesting program 2.5 Incorporate sustainability and biosecurity practices into the crop harvesting program 2.6 Document the crop harvesting program and schedule of activities
3. Complete harvest operation	3.1 Communicate the crop harvesting program and schedule of activities to staff 3.2 Locate storage resources to meet program requirements 3.3 Determine strategies for drying crops where necessary 3.4 Monitor work to ensure that crop is graded, packed and stored according to workplace requirements 3.5 Evaluate harvesting operations and outcomes against crop harvesting program 3.6 Provide feedback on performance to personnel under supervision 3.7 Review and document crop quality, pre-harvest treatments and outcomes of harvest to identify opportunities for improvements in performance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for horticultural crop harvesting program
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff, using clear language and standard industry terminology to communicate horticultural crop harvesting program requirements and schedule of activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT411 Implement and monitor a horticultural crop harvesting program	AHCPHT404 Implement and monitor a horticultural crop harvesting program	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT411 Implement and monitor a horticultural crop harvesting program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented and monitored a horticultural crop harvesting program on at least one occasion, and has:

- estimated crop quality and yield
- established strategies for pre-harvest and harvest
- implemented treatments for control and eradication of pests
- organised resources for the harvest
- coordinated equipment
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- documented a crop harvesting program and schedule of activities
- evaluated harvest operations and outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for crop harvesting, including:
 - crop measurement techniques and parameters
 - customer requirements
 - environmental controls and codes of practice applicable to harvesting operations
 - functions and limitations of harvesting equipment
 - location and relative skills and abilities of available staff, contractors or casual staff
 - market information and sources
 - required productivity rates
 - weather or other conditions that may affect harvest

- where relevant to workplace production: food safety and Hazard Analysis and Critical Control Points (HACCP) requirements, and requirements for export markets
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to implementing and monitoring a horticultural crop harvesting program.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - industry publications and internet sources of information relevant to the planning of a horticultural crop harvesting program
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to implementing and monitoring a horticultural crop harvesting program
 - where relevant to workplace production food safety and HACCP requirements, and requirements for export markets
- relationships:
 - staff
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPTH412 Manage mushroom substrate preparation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to manage mushroom substrate preparation, including confirming status of system requirements, confirming quality and consistency of Phase II outputs, monitoring and manipulating spawning and spawn run, and managing clean-up procedures.

The unit applies to individuals who apply specialist skills and knowledge to manage mushroom substrate preparation. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm status of system requirements for	1.1 Determine details of quantities of substrate required, and dates and times to be achieved for each process stage, and inform personnel

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
mushroom substrate preparation	<p>1.2 Determine availability, quality, serviceability and cleanliness of all rooms, work areas, machinery, equipment and materials for mushroom substrate preparation</p> <p>1.3 Allocate staff duties and responsibilities according to mushroom substrate preparation plan</p> <p>1.4 Identify and implement site quarantine protocols and workplace and personal hygiene requirements for mushroom substrate preparation</p> <p>1.5 Identify hazards and assess risks in the workplace, and implement control measures to manage risks according to workplace health and safety procedures</p>
2. Confirm quality and consistency of Phase II outputs	<p>2.1 Confirm Phase II process conforms to required production schedule and workplace procedures</p> <p>2.2 Measure and record key factors and critical points</p> <p>2.3 Take random samples of end product and dispatch for analysis</p> <p>2.4 Record test results, compare to standards and take remedial action</p>
3. Monitor and manipulate spawning and spawn run	<p>3.1 Assess condition and quality of compost before spawning, and take remedial action</p> <p>3.2 Take temperature readings, and record and adjust if required</p> <p>3.3 Measure, record and control carbon dioxide content</p> <p>3.4 Monitor spawn growth and appearance of mycelium during spawn run period</p> <p>3.5 Select product and its rate of application where supplement is to be added to substrate at spawning</p> <p>3.6 Monitor room hygiene and occurrence of pests and diseases, and implement control measures</p>
4. Manage clean-up procedure	<p>4.1 Manage clean-up activities at the end of each process stage</p> <p>4.2 Conduct cook-out or chemical disinfestations treatment before removal of spent substrate</p> <p>4.3 Return tools and equipment to storage area after cleaning, performing basic preventative maintenance and checking for future serviceability</p> <p>4.4 Report faults to maintenance personnel</p> <p>4.5 Complete workplace records according to workplace requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for managing mushroom substrate preparation
Oral Communication	<ul style="list-style-type: none"> Initiate discussions with staff, using clear language and standard industry terminology to communicate substrate preparation activities and allocate duties and responsibilities Use clear language to report faults or variations from required settings to maintenance personnel

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPTH412 Manage mushroom substrate preparation	AHCPTH405 Manage mushroom substrate preparation	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT412 Manage mushroom substrate preparation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed mushroom substrate preparation on at least two occasions, and has:

- set and monitored productivity standards for mushroom substrate and rest of production cycle
- maintained site quarantine protocols, and workplace and personal hygiene requirements
- applied relevant workplace health and safety procedures
- established and reviewed workplace procedures for mushroom substrate preparation
- recorded and analysed production data
- monitored and manipulated all interactions between inputs, conditions and outputs for each stage of substrate process.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for managing mushroom substrate preparation and casing production, including:
 - casing function, application, required depth and required surface structure
 - detailed knowledge of all stages in Phase II substrate preparation process
 - Hazard Analysis and Critical Control Points, quality systems, emergency procedures, organisational structure and workplace communication channels and protocols
 - how mushrooms are grown, with a focus on interaction between compost, environmental factors such as temperature, water, relative humidity, carbon dioxide and ammonia, and mushroom growth
 - industry and workplace awards and conditions

- key parameters to be recorded and monitored, and appropriate ranges in relation to temperature, ammonia, relative humidity, moisture content, carbon dioxide and time
- overview of mushroom production cycle and possible impact of deviations from workplace standards on substrate and rest of production cycle
- overview of Phase I compost production
- food safety standards, legislation and industry codes of practice relevant to managing mushroom substrate preparation
- workplace requirements applicable to health and safety in the workplace for managing mushroom substrate preparation.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - food safety standards, legislation and industry codes of practice relevant to managing mushroom substrate preparation
 - workplace requirements applicable to health and safety in the workplace for managing mushroom substrate preparation
- relationships:
 - staff and maintenance personnel
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT413 Oversee vineyard practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to define vineyard requirements, develop and implement a program of vineyard practices, and monitor and review the growing program.

The unit applies to individuals who apply specialist skills and knowledge to overseeing vineyard practices. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Define the requirements of the vineyard	1.1 Identify range of grape varieties and cultivars, and vineyard growing systems according to requirements 1.2 Determine materials, equipment and labour required for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>maintaining the vineyard</p> <p>1.3 Determine consumables required for maintaining the vineyard</p> <p>1.4 Check staff skills and knowledge of vineyard practices according to requirements</p>
2. Develop a program of vineyard practices	<p>2.1 Determine vineyard practices from planting out to harvest and for the annual growing season</p> <p>2.2 Identify hazards and assess risks in the workplace, and implement control measures to manage risks according to workplace health and safety procedures</p> <p>2.3 Consider the environmental implications of the vineyard program</p> <p>2.4 Identify and allocate resources required to meet vineyard program requirements</p> <p>2.5 Make allowance in the program for unforeseen circumstances, damage caused by weather and new developments</p> <p>2.6 Document the vineyard growing program</p>
3. Implement the program	<p>3.1 Communicate the vineyard growing program and activities to staff</p> <p>3.2 Maintain daily workplace records and other information relevant to the vineyard growing program</p> <p>3.3 Monitor work to ensure materials and equipment are used according to workplace procedures</p>
4. Monitor and review the program	<p>4.1 Compare vineyard growing program against previous programs, and make adjustments as necessary</p> <p>4.2 Review production plans to determine and align schedule of activities</p> <p>4.3 Compare vineyard growing program estimates against resource allocation costs</p> <p>4.4 Review vineyard practices and growing program to identify opportunities for improvements in performance</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for overseeing vineyard practices and developing a vineyard growing program
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff, using clear language and standard industry terminology to communicate vineyard growing program requirements and activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT413 Oversee vineyard practices	AHCPHT408 Oversee vineyard practices	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT413 Oversee vineyard practices

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has overseen vineyard practices on at least one occasion, and has:

- recognised wine grape varieties and cultivars
- determined maintenance requirements for the vineyard
- planned and programmed vineyard practices
- applied relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- documented and communicated the vineyard growing program
- maintained daily workplace records
- overseen the implementation of vineyard practices
- monitored and reviewed the vineyard growing program
- determined and organised work schedules.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for overseeing vineyard practices, including:
 - irrigation systems operation
 - plant nutrition practices
 - safe operating practices
 - supervision and team building
 - trellis and harvesting systems
 - vineyard practices and growing systems for grape varieties and cultivars
 - weed, pest and disease control practices

- wine grape varieties and cultivars
- workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to overseeing vineyard practices.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - industry publications and internet sources of information relevant to overseeing vineyard practices
- specifications:
 - workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures relevant to overseeing vineyard practices
- relationships:
 - staff
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT414 Assess olive oil for style and quality

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to establish olive oil tasting protocols, determine sensory and analytical quality of olive oil, identify factors influencing the style and quality of olive oil, and implement findings.

The unit applies to individuals who apply specialist skills and knowledge to assessing olive oil for style and quality. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish and implement appropriate tasting protocols	1.1 Establish appropriate tasting conditions 1.2 Apply industry tasting procedures 1.3 Determine oils to taste, and taste oils in the order that will best show the character of each oil

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Determine style and sensory quality of the olive oil	2.1 Identify and assess characteristics of the olive oil 2.2 Taste oil to assess style 2.3 Smell and taste oil to assess sensory quality 2.4 Analyse and record observed defects for future action
3. Determine the analytical quality of the olive oil	3.1 Send oil samples to laboratory to test key chemical indices 3.2 Interpret key chemical indices to assess analytical quality of oil 3.3 Record observed chemical indices that are beyond the normal range, for future action
4. Identify factors influencing the style and quality of the olive oil	4.1 Identify horticultural factors that may influence the style and quality of the olive oil 4.2 Identify processing factors that may influence the style and quality of the olive oil 4.3 Identify other factors that may influence the style and quality of the olive oil
5. Implement findings of tastings and chemical analyses	5.1 Maintain records of season tastings and chemical analyses 5.2 Evaluate horticultural and processing activities and methods to identify modifications and improvements 5.3 Adjust and document horticultural production plan for next season 5.4 Document and communicate next season processing requirements to processing personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for assessing olive oil style and quality
Oral communication	<ul style="list-style-type: none"> Initiate discussions with processing personnel, using clear language to communicate next season processing requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT414 Assess olive oil for style and quality	AHCPHT401 Assess olive oil for style and quality	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT414 Assess olive oil for style and quality

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assessed olive oil for style and quality on at least one occasion, and has:

- applied industry tasting procedures
- identified olive oil style and quality
- identified common olive oil defects
- interpreted olive oil chemical indices
- maintained records of season tasting and chemical analyses
- modified horticultural and processing practices to remedy variations from desired style and quality
- documented and communicated next season processing requirements and adjustments to horticultural production plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- industry tasting procedures
- principles and practices for assessing olive oil, including:
 - cause of olive oil defects and how they can be remedied
 - horticultural and processing practices that affect olive oil style, and reasons for the effect
 - relationship between critical chemical parameters and oil style and quality.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - olive oils
 - sampling equipment
 - horticultural production plan
- specifications:
 - industry tasting procedures
- relationships:
 - processing personnel
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPTH415 Control Phase II mushroom substrate process

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to control Phase II of a mushroom substrate process, including confirming requirements for mushroom substrate preparation and carrying out Phase II processes.

The unit applies to individuals who apply specialist skills and knowledge to control Phase II of a mushroom substrate process. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm the requirements for Phase II mushroom substrate	1.1 Monitor and manage Phase II mushroom substrate process and ensure all equipment is operated safely

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
preparation	1.2 Check and ensure all temperature probes are functioning correctly 1.3 Confirm site quarantine protocols and workplace and personal hygiene requirements are followed 1.4 Assess condition and quality of compost before filling
2. Carry out Phase II process	2.1 Monitor placement of probes in air and substrate 2.2 Check amount and evenness of filling 2.3 Check doors are secure and vents and thermostats are set at completion of filling 2.4 Measure and record key factors and critical points 2.5 Adjust equipment settings to ensure optimum conditions for each Phase II sub-stage 2.6 Take random representative samples for laboratory testing 2.7 Determine ammonia levels before cool down for spawning

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for controlling Phase II of a mushroom substrate process

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT415 Control Phase II mushroom substrate process	AHCPT406 Control Phase II mushroom substrate process	Performance criteria clarified Foundation skills added Assessment requirements	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		updated	

Links

Companion Volumes, including Implementation Guides, are available at VETN -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT415 Control Phase II mushroom substrate process

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has controlled Phase II mushroom substrate processes on at least two occasions, and has:

- applied relevant workplace health and safety procedures
- differentiated between Phase I substrate and substrate ready for spawning, and described desired parameters of each stage
- monitored and managed Phase II process for at least eight crops
- assessed room or tunnel layout and determined most appropriate locations for taking substrate and air measurements
- carried out effective troubleshooting during Phase II process.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for controlling Phase II mushroom substrate processes, including:
 - concept of compost selectivity and biological indicators of compost quality
 - correct probe placement and calibration
 - factors influencing air quantity and distribution
 - Hazard Analysis and Critical Control Points, quality systems, emergency procedures, organisational structure
 - interpretation of chemical test results
 - how different systems, including; shelf, tray and tunnel, impact on temperature zones in substrate
 - key parameters to be recorded and monitored relating to temperature, ammonia and moisture content
 - objectives and desired parameters of each sub-stage of Phase II substrate preparation

- overview of Phase I compost production and how it impacts on Phase II process
- food safety standards, legislation and industry codes of practice relevant to controlling Phase II processes
- site quarantine protocols
- workplace requirements applicable to health and safety in the workplace for controlling Phase II mushroom substrate processes.
-

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - food safety standards, legislation and industry codes of practice relevant to controlling Phase II processes
 - site quarantine protocols
 - workplace requirements applicable to health and safety in the workplace for controlling Phase II mushroom substrate processes
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETN - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT416 Manage mushroom crop development

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to manage mushroom crop development, including the selection, application and management of the mushroom casing and all activities up to the end of the harvesting period.

The unit applies to individuals who apply specialist skills and knowledge to manage mushroom crop development. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Manage casing application	1.1 Select casing materials and recipe 1.2 Assess condition and quality of spawn run before casing

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Select product and rate of application where supplement is to be added to substrate at casing, and instruct appropriate personnel</p> <p>1.4 Confirm casing mixture is checked against workplace standards for moisture, structure and depth, and confirm remedial action has been taken if required</p>
2. Control environment during casing colonisation growth phase	<p>2.1 Install crop in growing room according to workplace procedures</p> <p>2.2 Set up growing room air conditioning system and check for correct functioning</p> <p>2.3 Measure, record and adjust temperature, relative humidity and carbon dioxide content as required</p> <p>2.4 Assess mycelium growth and determine timing and quantity of water to be applied</p> <p>2.5 Monitor and record pest and disease status and take remedial action as required</p>
3. Initiate fruit body formation and manage pinning and pre-picking growth phases	<p>3.1 Assess growth and make changes to temperature and ventilation to initiate fruit body formation according to workplace procedures</p> <p>3.2 Record and adjust temperature, relative humidity and carbon dioxide content</p> <p>3.3 Identify and analyse variations from expected or required ranges of temperature, relative humidity and carbon dioxide content, and take appropriate remedial action</p> <p>3.4 Assess mycelium development and pin development, and determine timing and quantity of water and additives to be applied to water</p> <p>3.5 Monitor and record pest and disease status, and take remedial action as required</p>
4. Assess crop maturity, flush development and quality, and monitor the harvesting process	<p>4.1 Assess crop maturity to determine when and what to pick</p> <p>4.2 Instruct pickers on tasks to be performed</p> <p>4.3 Monitor picking results to ensure instructions continue to be appropriate and are being carried out</p> <p>4.4 Consult markets to ensure product meets market needs and specifications</p> <p>4.5 Monitor crop quality, recognise disorders stimulated by environmental conditions, and implement remedial action as required</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.6 Monitor and record pest and disease status during this stage of crop development, and take remedial action as required</p> <p>4.7 Plan daily work schedule for waterers, and coordinate picking and watering schedules</p> <p>4.8 Review harvest process for compliance with quality standards, and identify, document and implement areas for improvement as appropriate</p> <p>4.9 Provide feedback to pickers on individual and team performance</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for managing mushroom crop development
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to document harvest process and areas for improvement

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPTH416 Manage mushroom crop development	AHCPTH407 Manage mushroom crop development	<p>Performance criteria clarified</p> <p>Foundation skills added</p> <p>Assessment requirements updated</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT416 Manage mushroom crop development

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed mushroom crop development on at least two occasions, and has:

- maintained environment within parameters for production
- recorded, analysed and adjusted temperature, relative humidity and carbon dioxide content
- monitored and managed growing room conditions, watering and flush development of mushroom crops
- identified stages of growth and development, and factors impacting on yields and mushroom quality
- identified the interdependency of stages of growth, and impact of early stages of production cycle on production results
- recorded pest and disease status, and documented harvest process and areas for improvement
- developed work schedules.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of mushroom crop development, including:
 - available options of additives to irrigation water to promote mushroom quality, and the main considerations of their use
 - basic understanding of air conditioning principles, particularly relative humidity
 - casing function, application and depth and surface structure requirements
 - desirable physical, biological and chemical characteristics of casing

- Hazard Analysis and Critical Control Points (HACCP), quality systems, emergency procedures, organisational structure and workplace communication channels and protocols
- goals and sub-stages of Phase II substrate preparation, and impact of Phase II on yields and quality
- growth phases of a mushroom crop, and interactions that occur between the compost, casing, environmental factors, such as temperature, water, relative humidity and carbon dioxide, and growth of the mushroom
- how nature of casing and the appearance and quantity of mycelium growth in casing affect the number, distribution and quality of fruit bodies formed
- impact of mushroom numbers and size on picking and quality
- industry and workplace awards and conditions
- management impacts of supplementing at spawning or casing
- management requirements of casing, including Compost Added at Casing (CAC) or Casing Inoculums (CI)
- overview of Phase I substrate production and its impact on yields and quality
- food safety standards, legislation and industry codes of practice relevant to managing mushroom crop development
- site quarantine protocols.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - food safety standards, legislation and industry codes of practice relevant to managing mushroom crop development
 - site quarantine protocols
- relationships:
 - appropriate personnel, pickers, waterers
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT502 Develop a horticultural production plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop a production plan for a horticultural enterprise.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Carry out planning activities	1.1 Ensure client preferences and requirements are understood and confirmed according to enterprise marketing and business plans 1.2 Assess the production site for growing factors, services and site

Element	Performance criteria
	<p>modifications</p> <p>1.3 Research the growing requirements of plant species and cultivars and restrictions that may affect the production plan</p> <p>1.4 Identify sustainable land use issues that may affect planned production</p> <p>1.5 Set production targets that are consistent with the marketing strategy and business plan</p> <p>1.6 Determine production requirements in terms of quantity, quality and availability of the product</p> <p>1.7 Develop a plan that reflects client preferences and requirements</p>
2. Determine the requirements of horticultural production	<p>2.1 Identify plant species that are consistent with the plan and the calculate, cost and confirm availability with the supplier</p> <p>2.2 Select plant establishment procedures consistent with the agreed plan</p> <p>2.3 Ensure design of the site includes irrigation and drainage systems, and takes into account the growing requirements of plants and sustainable land use practices</p> <p>2.4 Provide cultural management of the growing environment from planting to harvest</p> <p>2.5 Determine harvesting dates to meet market deadlines</p> <p>2.6 Identify resources required for the establishment of the site</p>
3. Schedule production activities	<p>3.1 Outline staged implementation and development with future works access provided for</p> <p>3.2 Determine timelines, taking into account any other planning requirements</p> <p>3.3 Plan marketing and schedule according to the production schedule and marketing strategy</p>
4. Plan monitoring of the production plan	<p>4.1 Determine production activities to be monitored, the format for recording factors, frequency of monitoring and the thresholds for remedial action</p> <p>4.2 Document required remedial for implementation by staff</p> <p>4.3 Review on a regular basis the effectiveness of the monitoring system</p> <p>4.4 Compare the production program with feedback and projections from clients</p>
5. Prepare and document the production plan and specification	<p>5.1 Prepare detailed plan, specifications and quotation based on horticultural conventions and the requirements of production</p> <p>5.2 Develop and document detailed on-site procedures and schedules required for production</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPTH502A Develop a horticultural production plan.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT502 Develop a horticultural production plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop a horticultural production plan that reflects client preferences and requirements
- design and incorporate infrastructure into planning
- document and cost the production plan
- establish product specifications
- research site factors and land use issues
- select and source plants or plant material for seeding or propagation
- develop a monitoring program to cover the horticultural operation from sowing to sale

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for developing a horticultural production plan
 - advantages and limitations of sustainable horticulture systems
 - establishment and maintenance of a range of enterprise horticultural products in relation to client needs and the standards required by the marketplace
 - establishment procedures, plant selection and cultural practices for a range of enterprise horticultural products
 - processes and techniques for preparing, costing and documenting plans for and scheduling horticultural production
 - role of business and marketing plans and client consultation processes in planning horticultural production

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPTH503 Manage a controlled growing environment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage controlled growing environments.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify crop requirements	1.1 Determine crop growth and production requirements according to a documented production plan 1.2 Research environmental parameters for optimal growing

Element	Performance criteria
	<p>conditions for the specific crop, using available information resources</p> <p>1.3 Identify and record controlled growing environment factors</p>
<p>2. Determine requirements for controlled growing environment</p>	<p>2.1 Identify, cost and confirm availability of structures, machinery, equipment and resources required to control environmental conditions</p> <p>2.2 Identify detrimental environmental impacts associated with the controlled growing environment system</p>
<p>3. Prepare a management plan for controlled growing environment</p>	<p>3.1 Determine management objectives for controlled growing environment consistent with production plan and market requirements for crop quantity and quality</p> <p>3.2 Develop a schedule of environmental control procedures according to controlled environment management objectives</p> <p>3.3 Evaluate and report staff training needs with regard to operation and maintenance of environmental control systems</p> <p>3.4 Document a budget supporting the controlled environment management plan and seek approval</p> <p>3.5 Communicate the schedule of environmental control procedures clearly to staff</p>
<p>4. Manage controlled growing environment</p>	<p>4.1 Identify controlled environment indicators and thresholds for remedial action for monitoring</p> <p>4.2 Develop monitoring frequency and schedule according to the requirements of the production plan and communicate to staff</p> <p>4.3 Record, analyse and apply all monitoring data to ensure optimal plant development</p> <p>4.4 Document and report remedial action undertaken</p> <p>4.5 Monitor costs of the controlled growing environment system against budget</p> <p>4.6 Record and report budget adjustments</p> <p>4.7 Evaluate recorded information, budget data and production outputs and document operational achievements towards management objectives in a report</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPTH503A Manage a controlled growing environment.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT503 Manage a controlled growing environment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop a management plan to cover staff training, budgets, operating procedures and remedial actions
- develop environmental monitoring procedures
- evaluate and document the achievements towards management objectives
- identify the growing requirements of the crop
- prepare specifications for controlled growing infrastructure

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for managing controlled growing environments
 - controlled environmental conditions in regard to crop plant physiology, growth stages, and product quality and quantity
 - legislation and regulations relating to the controlled environment systems
 - market requirements for crop quantity and quality
 - monitoring, analysis and recording systems
 - plant physiology and biochemistry
 - quality production methods and techniques for a range of controlled environment plants
 - staff training requirements
 - techniques and methods of implementing optimal growing conditions for a range of horticultural crops

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT507 Evaluate grapes for production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to collect, process and evaluate grapes for production, monitor and evaluate vineyard, and analyse the effect of climate, site characteristics, grape varieties and viticultural practices on grape quality.

The unit applies to individuals who apply specialised skills and knowledge to the evaluation of grapes for production, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect samples	1.1 Identify vineyard block to be sampled 1.2 Determine optimum grape sampling time 1.3 Identify and interpret standard sampling procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Utilise vegetation indices where available to identify zones of uniformity or variation</p> <p>1.5 Confirm sampling areas with client or winemaker</p> <p>1.6 Observe and record out-of-specification condition or characteristics of grapes</p> <p>1.7 Take samples of grapes according to standard sampling procedures</p>
2. Process samples	<p>2.1 Prepare sample processing equipment according to standard sampling procedures</p> <p>2.2 Extract juice using processing equipment</p> <p>2.3 Wash processing equipment between samples</p> <p>2.4 Wash and store processing equipment after use</p>
3. Evaluate samples	<p>3.1 Evaluate juice using standard organoleptic procedures</p> <p>3.2 Perform simple grape analysis procedures and record results</p> <p>3.3 Evaluate results using quantitative parameters</p>
4. Taste and evaluate wine	<p>4.1 Use accepted tasting procedures for tasting wine</p> <p>4.2 Identify the flavour and aroma components and characteristics of wine using organoleptic evaluation techniques</p> <p>4.3 Identify the relative contribution and interaction of wine components to the wine taste, aroma and appearance, using accepted wine description terminology</p>
5. Monitor and evaluate vineyard	<p>5.1 Establish and document vineyard qualitative parameters</p> <p>5.2 Monitor qualitative parameters to determine harvest time for optimum wine quality</p> <p>5.3 Compare results to grape production plan schedule, and determine best course of action</p> <p>5.4 Identify and communicate opportunities to optimise fruit quality prior to harvest</p>
6. Analyse effects in grape quality	<p>6.1 Identify effects of climate on grapes</p> <p>6.2 Identify site effects on grape quality</p> <p>6.3 Identify and analyse effects of grape variety and flavour</p> <p>6.4 Identify and evaluate effects of vineyard management practices on grapes in terms of modifications and improvements to be made for the</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	current and next season

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identifies and interprets grape standard organoleptic procedures and quantitative parameters Identifies and interprets grape production plan schedule Interprets vegetation indices where available
Oral communication	<ul style="list-style-type: none"> Initiates discussions with client or winemaker, using clear language to confirm sampling areas and communicate opportunities to optimise grape quality
Numeracy	<ul style="list-style-type: none"> Records and evaluates sample data Interprets quantitative parameters
Navigate the world of work	<ul style="list-style-type: none"> Identifies and describes own workplace requirements associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Uses appropriate language and communication skills to disseminate information to client or winemaker

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT507 Evaluate grapes for production	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT507 Evaluate grapes for production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has evaluated grapes for production on at least two occasions and has:

- utilised vegetation indices where available
- researched, evaluated and recorded relevant information
- collected, processed and evaluated samples using standard sampling procedures
- evaluated juice using standard organoleptic procedures
- tasted and evaluated wines using standard organoleptic evaluation techniques
- recorded grape analysis results and evaluated results using quantitative parameters, including:
 - sugar content, soluble solids concentration (SSC)
 - titratable acidity (TA)
 - concentration of hydrogen ions in solution (pH)
- established and documented vineyard qualitative parameters, including:
 - berry colour and skin splitting
 - texture
 - aroma
 - aftertaste
 - rachis
 - berry dehydration
 - seed ripeness
- identified areas of concern and opportunities to change harvest plans to optimise grape quality outcomes prior to harvest, including unsuitable or special parcels of fruit
- identified and recommended improvements to vineyard management practices that will contribute to enhanced grape quality in the next season.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for evaluating grapes for production, including:
 - changes to the chemical characteristics of grapes during ripening, including SSC, TA and pH
 - changes to the physical characteristics of grapes during ripening, including size, hardness and colour
 - climatic and physical features of wine grape growing areas and wine styles produced
 - quantitative parameters of grape testing
 - sensory evaluation and qualitative parameters of grapes and wine
- sensory evaluation of wines
- grape end-use, including:
 - dried
 - table
 - wine
- grape standard sampling procedures
- vegetation indices, including:
 - plant cell density (PCD) maps
 - normalised difference vegetation index (NDVI)
- vineyard management practices and their impact on grapes, including:
 - plant moisture status management
 - irrigation management
 - canopy management
 - pruning levels
 - nutrition regimes.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - grapes
 - vineyard
 - sample processing equipment
 - grape standard sampling procedures
- relationships:
 - clients or winemakers
- timeframes:

- according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT508 Develop a grape production plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to carry out preliminary planning activities, determine grape production requirements, schedule production activities, plan monitoring of grape production plan and document grape production plan.

The unit applies to individuals who apply specialised skills and knowledge to the development of a grape production plan, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out preliminary planning activities	1.1 Identify and evaluate trends and issues affecting the Australian viticulture industry for their impact on planning decisions

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Determine client specifications for the production of grapes</p> <p>1.3 Assess the vineyard site for growing environment factors, resources, services and site modifications</p> <p>1.4 Conduct research into the characteristics and growing requirements of grape varieties and cultivars, legal attributes of the site, and local by-laws and restrictions that may affect the production plan</p> <p>1.5 Identify sustainable land use issues that may affect planned production</p> <p>1.6 Set production targets that are consistent with the marketing strategy and business plan</p> <p>1.7 Determine production requirements in terms of quantity and quality of grapes</p> <p>1.8 Develop a draft plan that reflects client preferences and requirements, and regulatory requirements and takes into account site factors and any identified sustainable land use requirements</p>
2. Determine the production requirements for grapes	<p>2.1 Identify grape varieties that are appropriate to the site and consistent with the plan</p> <p>2.2 Calculate, cost and confirm the quantity required with the supplier</p> <p>2.3 Select establishment procedures consistent with the agreed preliminary plan</p> <p>2.4 Document cultural management practices to achieve optimal growth</p> <p>2.5 Determine harvesting dates to meet market specifications and deadlines</p> <p>2.6 Determine production costs of growing grapes</p> <p>2.7 Identify hazards associated with production activities, assess risks and identify and document controls in the plan</p> <p>2.8 Identify policy concerning grapes not meeting specifications according to customer requirements, quality assurance policies and marketing strategy</p>
3. Schedule grape production activities	<p>3.1 Outline staged implementation and development of the grape production activities</p> <p>3.2 Determine and document timelines for grape production activities</p> <p>3.3 Plan and schedule marketing according to the production schedule</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	and marketing strategy
4. Plan monitoring of the grape production plan	<p>4.1 Determine production activities to be monitored, the format for recording factors, frequency of monitoring and the thresholds for remedial action</p> <p>4.2 Document required remedial action or contingency plan for implementation by staff</p> <p>4.3 Review the effectiveness of the monitoring system on a regular basis</p>
5. Match grape production to required output	<p>5.1 Determine grape yields required to meet client projections</p> <p>5.2 Determine grape variety required to meet output</p> <p>5.3 Compare production program to client projections</p> <p>5.4 Implement remedial action or contingency plan where grape production falls outside client projections</p>
6. Prepare and document the grape production plan and specifications	<p>6.1 Prepare detailed plans and specifications based on industry conventions and the requirements of production</p> <p>6.2 Produce a scaled vineyard site plan which can be readily interpreted and understood by on-site personnel</p> <p>6.3 Develop and document detailed on-site procedures and schedules required for grape production</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information regarding the Australian viticulture industry issues and trends Identify and interpret information regarding grape growing requirements, legal attributes of the site, and by-laws and restrictions Identify and interpret customer requirements and market specifications, quality assurance policies and marketing strategy

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with clients, using clear language to plan and communicate grape production plan
Numeracy	<ul style="list-style-type: none"> Access and analyse data for input to grape production plan and grape production schedule Document harvesting dates, and resource costs of grape production plan Identify and calculate production costs
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT508 Develop a grape production plan	AHCPHT504 Develop a grape production plan	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT508 Develop a grape production plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has developed a grape production plan on at least one occasion and has:

- researched, evaluated and recorded relevant information
- calculated production costs, including:
 - staff
 - resources
 - tools
 - equipment and machinery
 - logistical requirements required for production
- planned and scheduled grape production activities
- planned and scheduled marketing
- communicated and negotiated with the client
- documented plans, specifications and production work procedures
- prepared reports for staff, managers, clients and contractors
- produced a site plan which can be readily understood by on-site personnel.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- trends and issues of the Australian viticulture industry
- principles and practices for developing a grape production plan, including:
 - establishment and management of grape production in relation to client specifications and the standards required by the marketplace
 - environmental growing conditions and sustainable land use strategies
 - establishment procedures, grape variety selection and cultural practices for grape production

- processes and techniques for preparing, costing and documenting plans for grape production and scheduling grape production
- the role of business and marketing plans and client consultation processes in planning grape production
- regulations and legislation relevant to grape production.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - industry publications and internet sources of information relevant to the development of a grape production plan
 - marketing strategy
- specifications:
 - market specifications
 - regulations and legislation relevant to grape production
- relationships:
 - customers
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT509 Evaluate wine

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to analyse chemical components of wine, resolve winemaking problems, taste and evaluate wine, analyse the effect of winemaking techniques, site characteristics, viticultural practices and grape varieties on wine quality, and analyse current packaging and bottle closure methods and wine labelling laws.

The unit applies to individuals who apply specialised skills and knowledge to the evaluation of wine, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Analyse chemical components of wine	1.1 Determine chemical components for a particular wine style, and identify testing laboratories 1.2 Take samples of grapes, juice or wine according to standard

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	sampling procedures and laboratory requirements 1.3 Perform simple wine analysis procedures and record results 1.4 Evaluate and compare results of chemical analyses with desired values to identify potential chemical problems in the winemaking process and any required additions or fining agents
2. Resolve winemaking problems	2.1 Evaluate wine or juice using standard laboratory and organoleptic procedures 2.2 Identify the protein stability of a wine using a buttes or heat technique 2.3 Identify the need for cold stabilisation of a wine 2.4 Use additives or fining agents to alleviate problems or improve quality 2.5 Evaluate the effectiveness of additives and/or fining agents used to alleviate problems or improve quality, and adjust their use where indicated 2.6 Carry out winemaking and handling processes in a hygienic working environment 2.7 Identify, record and use cellar operations procedures and instructions during the winemaking process
3. Taste and evaluate a wine	3.1 Use accepted tasting procedures for tasting the wine 3.2 Identify the flavour and aroma components and characteristics of the wine using organoleptic evaluation techniques 3.3 Identify the relative contribution and interaction of wine components to the wine taste, aroma and appearance, using accepted wine description terminology
4. Analyse the effect of winemaking techniques on wine	4.1 Identify evidence of the winemaking technique in the wine to distinguish it from other influences on the wine 4.2 Identify faults in the wine attributable to the winemaking technique, and distinguish from bottle age characteristics 4.3 Determine the effect of winemaking techniques on suitability of wine for cellaring
5. Analyse the effect of site characteristics, vineyard management	5.1 Identify effects of climate in the wine 5.2 Identify site effects on grape quality 5.3 Identify and evaluate effects of vineyard management practices in

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
practices and grape varieties on wine quality	the wine in terms of modifications and improvements to be made for the next season 5.4 Identify and analyse effects of grape variety on wine flavour 5.5 Adjust, document and communicate viticultural production plan for next season to vineyard personnel
6. Analyse current packaging methods, bottle closure methods and wine labelling laws	6.1 Identify the range of wine packaging available and used in the Australian wine industry 6.2 Identify and compare the range of wine bottle closure methods used in the Australian wine industry 6.3 Identify and interpret current wine labelling regulations and their impact on the wine industry

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interprets standard sampling procedures, laboratory requirements and procedures, and organoleptic procedures Interprets cellar operations procedures and instructions, and current wine labelling regulations
Oral communication	<ul style="list-style-type: none"> Initiates discussions with work colleagues, using clear language to plan and communicate next season viticultural production plan
Numeracy	<ul style="list-style-type: none"> Accesses and analyses data for input into winemaking process Calculates additives or fining agents to alleviate problems or improve quality
Navigate the world of work	<ul style="list-style-type: none"> Identifies and describes own workplace requirements associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Uses appropriate language and communication skills to disseminate information within work team

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT509 Evaluate wine	AHCPT505 Evaluate wine	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT509 Evaluate wine

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has evaluated wine on at least one occasion and has:

- researched, evaluated and recorded information for a wine
- performed chemical analyses necessary for the winemaking process
- determined wine characteristics and faults using organoleptic evaluation techniques
- evaluated a wine, following tasting
- determined the effect of winemaking techniques on wine
- identified and recommended improvements to vineyard management practices that will contribute to enhanced wine quality in the next season
- analysed current packaging methods, bottle closure methods and wine labelling laws.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for evaluating wine, including:
 - balance in relation to wine taste
 - changes to the chemical characteristics of grapes during ripening, including acid, sugar and flavour
 - changes to the physical characteristics of grapes during ripening, including size, hardness and colour
 - climatic and physical features of wine grape growing areas and wine styles produced
 - factors involved in the initiation and management of primary, secondary and malolactic fermentation processes
 - food safety requirements
 - ideal Australian cellaring conditions
 - main export markets
 - packaging, regulations and relationship to product marketing and quality

- sensory evaluation of wines with potential for cellaring
- types and styles of wine produced in Australia
- varieties of wine grapes in Australia
- vintage ratings in Australia
- vineyard management practices and their impact on wine, including:
 - plant moisture status management
 - canopy management
 - pruning levels
 - nutrition regimes.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - grapes, juice or wine
 - sampling equipment
 - viticultural production plan
- specifications:
 - wine labelling regulations
 - standard laboratory and organoleptic procedures
 - cellar operations procedures and instructions
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT510 Manage a wine making process

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to determine wine to be produced and winemaking process, acquire grapes for processing, initiate a ferment, manage primary and secondary fermentation and mature wine in storage vessels.

The unit applies to individuals who apply specialised skills and knowledge to the management of a wine making process, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine wine and wine making process	<p>1.1 Determine the type and style of wine to be produced according to variety and characteristics of the grapes, winemaking factors, consumer preferences, client requirements and industry trends</p> <p>1.2 Determine the winemaking process to be followed according to type and style of wine to be produced, quality and quantity of grapes</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	available, and availability of required equipment and personnel
2. Acquire, deliver and prepare grapes for fermentation	<p>2.1 Harvest and handle grapes according to standard vineyard practices and quality criteria</p> <p>2.2 Acquire and deliver the grapes that meet the desired variety and quality parameters to the winery</p> <p>2.3 Prepare grapes for fermentation, and deliver must or juice to fermentation vessels to meet the desired wine type and style requirements</p>
3. Initiate a ferment	<p>3.1 Select yeast types or strains to produce a given wine type and style</p> <p>3.2 Prepare fermentation vessels and transfer must or juice according to wine type and style requirements</p> <p>3.3 Prepare yeast culture according to specifications and add to fermentation vessels</p>
4. Manage primary fermentation	<p>4.1 Monitor and adjust physical and chemical characteristics of ferment</p> <p>4.2 Predict potential fermentation problems</p> <p>4.3 Detect the presence of undesirable fermentation characteristics</p> <p>4.4 Outline steps to rectify fermentation problems</p> <p>4.5 Rack off gross lees or pressings into appropriate vessels at a determined time</p> <p>4.6 Maintain records of additions and adjustments</p>
5. Manage secondary fermentation	<p>5.1 Obtain and check oak barrels for serviceability for use if required</p> <p>5.2 Inoculate wine with selected malolactic fermentation bacteria</p> <p>5.3 Manage malolactic fermentation to the predetermined end point</p>
6. Mature wine in storage vessels	<p>6.1 Select suitable maturation storage vessels to produce a given wine style and check for serviceability and use</p> <p>6.2 Transfer wine into the selected vessels according to determined wine style characteristics</p> <p>6.3 Monitor condition of wine in storage</p> <p>6.4 Bottle and seal wine according to workplace procedures</p> <p>6.5 Maintain wine production and storage records</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding type and style of wine, grape variety and characteristics Identify and interpret information regarding winemaking factors, consumer preferences, client requirements and industry trends
Oral communication	<ul style="list-style-type: none"> Initiate discussions with clients, using clear language to determine wine production requirements
Numeracy	<ul style="list-style-type: none"> Access and analyse data from specifications to calculate yeast culture quantities Calculate bacteria quantities for inoculation of wine
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT510 Manage a wine making process	AHCPT506 Manage a wine making process	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT510 Manage a wine making process

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed a wine making process on at least one occasion and has:

- planned processes that may be used to maximise production of grapes that meet winery quality requirements
- acquired and processed grapes for wine production
- performed must handling processes
- operated the range of equipment required to process grapes from winery receipt point to the fermentation tank
- initiated and managed the fermentation process
- made additions and finings as required
- identified, established, supervised and monitored daily cellar work practices
- performed chemical analyses necessary for the winemaking process
- organised and undertaken routine cellar operations
- operated the filtration and bottling processes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- changes to the chemical characteristics of grapes during ripening, including acid, sugar and flavour
- changes to the physical characteristics of grapes during ripening, including size, hardness and colour
- climatic and physical features of wine grape growing areas and wine styles produced
- types and styles of wine produced in Australia
- varieties of wine grapes in Australia
- principles and practices for managing a wine making process
- balance in relation to wine taste

- vineyard practices relevant to the production of grapes that meet the requirements of the winery
- processes involved in handling grapes from the vineyard to the winery in order to produce wine
- must and marc handling procedures
- routine winemaking and cellar operation procedures including maintenance of a clean, safe working environment
- ranges of equipment and using this equipment to process grapes and must in a winery
- factors involved in the initiation and management of primary, secondary and malolactic fermentation processes
- ideal Australian cellaring conditions
- equipment and processes for wine filtration.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - industry publications and internet sources of information on variety and characteristics of grapes, winemaking factors, consumer preferences, client requirements and industry trends
 - grapes, yeast and bacteria for production of wine
 - fermentation vessels
 - oak barrels
 - storage vessels
 - wine bottles and seals
- specifications:
 - yeast culture specifications
 - malolactic fermentation bacteria inoculation specifications
- relationships:
 - clients
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPHT511 Develop a horticultural production plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop a production plan, including carrying out planning activities, determining horticultural production requirements, scheduling production activities, planning monitoring of the production plan, and documenting the production plan and specifications for a horticultural workplace.

The unit applies to individuals who apply specialised skills and knowledge to the development of a horticultural production plan, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out planning	1.1 Determine client preferences and requirements for the production

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
activities	<p>plan, and confirm according to workplace marketing strategy and business plans</p> <p>1.2 Assess the production site for growing environment factors, services and site modifications</p> <p>1.3 Conduct research into the growing requirements of plant species and cultivars, and restrictions that may affect the production plan</p> <p>1.4 Identify sustainable land use issues that may affect planned production</p> <p>1.5 Set production targets that are consistent with the marketing strategy and business plan</p> <p>1.6 Determine production requirements in terms of quantity, quality and availability of the product</p> <p>1.7 Develop a draft plan that reflects client preferences and requirements</p>
2. Determine the requirements of horticultural production	<p>2.1 Identify plant species that are appropriate to the site and consistent with the plan</p> <p>2.2 Calculate, cost and confirm availability and quantity required with the supplier</p> <p>2.3 Select plant establishment procedures consistent with the agreed preliminary plan</p> <p>2.4 Ensure design of the site includes irrigation and drainage systems, and takes into account the growing requirements of plants and sustainable land use practices</p> <p>2.5 Document cultural management practices to achieve optimal growth environment from planting to harvest</p> <p>2.6 Determine harvesting dates to meet market specifications and deadlines</p> <p>2.7 Identify and cost resources, tools, equipment and machinery required for production and site establishment</p>
3. Schedule production activities	<p>3.1 Outline staged implementation and development of the crop production activities, including providing for future works access</p> <p>3.2 Determine and document timelines for crop production activities, taking into account any other planning requirements</p> <p>3.3 Plan and schedule marketing according to the production schedule and marketing strategy</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Plan monitoring of the production plan	<p>4.1 Determine production activities to be monitored, the format for recording factors, frequency of monitoring and the thresholds for remedial action</p> <p>4.2 Document required remedial or contingency plan for implementation by staff</p> <p>4.3 Review on a regular basis the effectiveness of the monitoring system</p> <p>4.4 Compare the production program with feedback and projections from clients</p> <p>4.5 Implement remedial action or contingency plan where crop production falls outside client projections</p>
5. Prepare and document the production plan and specifications	<p>5.1 Prepare detailed plans, specifications and quotations based on horticultural conventions and the requirements of production</p> <p>5.2 Develop and document detailed on-site procedures and schedules required for crop production</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding the production and growing requirements of plant species and cultivars, and restrictions Identify and interpret client requirements, market specifications and marketing strategy
Writing	<ul style="list-style-type: none"> Document a horticultural production plan
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client and suppliers, using clear language to plan and communicate horticultural production plan
Numeracy	<ul style="list-style-type: none"> Access and analyse data for input to production plan and production schedule Document harvesting dates and resource costs of production plan

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT511 Develop a horticultural production plan	AHCPHT502 Develop a horticultural production plan	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT511 Develop a horticultural production plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed a horticultural production plan on at least one occasion, and has:

- developed a horticultural production plan that reflects client preferences and requirements
- communicated and negotiated with the client and suppliers
- researched, evaluated and recorded relevant information, including site factors and land use issues
- selected and sourced plants or plant material for seeding or propagation
- calculated and documented the cost and logistical requirements of the production plan
- designed and incorporated infrastructure into planning
- planned and scheduled production activities
- planned and scheduled marketing
- developed a monitoring program to cover the horticultural operation from sowing to sale
- established product specifications
- documented plans, specifications and production work procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for developing a horticultural production plan:
 - advantages and limitations of sustainable horticulture systems
 - establishment and maintenance of a range of enterprise horticultural products in relation to client needs and the standards required by the marketplace
 - establishment procedures, plant selection and cultural practices for a range of enterprise horticultural products

- processes and techniques for preparing, costing and documenting plans for and scheduling horticultural production
- the role of business and marketing plans and client consultation processes in planning horticultural production.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - industry publications and internet sources of information relevant to the development of a horticultural production plan
 - marketing strategy
- specifications:
 - market specifications
- relationships:
 - client
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC PHT512 Manage a controlled growing environment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to manage a controlled growing environment, including identifying and determining crop requirements, preparing a management plan, and managing the controlled growing environment.

The unit applies to individuals who apply specialised skills and knowledge to the management of a controlled growing environment, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Production Horticulture (PHT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify crop requirements	1.1 Determine crop growth and production requirements according to a documented production plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Research environmental parameters and optimal growing conditions for the specific crop, using available information resources</p> <p>1.3 Identify and record controlled growing environment factors</p>
2. Determine requirements for a controlled growing environment	<p>2.1 Identify, cost and confirm availability of structures, machinery, equipment and resources required to control environmental conditions</p> <p>2.2 Identify detrimental environmental impacts associated with the controlled growing environment system</p>
3. Prepare a management plan for the controlled growing environment	<p>3.1 Determine management objectives for the controlled growing environment consistent with production plan and market requirements for crop quantity and quality</p> <p>3.2 Develop a schedule of environmental control procedures according to controlled environment management objectives</p> <p>3.3 Evaluate and report staff training needs for operation and maintenance of environmental control systems</p> <p>3.4 Negotiate and document a budget supporting the controlled environment management plan</p> <p>3.5 Determine and communicate roles and responsibilities of staff</p> <p>3.6 Document the controlled growing environment plan</p>
4. Manage the controlled growing environment	<p>4.1 Identify controlled environment indicators and thresholds for remedial action, and monitoring frequency</p> <p>4.2 Develop monitoring procedures according to the requirements of the production plan, and communicate to staff</p> <p>4.3 Record, analyse and apply monitoring data to ensure optimal plant development</p> <p>4.4 Document and report remedial action undertaken</p> <p>4.5 Monitor costs of the controlled growing environment system against budget</p> <p>4.6 Record and report budget adjustments</p> <p>4.7 Evaluate recorded information, budget data and production outputs</p> <p>4.8 Document and report operational achievements towards management objectives</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding production requirements for a controlled growing environment plan
Oral communication	<ul style="list-style-type: none"> Initiate discussions with management, using clear language to discuss production requirements, controlled growing environment plan and operational achievement report, and to negotiate budget Use clear language with staff to communicate roles and responsibilities and monitoring procedures
Numeracy	<ul style="list-style-type: none"> Access and analyse data for input into the controlled growing environment plan, monitoring procedures and operational achievement report Calculate structures, machinery, equipment and resource costs Document controlled growing environment budget and adjustments

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT512 Manage a controlled growing environment	AHCPT503 Manage a controlled growing environment	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPHT512 Manage a controlled growing environment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed a controlled growing environment on at least one occasion, and has:

- researched, evaluated and recorded relevant information about production requirements, growing requirements of the crop, and controlled growing environment factors
- developed a controlled growing environment plan to cover staff training, budgets, operating procedures and remedial actions
- developed environmental monitoring procedures
- evaluated, documented and reported the achievements towards management objectives.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for managing controlled growing environments, including:
 - controlled environmental conditions for crop plant physiology, growth stages and product quality and quantity
 - legislation and regulations relevant to controlled growing environment systems
 - market requirements for crop quantity and quality
 - monitoring, analysis and recording systems
 - plant physiology and biochemistry
 - quality production methods and techniques for a range of controlled environment plants
 - staff training requirements
 - techniques and methods of implementing optimal growing conditions for a range of horticultural crops.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - industry publications and internet sources of information relevant to the management of a controlled growing environment and development of a controlled growing environment plan
 - production plan
- specifications:
 - legislation and regulations relevant to controlled growing environment systems
- relationships:
 - management and staff
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG401 Implement the pest monitoring and evaluation plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement the pest monitoring plan and evaluate and report on performance of pest management.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Obtain and collate all available data	1.1 Determine objectives of pest monitoring and evaluation plan 1.2 Collate data on pest numbers, economic and environmental impacts of pests and pest management plan operating costs 1.3 Consult with stakeholders for input into pest management plan 1.4 Investigate site and record presence of recent pest activity

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Investigate and record previous pest control activity
2. Monitor the pest management plan	2.1 Determine monitoring points in the monitoring plan 2.2 Measure and record outcomes of pest control procedures 2.3 Verify and record compliance with health and safety and environmental requirements 2.4 Report monitoring outcomes and compliance according to workplace procedures
3. Evaluate data against objectives and performance criteria	3.1 Collate and evaluate pest control outcomes against objectives in the monitoring plan 3.2 Reconcile cost of plan against budget 3.3 Conduct a cost–benefit analysis of pest control program
4. Compile a report of the evaluation	4.1 Isolate and examine indicators of performance 4.2 Analyse indicators to build a considered conclusion on outcome of control program on pest populations and impact 4.3 Compile conclusions into a report
5. Recommend modifications	5.1 Consider conclusions and recommend changes to improve pest control performance and impact on land management and production processes 5.2 Provide recommendations to stakeholders according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse pest control plans and outcomes, and consolidate information into data sets for analysis to formulate recommendations for improvement
Writing	<ul style="list-style-type: none"> Prepare reports to stakeholders to inform on pest control outcomes using clear and accurate language

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG401 Implement the pest monitoring and evaluation plan	AHCPMG410 Implement the pest monitoring and evaluation plan	Minor changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG401 Implement the pest monitoring and evaluation plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, implemented a pest monitoring and evaluation plan to workplace requirements.

There must also be evidence that the individual has:

- collated data for performance of control program according to pest monitoring and evaluation plan
- consulted with stakeholders on monitoring plan performance metrics
- analysed performance data against objectives
- produced a cost–benefit analysis
- reported results of monitoring operations and evaluation results.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- setting and analysing performance metrics, including:
 - data sets and analysis against objectives and performance
 - comparing actual costs with budgeted costs
 - creating a cost–benefit analysis
- environmental and economic impacts of pests on land management and production processes
- pest management plans, their structure and use in land management
- monitoring and evaluation principles and how they work in the pest management plan
- types and range and characteristics of pests, including:
 - identified pests
 - lifecycles

- threshold levels
- effects of control methods on them
- local, regional, state or territory and national pest management strategies for pest control
- federal, state or territory legislation and regulations relating to pest management activities
- principles of integrated pest management (IPM).

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a site for a specified pest management plan or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology and software for analysing data and preparing reports
- specifications:
 - workplace policies and procedures for pest management and reporting
 - workplace pest management plans and performance data
 - legislation, regulations and codes of practice for Commonwealth, state and local jurisdictions
- relationships:
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG402 Ensure compliance with pest legislation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify and investigate non-compliances with pest legislation and act on non-compliance issues.

The unit applies to individuals who take a lead role in implementing pest management procedures and work autonomously, instruct, and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

Pest control legislation and regulations apply in all states and territories and must be adhered to. Users are advised to check details with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify non-compliance with legislation	1.1 Identify and record alleged non-compliance with pest control legislation 1.2 Report allegation to authority according to workplace procedures
2. Investigate non-compliance	2.1 Determine land ownership, identity and responsibility of stakeholders accused of non-compliance 2.2 Investigate and collect evidence for alleged non-compliance of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	pest control legislation 2.3 Notify stakeholders of non-compliance of pest control legislation 2.4 Provide stakeholder with advice and estimates on rectifying non-compliance 2.5 Conduct investigations and communications according to privacy, right of entry, and workplace policies and procedures 2.6 Record investigation activity, actions and advice according to workplace procedures
3. Act on non-compliance issues	3.1 Produce and issue notices of non-compliance to stakeholders 3.2 Collate investigations, evidence and findings into a final report 3.3 Advise stakeholder of outcomes of investigations and findings according to legislative and regulatory requirements 3.4 Provide support to stakeholders during implementation of rectifications according to workplace policies and procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Maintain accurate records of investigations and document notifications and reports accurately for specific audience using clear and detailed language in order to convey explicit information, requirements and recommendations
Oral Communication	<ul style="list-style-type: none"> Elicit evidence and inform stakeholders of breaches in legislation and requirements for rectification using collaborative and inclusive techniques, including active listening, questioning and reading of non-verbal signals

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG402 Ensure compliance with pest legislation	AHCPMG411 Ensure compliance with pest legislation	Changes to Application and Performance Criteria for clarity Updated Foundation Skills, Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG402 Ensure compliance with pest legislation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, conducted an investigation, determined status of compliance and advised rectification procedures to stakeholders for a breach in pest control legislation according to Commonwealth, state or territory legislation.

There must also be evidence that the individual has:

- identified and interviewed stakeholders alleged to have not complied with pest control legislation
- investigated and collected evidence of breaches
- provided advice to stakeholders of a non-compliance issue according to authority guidelines
- provided advice and support to stakeholder to rectify the non-compliance according to authority guidelines
- conducted investigations and communication according to privacy and right of entry legislation and policies
- reported findings of investigations and actions according to legislative requirements
- produced and issued notices to stakeholders for non-compliance
- completed records and reports according to authority and workplace standards.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- relevant Commonwealth, state, territory and local government legislation regarding pest management and the destruction and movement of declared species
- methods of investigation and procedures for collecting evidence, including:
 - interview skills

- types of evidence relevant to non-compliant pest control
- conflict avoidance and resolution techniques
- site access rights and responsibilities
- communicating with and supporting stakeholders through notifications and advice
- the legislative status of particular pests and how to identify whether a pest is a declared species
- the types of breaches that generally occur in the locality, and the appropriate control options for pests, including:
 - plants
 - vertebrates
 - invertebrates
 - microbial
- property owners' rights and responsibilities for managing pests on properties
- delegations under the relevant Acts and Certificates of Authority
- control measures appropriate to the pests and environment in the area.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a property with an actual breach in legislative compliance or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - equipment used to capture and store evidence during investigations
- specifications:
 - workplace policies, procedures and processes for conducting investigations and preparing notices and reports
 - legislation, regulations and codes of practice relevant to pest control
- relationships:
 - stakeholder
 - agency authority.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG403 Apply predator trapping techniques

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to effectively use leg hold traps to capture predator species, to release the animal unharmed as part of research programs or to humanely euthanise in accordance with pest management programs. It primarily deals with the use of leg hold or foothold traps to capture predator pest species, including dogs, foxes and cats. Animals may be native animals, domestic animals, animals determined to be pests or feral animals. Trapping techniques call for the use of a variety of equipment and may include the use of lures or attractants baits.

Trapping must be carried out in accordance with an approved pest management plan or research project plan.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection and use of available resources.

Some forms of traps are strictly regulated in some states and territories in Australia. Specific determination should be sought through the relevant state or territory authority.

Where feral animals are trapped, they may need to be euthanised with a firearm. Firearms licensing conditions apply to this unit, in particular the use of Cat A, B or C firearms. Specific approval should be sought through the relevant state or territory firearms licensing agency.

Appropriate firearms licences and training are also required for those involved in training and assessment of this unit.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess site and predator trapping requirements	1.1 Identify purpose of animal capture and set objectives 1.2 Confirm the location and extent of the pest problem 1.3 Confirm target animal movement patterns and behaviour to determine trapping location and placement of equipment 1.4 Identify non-target animals present in the area 1.5 Estimate time required to complete trapping
2. Prepare equipment required for trapping	2.1 Identify and check vehicles, materials and equipment required for trapping 2.2 Clean and maintain trapping equipment and prepare traps for trapping 2.3 Identify hazards, assess risks and implement controls according to workplace health and safety and environmental procedures 2.4 Assess site access requirements and obtain authority and permits to enter property 2.5 Identify potential hazards to non-target animals from trapping, and implement control strategies to mitigate risk 2.6 Tune, modify and prepare traps to minimise non-target capture
3. Place and set traps	3.1 Undertake site surveillance to identify target and non-target animals 3.2 Identify and interpret signs of target animal 3.3 Select, check and use personal protective equipment 3.4 Select and prepare trap site to maximise opportunity of trapping target animals 3.5 Position, set, calibrate and check trapping equipment 3.6 Apply lures, decoys or baits and toxins according to trapping objectives 3.7 Camouflage traps according to trap design
4. Check and remove traps	4.1 Inspect traps according to frequency specified in trapping objectives and legislative requirements 4.2 Identify trapped animals, then release, destroy or prepare for transport according to trapping objective

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.3 Handle and transport captured animals humanely according to animal welfare codes of practice</p> <p>4.4 Observe workplace health and safety procedures and public safety requirements during trapping activities</p> <p>4.5 Render traps safe and remove trap according to manufacturer specifications</p> <p>4.6 Restore trap site to its prior condition</p>
5. Maintain accurate records	<p>5.1 Record details of trapping activities according to workplace procedures</p> <p>5.2 Report results of trapping activities and incidents according to workplace procedures</p> <p>5.3 Report trapping results and outcomes according to approved management plan</p> <p>5.4 Record trap locations and captures according to workplace record-keeping procedures</p>
6. Clean and store equipment and material	<p>6.1 Remove, retain or dispose of carcasses according to workplace health and safety and biosecurity procedures</p> <p>6.2 Clean, maintain and store equipment and unused materials</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Maintain accurate records and prepare reports using structure and layout specified in workplace procedures, incorporating vocabulary, grammatical structure and conventions appropriate to the reader

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG403 Apply predator trapping techniques	AHCPMG414 Apply predator trapping techniques	<p>Minor changes to Application</p> <p>Element 1 split into two to rationalise unit structure</p> <p>Changes to Performance Criteria to remove duplication</p> <p>Added Foundation Skills</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG403 Apply predator trapping techniques

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has deployed leg hold traps on at least two occasions for the capture of predatory pest animals.

There must also be evidence that the individual has:

- trapped, handled and released or euthanised animals humanely according to trapping objectives and animal welfare regulations and guidelines
- identified target and non-target animals in the field
- checked vehicles, equipment and materials for serviceability, and cleaned equipment before starting and on completion of trapping activity
- selected and prepared the trapping site and restored it on completion of trapping activity
- positioned, set, calibrated and checked trapping equipment according to trapping objectives and procedures
- prepared and applied lures or attractants to traps
- identified signs of target animals using scent stations, and identifiable tracks, scats and/ or other traces
- summarised and presented trapping results according to workplace reporting procedures
- maintained accurate records according to workplace procedures including:
 - types of trap sets and lures
 - target species captured
 - non-target species captured
- recorded location of traps and lures using at least one of the following methods:
 - Global Positioning System (GPS) device
 - software application
 - maps or charts.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic requirements for ensuring the welfare of animals described in the relevant codes of practice and standard operating procedures, including animal ethics
- purpose of the animal capture
- selecting trapping location and equipment, including:
 - target animal's range
 - movement patterns and behaviour
- factors affecting choices around equipment and resources and timing of trapping activities, including:
 - the reproductive cycle of the target animal
 - food preferences, both general and local, of target animals
 - biology of non-target animals that may be impacted by trapping program in the area
 - permissions and permits that may be required
 - suitable traps for the target animal
 - precautions that need to be taken to minimise trapping non-target animals
- capture and humane killing methods for target animals
- principles relating to property, stock and duty of care
- how to camouflage traps
- how to safely set off traps to render them inactive
- workplace health and safety procedures that relate to trapping animals
- recording and reporting requirements
- decoys and lures types, purpose and safe use
- toxins used in trapping, including:
 - types
 - preparation
 - use
 - state or territory legislation on the use and storage of toxins
- applicable legislation on the capture and handling of pest animals
- suitable personal protective equipment
- transportation methods for captured animals.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field where predatory pest animals are to be found, or in an environment that accurately represents workplace conditions
- resources, equipment and materials:

- leg hold and foothold traps and lures that comply with Commonwealth and state/territory legislation
- personal protective equipment
- specifications:
 - workplace policies and procedures for using trapping techniques
 - manufacturer operating instructions for traps
 - safety data sheets for chemical lures and baits
 - workplace instructions and trapping objectives
 - legislation and codes of practice for humane traps, trapping and handling of animals
- timeframes:
 - checking traps according to timeframes recommended in legislation and animal welfare regulations.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

In addition, the following specific assessor requirements apply to this unit:

- assessors must have appropriate firearms licence where required by trapping techniques.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG410 Implement the pest monitoring and evaluation plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement the pest monitoring plan and evaluate and report on performance of pest management.

Pests may be weeds, vertebrate or invertebrate pests or a combination of these.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication. However, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

Pre-requisite Unit

Nil.

Unit Sector

Pest Management (PM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Obtain and collate all	1.1 Determine the objectives of the pest monitoring and evaluation

Element	Performance criteria
available data	plan 1.2 Collate data on pest numbers, economic and environmental impacts of pests and pest management plan operating costs 1.3 Consult with stakeholders about the pest management plan 1.4 Identify pest signs and confirm if there is presence of recent pest activity around the site 1.5 Identify signs of previous control activity
2. Monitor the pest management plan	2.1 Determine monitoring points in the monitoring plan 2.2 Measure response to the control procedures used 2.3 Confirm that work health and safety requirements are being followed 2.4 Confirm that environmental requirements are being followed 2.5 Record any corrective actions required, processes used and outcomes achieved and report to management
3. Evaluate data against objectives and performance criteria	3.1 Compare data with objectives and performance criteria in the monitoring plan 3.2 Compare costs with budget 3.3 Document costs and benefits
4. Compile a report of the evaluation	4.1 Isolate and examine indicators of good and poor performance 4.2 Use clearly stated conclusions, supported by data, in relation to changes in pest abundance and impacts 4.3 Compile a report that includes discussion of data analysis results
5. Recommend modifications	5.1 Make recommendations to modify or eliminate causes of poor performance or to enhance current performance 5.2 Make recommendations to reduce impacts on land management and production processes 5.3 Provide recommendations to management in the required format

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit has resulted from the merging of AHCPMG407A Monitor and evaluate the local pest management action plan, AHCPMG408A Assess and monitor weed, pest and/or disease control programs and AHCPMG505A Evaluate the pest management strategy and is not equivalent to any of these units.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG410 Implement the pest monitoring and evaluation plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- implement a pest monitoring and evaluation plan to organisational requirements
- collate data as required in the pest monitoring and evaluation plan
- conduct a site inspection
- consult with stakeholders about the plan
- measure responses to the organisation's pest control procedures
- analyse data against objectives and performance criteria
- produce a report on the results of monitoring operations and a report with evaluation results
- apply all monitoring techniques stipulated in the monitoring and evaluation plan
- apply work health and safety policies and procedures in all monitoring activities

Knowledge Evidence

The candidate must demonstrate knowledge of:

- how to compare data with objectives and performance criteria
- how to compare actual costs with budgeted costs
- environmental and economic impacts of pests on land management and production processes
- the organisation's pest management plan
- monitoring and evaluation principles and how they work in the pest management plan
- land management and production purposes
- range of pests identified in the pest management plan, their lifecycles, threshold levels and the effects of control methods upon them

- relevant local, regional, State or Territory and national pest management strategies
- Federal, State or Territory legislation and regulations relating to pest management activities
- principles of integrated pest management

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG411 Ensure compliance with pest legislation

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to identify and investigate non-compliances with pest legislation and act on non-compliance issues.

Pests may be weeds, vertebrate or invertebrate pests or a combination of all three.

This unit applies to individuals who take responsibility for their own work. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify non-compliance with legislation	1.1 Identify non-compliance through complaint or other means, and record 1.2 Notify senior staff of non-compliance

Element	Performance criteria
2. Investigate non-compliance	2.1 Determine land ownership or identity of stakeholder and confirm responsibilities of all parties 2.2 Obtain further information on possible non-compliance with legislation 2.3 Contact stakeholder to notify them of breach and provide advice on how to fulfil requirements for compliance 2.4 Provide stakeholder with estimates for pest control work 2.5 Adhere to policies of right of entry when communicating with stakeholders 2.6 Maintain accurate records
3. Act on non-compliance issues	3.1 Issue relevant notices 3.2 Collect evidence and report findings 3.3 Provide advice to the stakeholder that is consistent with legislative requirements 3.4 Provide support to stakeholders in the implementation of programs

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK404A Ensure compliance with pest legislation.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG411 Ensure compliance with pest legislation

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed meeting with a stakeholder. All work must be carried out in accordance with relevant Federal, State or Territory legislation regarding pest management activities and the destruction and movement of declared pests.

The candidate must provide evidence that they can:

- identify a non-compliance issue
- provide advice to stakeholders of a non-compliance issue according to authority guidelines and in a manner and language appropriate to the situation
- provide advice and support to stakeholder to manage the issue in accordance with authority guidelines
- follow right of entry requirements
- investigate and collect evidence of breaches
- report findings of non-compliance and compliance according to legislative requirements
- issue relevant notices
- complete recording and reporting requirements to authority and workplace standards

Knowledge Evidence

The candidate must demonstrate a knowledge of:

- relevant Federal, State, Territory and local government legislation regarding pest management and the destruction and movement of declared species
- the legislative status of particular pests and how to identify whether a pest is a declared species

- the types of breaches that generally occur in the locality and the appropriate control options
- conflict avoidance and resolution techniques
- property owners' rights
- delegations under the relevant Acts and Certificates of Authority
- control measures appropriate to the pests and environment in the area

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG501 Develop a regional pest management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop a pest management plan that applies to a large or regional area. It also describes the skills and knowledge required to gain agreement and commitment from stakeholders to implement the plan, which is used by land managers who practice sustainable land management principles and require a collaborative approach with neighbouring landholders.

The unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in specific technical areas, are able to analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine goals of the plan	1.1 Define pest problem and determine scope of pest management plan 1.2 Establish a steering committee where a need has been identified

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Determine consultation requirements 1.4 Determine and document goals through consultation with stakeholders 1.5 Assess and document pest management options for goals of management plan
2. Set specific objectives for the pest management plan	2.1 Define and document objectives to be achieved in consultation with stakeholders 2.2 Define roles and responsibilities of stakeholders in delivering objectives
3. Identify activities required to achieve specific objectives	3.1 Determine and document activities required to achieve objectives in consultation with stakeholders 3.2 Prioritise activities and seek commitment from stakeholders 3.3 Conduct risk management assessment for community, environment, workplace health and safety and production 3.4 Confirm activities align with pest management plan, and environmental, sustainability and biosecurity policies and legislation 3.5 Determine measurable performance metrics for objectives 3.6 Determine monitoring, evaluation and reporting methods
4. Publish the plan	4.1 Verify that plan complies with biosecurity, legislative and national and state or territory strategic policies 4.2 Submit draft plan to stakeholders for review and feedback 4.3 Finalise plan from stakeholder feedback and seek endorsement 4.4 Publish and distribute plan according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Generate complex written plans for a specified purpose by selecting appropriate conventions and stylistic devices to express

Skill	Description
	precise meaning
Oral Communication	<ul style="list-style-type: none"> Establish and maintain effective communication in a broad range of contexts when communicating and negotiating with stakeholders
Numeracy	<ul style="list-style-type: none"> Interpret complex economic measures, and perform calculations for determining the economic impact of pests

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG501 Develop a regional pest management plan	AHCPMG507 Develop a regional pest management plan	Minor changes to Application Minor changes and consolidation of Elements and Performance Criteria Foundation Skills added Updated Performance Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG501 Develop a regional pest management plan

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has produced at least one pest management plan that must include the following:

- objectives of the management plan
- alternative management options
- measurable metrics for objectives.

The management plan must also comply with relevant legislation and best practice principles for pest management, and must take into consideration the following points:

- pest populations and options for control
- changes to land management or production practices
- impact of economic factors
- technical difficulty
- practicality and feasibility
- social and environmental acceptability.

There must also be evidence that the individual has:

- consulted with stakeholders to reach agreed outcomes
- investigated geographical area for landscape and land use
- developed pest management plan according to defined pest problem
- aligned pest management plan to biosecurity regulations and other legislation
- developed, evaluated and documented management options for managing pest populations
- achieved approval of the plan from key stakeholders
- conducted risk assessment and cost–benefit analyses of a range of management options to assist in selection.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- consultative planning methods and techniques
- concepts of the strategic approach to pest management, the importance of monitoring and the effectiveness of management evaluation
- relevant local, regional, state/territory and national pest management strategies
- federal, state or territory legislation and regulations relating to pest management activities
- principles of integrated pest management
- types of monitoring technology for pest management
- impact of pests on terrestrial and aquatic ecosystems and production enterprises
- pest management options and strategies
- techniques used to validate target pest population and distribution data supplied by stakeholders, and methods of obtaining other relevant data
- measuring and estimating economic losses and environmental impact from pest presence
- federal and state or territory legislation and regulations relating to property, stock and duty of care
- target pest biology and lifecycles
- pest population dynamics and economic and environmental thresholds
- wildlife issues and how to minimise risks to non-target species as well as deal with pest behaviour
- environmental protection, cultural and heritage legislation affecting pest management
- basic requirements for ensuring the welfare of animals described in the relevant codes of practice.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated for a regional area or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology and software for research and documenting plans
- specifications:
 - workplace policies and procedures for pest management planning
 - legislation, regulations and industry codes of practice for pest management
- relationships:
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf7>

AHCPMG502 Investigate a pest control failure

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to investigate causes of pest control failure after the implementation of a pest management plan for the control of weeds, vertebrate and/or invertebrate pests.

This unit applies to individuals who are regional pest control officers and managers that take personal responsibility for their own work and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess planning techniques used	1.1 Determine and assess management techniques used in pest management plan 1.2 Assess level of community and stakeholder engagement for development of the pest management plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Evaluate the level of commitment gained from stakeholders 1.4 Assess validity of defined pest problem 1.5 Assess stakeholder understanding of pest and damage caused 1.6 Determine and assess suitability of monitoring techniques used
2. Assess treatment failure	2.1 Assess level of pest damage subsequent to treatment according to expectations 2.2 Review pest management records and conduct site inspections to determine pre-treatment and post-treatment infestation 2.3 Review pest management plan to determine expected pest population size post-treatment 2.4 Assess the difference between expected and monitored population levels 2.5 Assess treatments and application techniques used 2.6 Determine if failure was due to defective treatment or pest response to treatment 2.7 Determine if operator skill level contributed to failure when applying pest treatment
3. Evaluate solutions to the failure	3.1 Consolidate and analyse all treatment failures 3.2 Identify alternative treatment solutions to rectify failures 3.3 Determine best treatment solutions to resolve failures 3.4 Review and revise pest management plans and procedures 3.5 Advise stakeholders of changes to pest management plan

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and analyse pest management records, plans and treatment documentation, to inform and verify actions and assess pest control failure

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG502 Investigate a pest control failure	AHCPMG509 Investigate a pest control failure	Minor changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG502 Investigate a pest control failure

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, investigated a failure of a pest control program, determined solutions and rectified pest management planning and implementation documentation.

There must also be evidence that the individual has:

- investigated the planning process, including:
 - planning documentation
 - stakeholder engagement and support
 - pest and damage caused
- reviewed and assessed methods and records of pest control measures used
- analysed pre-treatment and post-treatment pest infestation levels
- evaluated and determined solutions to the failure
- revised pest management plans and procedures and advised stakeholders of changes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles that underpin the strategic approach to managing pests
- pest management processes and procedures, including:
 - surveying pest populations for determining infestation levels
 - pest monitoring techniques
 - defining the pest problem
 - pest treatments for different contexts
 - pest control measures
- chemical, biological, physical and habitat management techniques for pest management

- investigative techniques, including:
 - desktop reviews
 - site visits and evidence collection
- federal, state or territory legislation and regulations relating to pest management activities
- designing and developing pest management plans and procedures
- assessing work team performance and skills
- importance of public and stakeholder consultation in pest management planning.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology and software for reviewing records and revising documents
- specifications:
 - legislation, regulations and industry codes of practice for pest management
- relationships:
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG507 Develop a regional pest management plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop a pest management plan that applies to a large or regional level. It also describes the skills and knowledge required to gain agreement and commitment from stakeholders to implement the plan.

Pest management plans are used by land managers who practice sustainable land management principles and require a collaborative approach with neighbouring landholders.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in specific technical areas, are able to analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication. However, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

Pre-requisite Unit

Nil.

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine goals of the plan	1.1 Determine scope of the plan 1.2 Determine the need for, and establish a steering committee, where necessary 1.3 Determine consultation requirements 1.4 Conduct and document consultation with stakeholders to determine goals 1.5 Assess and document options for controlling pest populations, changing land management or production practices, in terms of economic factors, technical difficulty, practical feasibility, and social and environmental acceptability
2. Set specific objectives for the pest management plan	2.1 Define and document objectives to be achieved in consultation with stakeholders 2.2 Define roles and responsibilities of stakeholders in delivering objectives
3. Identify activities required to achieve specific objectives	3.1 Determine and document activities required to achieve objectives in consultation with stakeholders 3.2 Prioritise activities and seek commitment from relevant stakeholders, where relevant 3.3 Conduct risk management for community, environment, work health and safety and production 3.4 Ensure activities align with pest management plan, environmental sustainability policies and biosecurity plans or legislation 3.5 Determine monitoring, evaluation and reporting methods
4. Determine performance criteria for objectives	4.1 Determine measurable performance criteria in terms of target pest population levels, economic impacts and environmental impacts
5. Publish the plan	5.1 Check the plan meets all biosecurity, legislative and national and State or Territory strategic policies 5.2 Submit draft plan to stakeholders for review 5.3 Finalise plan and seek endorsement by key stakeholders 5.4 Publish and distribute plan according to organisational requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit has resulted from the merging of AHCPMG402A Develop a pest management action plan within a local area and AHCPMG503A Develop a strategy for the management of target pests and is not equivalent to either of these units.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG507 Develop a regional pest management plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- produce a pest management plan that contains objectives and management options which comply with relevant legislation and best practice principles of pest management
- consult with stakeholders to reach agreed upon outcomes from identified objectives
- scope geographical area, landscape and land uses within area and with stakeholders
- develop pest management plan according to defined pest problem
- align pest management plan to biosecurity plans or legislation
- develop pest management plan in accordance with sustainable land use principles, economic feasibility, environmental acceptability and statutory requirements for pest control
- develop, evaluate and document all management options to control, eradicate or prevent pest populations
- achieve approval of the plan by key stakeholders
- conduct risk assessments and cost-benefit analyses of the range of management options available in order to select the best option for the specific context
- apply work health and safety policies and procedures in the context of own work
- include appropriate animal welfare Code of Practice and Standard Operating Procedures in the plan
- apply appropriate sustainability practices in the plan

Knowledge Evidence

The candidate must demonstrate knowledge of:

- planning techniques

- concepts of the strategic approach to pest management, the importance of monitoring and the effectiveness of management evaluation
- relevant local, regional, State/Territory and national pest management strategies
- Federal, State or Territory legislation and regulations relating to pest management activities
- principles of integrated pest management
- types of monitoring technology available
- land use processes, ecological systems and production systems
- pest management options and strategies
- techniques used to validate target pest population and distribution data supplied by stakeholders, and methods of obtaining other relevant data
- how to measure or estimate economic losses and environmental impacts from pest presence
- Federal and State or Territory legislation and regulations relating to property, stock and duty of care
- target pest biology and lifecycles
- potential diseases or toxicity risks
- pest population dynamics and economic and environmental thresholds
- wildlife issues and how to minimise risks to non-target species as well as deal with pest behaviour
- environmental protection legislation
- basic requirements for ensuring the welfare of animals described in the relevant Codes of Practice

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG509 Investigate a pest control failure

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to investigate causes of pest control failure after the implementation of a pest management plan.

Pests may be weeds, vertebrate or invertebrate pests or a combination of these.

Treatment may be any measure used to decrease the pest population and the damage caused by it.

This unit applies to regional pest control officers and managers who take personal responsibility for their own work and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

Individuals operating in this field are required to hold current chemical handling certification and a first aid certificate. Other licensing conditions may also apply to this unit. Specific determination should be sought through the relevant State or Territory.

Pre-requisite Unit

Nil.

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess planning techniques used	1.1 Determine and assess management techniques used in the pest management plan 1.2 Assess the level of community and stakeholder consultation carried out 1.3 Evaluate the level of commitment gained from the community and stakeholders 1.4 Assess whether the definition of the pest problem is correct 1.5 Assess staff understanding of the pest and the damage caused 1.6 Determine monitoring techniques used and assess suitability
2. Assess treatment failure	2.1 Assess whether damage caused by the pest after treatment is within expectations 2.2 Determine pre-treatment and post-treatment pest infestation levels by monitoring pest management plan records and inspection 2.3 Determine expected pest population after treatment using available information 2.4 Assess the difference between expected and monitored population 2.5 Assess treatments and application techniques used 2.6 Determine whether failure is due to product failure or pesticide resistance if pesticides are involved 2.7 Determine operator's qualifications and experience in applying a particular pest treatment where appropriate
3. Evaluate solutions to the failure	3.1 Assess possible solutions to the failure 3.2 Determine best option for solution based on cost, appropriateness to the problem and timing 3.3 Review pest management plans and implementation plans as required and advise stakeholders, personnel and contractors of the changes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCPMG406A Investigate a reported pest treatment failure

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG509 Investigate a pest control failure

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- investigate and assess a pest treatment failure
- find solutions to the failure
- analyse pre-treatment and post-treatment pest infestation levels
- assess planning techniques used
- evaluate solutions to the failure

Knowledge Evidence

The candidate must demonstrate knowledge of:

- how to survey pest populations to determine infestation levels
- monitoring techniques
- how to assess whether the definition of the pest problem is correct
- range of pest treatments appropriate to context
- a deep understanding of a variety of pest control measures
- the principles that underpin the strategic approach to managing pests
- Federal, State or Territory legislation and regulations relating to pest management activities
- chemical, biological, physical and habitat techniques for pest management

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK307 Mate pigs naturally

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to manage the mating of pigs, including preparing for and facilitating mating.

The unit applies to individuals who mate pigs under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for mating	1.1 Apply knowledge of relevant animal anatomy and physiology to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	carry out oestrus inducement and detection procedures 1.2 Follow workplace health and safety and biosecurity procedures 1.3 Select, fit, use and maintain personal protective equipment (PPE), and select tools and other equipment applicable to task 1.4 Ensure mating areas are secure and provide for access during joining
2. Facilitate mating	2.1 Use mating procedures and handling techniques that maximise welfare of pigs according to animal welfare practices 2.2 Supervise mating and intervene when required to maximise conception rates 2.3 Complete mating records according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare mating records

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPRK307 Mate pigs naturally	AHCPRK304 Mate pigs and monitor dry sow performance	Content of AHCPRK304 Mate pigs and monitor dry sow performance split into two units Major changes to application Major changes to	Not equivalent

		performance criteria Split unit into two separate units Foundation skills added Assessment requirements updated	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK307 Mate pigs naturally

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has mated pigs on at least two occasions and has:

- followed relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures
- followed workplace animal welfare practices
- facilitated mating
- completed mating procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environment and biosecurity legislation and regulations and workplace practices relevant to mating pigs
- workplace requirements applicable to health and safety in the workplace for mating pigs, including appropriate use of personal protective equipment (PPE)
- principles and practices of mating pigs, including:
 - nutritional requirements for boars
 - husbandry and management practices for pregnant and non-pregnant sows
 - anatomy and physiology of sows and boars
 - tools and equipment used during methods and procedures
 - methods and procedures for oestrus detection in sows
 - requirements, methods, procedures and management of mating in pigs
 - methods and management of conception rates in pigs
 - animal welfare legislation, codes of practice and procedures relevant to mating of pigs
 - documentation and record keeping requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to mating pigs
 - live pigs
 - materials, tools and equipment applicable to mating pigs
 - PPE applicable to mating pigs
- specifications:
 - workplace requirements applicable to health and safety in the workplace for mating pigs
 - environment and biosecurity legislation and regulations and workplace practices applicable to mating pigs
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to mating pigs
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK308 Monitor dry sow performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to monitor dry sow performance, including determining conditions of pigs, adjusting nutrition for mating and providing adequate nutrition for pregnant sows.

The unit applies to individuals who monitor dry sow performance under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine condition	1.1 Follow workplace health and safety and biosecurity procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
of pigs and adjust nutrition for mating	and select, fit and use personal protective equipment (PPE) applicable to task 1.2 Determine condition scores of gilts and sows 1.3 Rank gilts and sows according to scores and adjust nutritional requirements to ensure gilts and sows are in optimum condition at mating 1.4 Ensure feeding strategies are appropriate for housing environment and seasonal conditions for gilts, sows and boars 1.5 Monitor and assess condition of gilts, sows and boars regularly
2. Determine and provide adequate nutrition for pregnant sows	2.1 Carry out regular post mating heat detection to identify sows returning to oestrus 2.2 Determine nutritional needs of pregnant sows according to workplace feeding plan 2.3 Provide adequate and suitable feed and feed supplements according to feeding plan and sow condition

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about suitable feed and feed supplement requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPRK308 Monitor dry sow	AHCPRK304 Mate pigs and monitor dry	Content of AHCPRK304 Mate pigs and monitor dry	Not equivalent

performance	sow performance	sow performance split into two units Major changes to application Major changes to performance criteria Split unit into two separate units Foundation skills added Assessment requirements updated	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK308 Monitor dry sow performance

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has monitored dry sow performance on at least two occasions and has:

- determined condition of gilts, sows and boars and adjusted nutrition for mating
- followed relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures, including selected, fitted and used PPE applicable to the task
- followed workplace animal welfare practices
- determined and provided adequate nutrition for pregnant sows.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for monitoring dry sow performance, including appropriate use of personal protective equipment (PPE)
- environment and biosecurity legislation and regulations and workplace practices relevant to monitoring dry sow performance
- principles and practices of monitoring dry sow performance, including:
 - criteria and methods for body condition scoring of gilts and sows
 - methods and procedures for determining nutritional requirements, types of feed and feeding methods for pregnant and non-pregnant sows
 - husbandry and management practices for pregnant and non-pregnant sows
 - reproductive physiology and pregnancy development of sows
 - methods and procedures for oestrus detection in sows
 - methods and management of conception rates in pigs

- animal welfare legislation, codes of practice and procedures relevant to monitoring dry sow performance.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to monitoring dry sow performance, including pig feeding plan
 - live pigs
 - pig feed and feed supplements
 - PPE applicable to monitoring dry sow performance
- specifications:
 - workplace requirements applicable to health and safety in the workplace for monitoring dry sow performance
 - environment and biosecurity legislation and regulations and workplace practices applicable to monitoring dry sow performance
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to monitoring dry sow performance
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK309 Pregnancy test pigs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare for and test pigs for pregnancy and carry out post pregnancy testing procedures.

The unit applies to individuals who pregnancy test pigs under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for pregnancy testing	1.1 Compose pregnancy testing documentation according to workplace procedures 1.2 Select, fit, use and maintain personal protective equipment (PPE) applicable to task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify pigs to be tested according to the breeding program 1.4 Check and prepare testing equipment and resources
2. Carry out pregnancy testing procedures	2.1 Follow workplace hygiene and animal welfare practices, and biosecurity procedures 2.2 Test individual pigs and check breeding records according to workplace procedures 2.3 Apply knowledge of relevant anatomy and physiology to use ultrasound equipment for pregnancy diagnosis 2.4 Identify pigs as pregnant or not pregnant according to workplace procedures 2.5 Complete required records and report outcomes 2.6 Assess and record individual pig health and condition for input to herd health management
3. Carry out post pregnancy testing procedures	3.1 Move pigs to designated area according to workplace procedures 3.2 Dispose of waste and debris according to workplace procedures 3.3 Clean work area according to workplace procedures 3.4 Clean, maintain and store equipment according to workplace procedures 3.5 Check pigs post testing regularly for health and condition

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about pig pregnancy testing operations
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare pregnancy testing records

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPRK309 Pregnancy test pigs	AHCPRK301 Pregnancy test pigs	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK309 Pregnancy test pigs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has successfully pregnancy tested at least ten pigs, and has:

- prepared for pregnancy testing
- followed relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures, including selected, fitted and used personal protective equipment (PPE) applicable to the task
- followed workplace hygiene and animal welfare practices
- execute pregnancy testing procedures using ultrasound equipment
- perform post pregnancy testing procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environment and biosecurity legislation and regulations and workplace practices relevant to pregnancy testing pigs
- workplace requirements applicable to health and safety in the workplace for pregnancy testing of pigs, including appropriate use of PPE
- principles and practices of pig pregnancy testing, including:
 - animal welfare legislation, codes of practice and procedures relevant to pregnancy testing of pigs
 - techniques and methods for humane handling and restraint of pigs
 - requirements, methods and procedures for pregnancy testing of pigs
 - documentation and record requirements
 - information required from breeding records for pregnancy testing
 - reproductive anatomy, reproductive physiology, pregnancy development and embryological/foetal development in pigs

- types, methods and procedures for pregnancy diagnosis of pigs using ultrasound equipment
- workplace hygiene practices during pregnancy diagnosis
- signs of health, signs of ill health, and methods for assessing pig health, welfare and behaviour
- effects and impacts of individual pig health and welfare on herd health status and vice versa
- types and methods of identifying pigs.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to pregnancy testing pigs
 - PPE applicable to pregnancy testing pigs
 - mated gilts and sows
 - ultrasound equipment
 - materials, tools and equipment applicable to pregnancy testing pigs
- specifications:
 - workplace requirements applicable to health and safety in the workplace for pregnancy testing pigs
 - environment and biosecurity legislation and regulations and workplace practices applicable to pregnancy testing pigs
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to pregnancy testing pigs
 - workplace hygiene practices applicable to pregnancy testing pigs
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK310 Artificially inseminate pigs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to prepare for and artificially inseminate pigs, record data and complete work.

The unit applies to individuals who artificially inseminate pigs under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for artificial insemination	1.1 Follow workplace hygiene and animal welfare practices, and biosecurity procedures 1.2 Identify potential hazards and risks, and implement safe working practices to address risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Select, fit, use and maintain personal protective equipment (PPE) applicable to task 1.4 Obtain semen supplies and resources 1.5 Follow artificial insemination program and procedures
2. Inseminate pigs and record data	2.1 Identify sows for insemination and ensure they are at correct stage of their oestrus cycles 2.2 Handle pigs humanely according to workplace animal welfare practices 2.3 Prepare pigs for artificial insemination 2.4 Conduct insemination hygienically applying relevant animal anatomy and physiology' 2.5 Complete required documentation and records according to workplace procedures
3. Complete work	3.1 Return pigs to designated area 3.2 Dispose of waste and debris according to workplace procedures 3.3 Clean work area according to workplace procedures 3.4 Clean, maintain and store equipment according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information from a range of sources to identify relevant and key information about pig artificial insemination operations
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare artificial insemination documents and records

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPRK310 Artificially inseminate pigs	AHCPRK303 Artificially inseminate pigs	Minor changes to application Minor changes to performance criteria Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK310 Artificially inseminate pigs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has successfully artificially inseminated at least ten pigs with an accuracy of over 85 percent and has:

- prepared for artificial insemination of pigs
- followed relevant workplace health and safety and environmental and biosecurity legislation, regulations and workplace procedures, including selected, fitted and used personal protective equipment (PPE) applicable to the task
- followed workplace hygiene and animal welfare practices
- prepare and artificially inseminate pigs and record data
- cleaned work area and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environment and biosecurity legislation and regulations and workplace practices relevant to artificial insemination of pigs
- workplace requirements applicable to health and safety in the workplace for artificial insemination of pigs, including appropriate use of PPE
- principles and practices of pig artificial insemination, including:
 - workplace practice and procedures for artificial insemination of pigs
 - workplace hygiene practices relevant to artificial insemination of pigs
 - animal welfare legislation, codes of practice and procedures relevant to artificial insemination of pigs
 - procurement, transportation, handling, maintenance, storage and use of porcine semen for artificial insemination
 - anatomy and physiology of reproductive organs and structures in pigs

- documentation and record keeping requirements
- procedures for cleaning and maintaining work areas
- types, uses, maintenance, servicing and storage of equipment.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to artificial insemination of pigs
 - PPE applicable to artificial insemination of pigs
 - live gilts and sows
 - semen, materials, tools and equipment applicable to artificial insemination of pigs
- specifications:
 - workplace requirements applicable to health and safety in the workplace for artificial insemination of pigs
 - environment and biosecurity legislation and regulations and workplace practices applicable to artificial insemination of pigs
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to artificial insemination of pigs
 - workplace hygiene practices applicable to artificial insemination of pigs
- timeframes:
 - according to performance targets.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSAW202 Recognise landforms and soil types

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to recognise commonly encountered landforms and soil, their origins and human and natural influences on their degradation.

The unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soil and Water Conservation (SAW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for landform and soil survey	1.1 Identify sources of expertise and references for assisting in landform and soil recognition 1.2 Prepare resources and equipment required for landform and soil survey 1.3 Identify hazards and report to supervisor for controls to implement

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	during field survey work 1.4 Follow workplace procedure for landform and soil field survey
2. Identify regional geology	2.1 Identify geological land forms and associated rock types for a local region 2.2 Conduct geological field tests to identify broad rock types and their characteristics 2.3 Recognise historical geological events that created landforms and soils in a local region
3. Recognise specified landforms and soils	3.1 Carry out a visual inspection of landforms and soil on specified site 3.2 Recognise and name outcropping rocks and parent materials by their identifiable characteristics 3.3 Conduct basic field tests to assist in recognising soil types 3.4 Recognise the association between soil type and local geology 3.5 Record description of landforms and soil for a specified site 3.6 Seek expert advice and consult references to confirm recognition of landform and soil type
4. Recognise and record degrading influences on landforms and soil	4.1 Identify natural and human activity that impacts on identified landforms and soil 4.2 Identify degrading processes associated with natural and human activity on specified site 4.3 Recognise impact of current land use of site on landforms and soil 4.4 Record degrading impact from current and projected future activity on landforms and soil according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Interpret reference materials to identify characteristics and assist in the recognition of landforms, rock types and soils
Oral Communication	<ul style="list-style-type: none"> Use clear language, vocabulary, tone and pace appropriate for the audience to discuss and confirm recognition of soils and landforms with experts

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSAW202 Recognise landforms and soil types	Not applicable	The unit has been created to address a skill or task required by industry that is not covered by an existing unit	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSAW202 Recognise landforms and soil types

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed landform and soil surveys on at least two sites with distinctly different landforms and soil conditions, and has recognised the landforms and basic soil type on each site.

There must also be evidence that the individual has:

- implemented safe work procedures relating to landform and soil field survey
- prepared for landform and soil recognition activities
- selected sampling and testing equipment and materials and:
 - conducted basic field tests on rock samples to assist recognition
 - conducted basic field tests on soil samples to assist recognition
- operated sampling and testing equipment according to safe work practices and manufacturer instructions
- recognised the processes affecting the formation and degradation of common landforms and soil types
- recorded results of landform and soil recognition activity according to supervisor instruction and workplace procedures
- cleaned and stored tools and equipment according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- main geological crustal processes and influences in a region
- main rock types, formation, common mineral content and characteristics for identification, including:
 - sedimentary
 - volcanic

- metamorphic
- field tests to assist in identifying rock types
- main soil types, common mineral content, soil characteristics and basic tests used for identification
- weathering, change and degrading processes relating to landforms and soil from both natural and human causes
- sampling and testing equipment
- landforms common to different geological regions, and the processes for their formation
- basic soil survey techniques and the equipment required
- records required for documenting results for rocks, landforms and soils
- sources of expertise and reference materials required for landforms and soil recognition.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field on at least two sites with different landforms and soil types, or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - sampling and testing equipment
 - personal protective equipment
 - access to expertise and reference materials to assist in recognition of soils and landforms
- specifications:
 - workplace instructions and procedures for sampling rocks and soils
 - manufacturer operating instructions for equipment
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSAW203 Conduct erosion and sediment control activities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to control erosion and sediment using earthworks construction and other land forming activities, usually using a single earthmoving machine in varied conditions and terrains that requires the plant operator to develop skills that are unique to this sector.

The unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined routine activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soil and Water Conservation (SAW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to work	1.1 Read and interpret work instructions and clarify with supervisor 1.2 Prepare tools and equipment and use according to instructions and biosecurity procedures 1.3 Identify workplace health and safety hazards and report to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	supervisor for instructions on controls 1.4 Select, check and use personal protective equipment
2. Conduct erosion and sediment control activities	2.1 Identify erosion and sediment risks at a site and confirm with supervisor 2.2 Assemble structures to prevent erosion and control sediment 2.3 Carry out sediment control and maintenance activities 2.4 Operate tools, machinery and equipment according to operator instructions
3. Complete work	3.1 Dispose of or recycle soil and waste material from the site according to environmental procedures 3.2 Clean, store and maintain tools and equipment according to workplace and biosecurity procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Interact effectively with supervisor when seeking direction using clear language and appropriate concepts, tone and pace

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSAW203 Conduct erosion and sediment control activities	AHCSAW201 Conduct erosion and sediment control activities	Minor changes to Application and Performance Criteria Updated Foundation Skills, Performance	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Evidence, Knowledge Evidence and Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSAW203 Conduct erosion and sediment control activities

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed erosion and sediment control on at least two different sites with distinctly different terrain and soil conditions.

There must also be evidence that the individual has:

- conducted erosion and sediment control activities as instructed by a supervisor
- identified hazards and followed safe operating procedures for each site
- identified erosion and sediment control structures, measures and practices
- carried out routine work using control measures and structures
- identified areas at risk of erosion
- operated machinery tools and equipment safely and efficiently
- followed biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- need of erosion and sediment, including:
 - importance of erosion and sedimentation to the community
 - effect on loss of habitat
 - effect on water quality
 - loss of production, assets and amenities
- maintenance, repair and monitoring requirements for erosion and sediment controls
- agents and processes of erosion and sedimentation, and ways to control them
- types of erosion and sediment control structures, and techniques for constructing them
- role of vegetation in erosion control
- basic catchment issues

- basic characteristics of erodible soils
- environmental and biosecurity procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on at least two different sites with distinctly different terrain and soil characteristics
- resources, equipment and materials:
 - tools, equipment and machinery for installing erosion and sediment controls specific to the site requirements
 - consumables and materials required for erosion controls
 - personal protective equipment
- specifications:
 - manufacturer operating instructions for equipment and machinery
 - workplace instructions and specifications
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSAW303 Construct conservation earthworks

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to use specialised earthmoving techniques to achieve fine tolerances in the construction of conservation earthworks, using a single earthmoving machine in varied conditions and terrains that requires the plant operator to develop skills that are unique to this sector.

The unit applies to individuals who work in conservation and land management roles and who use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

Special vehicle licenses may apply to this unit, dependent on the type of machinery and conditions of use. Specific determination should be sought through the relevant state or territory authority.

Pre-requisite Unit

Nil

Unit Sector

Soil and Water Conservation (SAW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for construction	1.1 Confirm construction details, sequence and specifications from site and construction plans 1.2 Identify and locate worksite and surveyed work according to maps and site plans

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Select, check and prepare machinery and equipment required for construction work 1.4 Identify hazards, assess risks and implement controls according to workplace health and safety procedures 1.5 Select, check and use personal protective equipment 1.6 Verify the suitability of equipment and attachments for terrain and construction work
2. Carry out conservation earthworks construction work	2.1 Operate machinery and equipment according to industry endorsed earthwork methods and patterns 2.2 Monitor and maintain optimum machinery loads in accordance with prevailing conditions and manufacturer specifications 2.3 Operate machinery safely using techniques suitable for terrain, site conditions and other operators and site worker safety 2.4 Construct earthworks according to specifications, workplace procedures and legislative requirements
3. Apply finishing techniques	3.1 Finish batters and surfaces 3.2 Retain site features and vegetation 3.3 Clear site and remove debris 3.4 Complete topsoiling of disturbed areas and surfaces
4. Finalise work	4.1 Complete work records 4.2 Clean, store and maintain machinery, tools and equipment according to environmental and biosecurity requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret instructions, plans and specifications to determine construction work required and performance quality outcomes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSAW303 Construct conservation earthworks	AHCSAW301 Construct conservation earthworks	Minor changes to Application and Performance Criteria Updated Foundation Skills, Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSAW303 Construct conservation earthworks

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, selected equipment and safely constructed earthworks for conservation using plans and specialisations.

There must also be evidence that the individual has:

- identified hazards and implemented controls and safe operating procedures
- prepared for construction according to construction plans and workplace requirements
- carried out planned earthworks with minimal damage to natural areas according to construction works plan and specifications, including:
 - excavation
 - transport
 - dumping
 - compaction of material
- applied finishing techniques to the site
- interpreted maps and plans to identify site construction requirements
- selected and safely used earthmoving equipment suitable for construction, soil properties and terrain
- cleaned, maintained and stored equipment and machinery according to biosecurity and environmental procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- erosion and sediment control standards
- soil types and formation and impact on construction works and site access
- principles of conservation earthwork construction and erosion and sediment control, including:

- catchment management and soils
- earthmoving principles
- levels and levelling
- interpreting plans and designs
- natural area protection and rehabilitation principles, including:
 - preservation of topsoil
 - soils and effect on erosion and sediment control
 - recognition and preservation of threatened vegetation
 - basic plant root physiology and construction works
 - root disturbance and compaction
 - disturbance of fauna habitat
- application of legislation and regulations relating to conservation earthwork construction, including:
 - protection of flora and fauna
 - health and safety
 - environmental protection from fuels and oils
 - biosecurity
- safety while working on construction sites, including:
 - proximity to machinery and site personnel
 - impediments to safe machinery operation, including terrain
 - workplace health and safety procedures
 - personal protective equipment
- construction works and sequencing, including:
 - excavation and earthmoving principles
 - transport
 - dumping
 - compaction
 - surface finish
- risk factors, including human health and environmental damage
- environmental and biosecurity impacts and controls for constructing conservation earthworks.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on at least one conservation site for earthworks, or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - machinery and equipment suitable for conservation earthworks

- personal protective equipment
- specifications:
 - workplace documents such as policies, procedures, processes
 - manufacturer operating instructions for equipment and machinery
 - workplace instructions, plans and specifications
- relationships:
 - work team, supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSAW304 Implement erosion and sediment control measures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to construct, install and maintain a range of measures specified on erosion and sediment control plans.

The unit applies to individuals who work under broad direction and take responsibility for their own work, including limited responsibility for the work of others. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soil and Water Conservation (SAW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for implementation and construction	1.1 Confirm erosion and sediment control site and work requirements with maps, plans and specifications 1.2 Identify and locate worksite and surveyed work according to maps and site plans 1.3 Select, check and prepare machinery and equipment required for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	erosion and sediment control work 1.4 Verify the suitability of equipment and attachments for terrain and control works 1.5 Identify hazards, assess risks and implement controls according to workplace health and safety and environmental procedures 1.6 Select, check and use personal protective equipment 1.7 Select materials required for proposed works according to plans and specifications
2. Carry out implementation and construction	2.1 Coordinate work sequence with work team according to planned works 2.2 Operate tools and equipment safely using techniques suitable for terrain, site conditions and other operators and site worker safety 2.3 Construct erosion and sediment control earthworks according to specifications
3. Carry out repairs and maintenance procedures	3.1 Monitor site operations and identify and resolve performance issues according to workplace procedures 3.2 Clean, maintain and store machinery, tools and equipment according to environmental and biosecurity procedures 3.3 Maintain records according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret basic construction plans and specifications for erosion control works and consolidate information to determine equipment required, methods and location of works and the tolerances required
Numeracy	<ul style="list-style-type: none"> Make measurements and perform calculations to check site layout against plans for erosion and sediment control works Make basic volumetric calculations for measuring and estimating

Skill	Description
	materials during construction works

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSAW304 Implement erosion and sediment control measures	AHCSAW302 Implement erosion and sediment control measures	Changes to Application and Performance Criteria for clarity Updated Foundation Skills, Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSAW304 Implement erosion and sediment control measures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted erosion and sediment control activities on at least one conservation worksite, and has constructed, installed and maintained at least three erosion and sediment control measures.

There must also be evidence that the individual has:

- identified hazards, assessed risk and implemented controls
- read and followed plans for construction work and site construction layout
- implemented site and equipment repairs and maintenance according to workplace procedures
- selected and operated tools and equipment according to safe work practices and manufacturer instructions
- cleaned, maintained and stored equipment, machinery and tools according to workplace and biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- construction and site plan types, reading and interpretation
- erosion and sediment control methods and construction techniques
- materials cartage pollution control
- operational planning skills to sequence and schedule the timing/duration of work
- workplace health and safety issues relating to erosion and sediment control works, including:
 - equipment
 - site-specific risks
 - personal protective equipment

- sun protection
- type and operation of machinery and equipment used for erosion and sediment control, including:
 - safety checks
 - site access and operational restrictions
 - maintenance
 - environmental protection from fuels and oils
 - impact of tools and machinery on biosecurity
- materials suitable for constructing erosion and sediment control measures, and where to source them on site
- limitations of structures, including:
 - timing of maintenance
 - structure life cycle
 - specifications and standards for construction.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a conservation worksite or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools, equipment and materials for installing specified erosion and sediment controls
 - personal protective equipment
- specifications:
 - workplace policies, procedures and processes for safety, biosecurity and environmental safety
 - manufacturer operating instructions for specific equipment and machinery
 - workplace instructions and plans
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSAW401 Set out conservation earthworks

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to set out standard structures using specialised pegging and marking techniques, for erosion and sediment control earthworks.

This unit applies to individuals who take responsibility for their own work and use discretion and judgement in the selection, allocation and use of available resources. This includes undertaking a range of routine and non-routine activities and work in known and changing contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Soil and Water Conservation (SAW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Interpret plans and specifications	1.1 Determine overall plan in consultation with landholder and surveyor 1.2 Establish earthworks specifications in consideration of desired

Element	Performance criteria
	outcome and prevailing conditions 1.3 Verify plan in line with job requirements
2. Relate plan to site	2.1 Locate key plan points on site 2.2 Identify additional features on site plan 2.3 Identify and record site issues which affect survey and pegging
3. Peg project	3.1 Establish pegging sequence in consultation with the site surveyor 3.2 Measure site dimensions in compliance with job specification 3.3 Establish peg locations using prescribed methods 3.4 Peg earthworks in line with project specification 3.5 Advise all construction personnel of pegging and the need for site integrity

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSAW401A Set out conservation earthworks

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSAW401 Set out conservation earthworks

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- set out conservation earthworks
- identify hazards and ensure the safety of self, field operators and any other person on site
- interpret plans and specifications
- relate plan to site
- measure out site dimensions precisely and peg project
- protect site

Knowledge Evidence

The candidate must demonstrate knowledge of:

- different types of survey equipment
- civil engineering and survey techniques applicable to conservation earthworks
- erosion control and design principles
- principles of native topsoil conservation and protection
- interpretation of plans and general and technical specification

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSAW402 Set out conservation earthworks

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to set out standard structures using specialised pegging and marking techniques, for erosion and sediment control earthworks.

The unit applies to individuals who take responsibility for their own work and use discretion and judgement in the selection, allocation and use of available resources. This includes undertaking a range of routine and non-routine activities and work in known and changing contexts.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soil and Water Conservation (SAW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Interpret plans and specifications	1.1 Determine overall objective of construction work from plans and in consultation with landholder and surveyor 1.2 Establish earthworks specifications required to achieve desired objectives 1.3 Inspect site for prevailing conditions and identify inconsistency

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>with plan</p> <p>1.4 Consult surveyor to rectify inconsistencies</p> <p>1.5 Verify plan according to workplace procedures</p> <p>1.6 Identify hazards, assess risks and implement controls according to workplace health and safety procedures</p>
2. Relate plan to site	<p>2.1 Harmonise key data points on plan with matching features on site</p> <p>2.2 Identify features on site plan to be used for survey work</p> <p>2.3 Identify and record inconsistencies between site plan and actual site that will affect survey activity</p>
3. Peg project	<p>3.1 Establish layout sequence in consultation with site surveyor</p> <p>3.2 Measure site dimensions according to plan and specification</p> <p>3.3 Relay site dimensions from plan to site</p> <p>3.4 Mark out site construction area and locations using workplace and industry best practice</p> <p>3.5 Lay out earthworks according to project specifications and specified tolerances</p> <p>3.6 Advise construction team of layout to preserve site layout integrity</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse plans and specifications to extract critical data for survey works
Numeracy	<ul style="list-style-type: none"> Select and apply mathematical and problem solving strategies to interpret plans and specifications and transfer linear dimensional information from scale drawings into real-world site layout

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSAW402 Set out conservation earthworks	AHCSAW401 Set out conservation earthworks	Changes to Application and Performance Criteria for clarity Updated Foundation Skills, Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSAW402 Set out conservation earthworks

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has interpreted plans and specifications and transferred dimensions to at least one conservation earthworks site.

There must also be evidence that the individual has:

- set out conservation earthworks site using industry and workplace practices
- identified hazards, assessed risks and implemented controls for the survey site
- interpreted plans and specifications and related plan to site for layout
- transferred measurements from plan to site to specified accuracy
- marked out site according to workplace and industry practices
- informed work team of layout and to preserve the integrity.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- plans and plan reading and interpretation, including:
 - types of plans
 - general and technical specifications
 - scale and calculating dimensions
 - supplementary plan documentation
 - version control
- survey equipment and its use for setting out earthworks, including:
 - equipment used for linear dimensions
 - determining levels and heights
 - setting up, operation and maintenance of equipment for preserving accuracy
- civil engineering and survey techniques applicable to conservation earthworks, including:

- industry operating procedures
- methods and materials used for marking out sites
- workplace health and safety issues relating to site safety while undertaking site survey works, including:
 - safe use of laser equipment
 - site-specific risks and impediments
 - personal protective equipment
 - sun protection.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a conservation construction site or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - surveying tools and equipment for transferring measurements
 - consumables for marking out site
 - personal protective equipment
- specifications:
 - workplace policies and procedures for safely conducting survey work
 - manufacturer operating instructions for survey equipment
 - workplace instructions, plans and specifications
- relationships:
 - landholder
 - surveyor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSAW404 Supervise implementation of conservation earthworks plans

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to supervise the on-site implementation of earthworks designed to control erosion and sediment at a given site.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. This includes using discretion and judgement in the selection and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soil and Water Conservation (SAW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan efficient implementation of erosion and sediment control works	1.1 Review plans and specifications and correlate to earthworks work site 1.2 Determine resource requirements to undertake work 1.3 Plan and record work sequences according to proposed work schedule

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify pest control requirements and develop a strategy for control</p> <p>1.5 Order resources required for works according to construction schedule and workplace procedures</p> <p>1.6 Identify potential regulatory, planning, biosecurity and environmental impacts of the work, and notify senior management of inconsistencies</p> <p>1.7 Identify workplace health and safety hazards, assess risks and implement control measures</p>
2. Direct and monitor work	<p>2.1 Communicate instructions and expected work performance standards to work team</p> <p>2.2 Assess work team skill level and arrange training according to assessment outcomes</p> <p>2.3 Assess site for constraints limiting achievement of performance targets, and modify techniques and schedules to mitigate constraints</p> <p>2.4 Report mitigating conditions and project modifications to senior management for approval</p> <p>2.5 Assess work performance against target and adjust activities or plan where inconsistencies in performance are identified</p> <p>2.6 Monitor site and machinery operational safety according to workplace health and safety policies and environmental and biosecurity practices</p> <p>2.7 Liaise with stakeholders to keep them apprised of project development</p>
3. Complete work	<p>3.1 Inspect site for confirmation of completion of work according to performance targets</p> <p>3.2 Report underperformance to target, and arrange rectification notices</p> <p>3.3 Supervise the maintenance and cleaning of machinery and equipment</p> <p>3.4 Report outcomes of conservation earthworks to senior management according to workplace reporting procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse project plans and specifications, and consolidate information into schedules, programs, materials and equipment requirements, and for monitoring work team performance
Writing	<ul style="list-style-type: none"> Prepare reports for stakeholders and senior managers to inform on project progress and completion targets, using clear and accurate language
Oral Communication	<ul style="list-style-type: none"> Use collaborative and inclusive techniques, including active listening and questioning and reading of non-verbal signals, to convey and clarify instruction to workers and to provide reports to stakeholders
Numeracy	<ul style="list-style-type: none"> Interpret and perform calculations to analyse materials and resource requirements, to determine costs and quantities, and to accurately report on progress performance against target

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSAW404 Supervise implementation of conservation earthworks plans	AHCSAW403 Supervise implementation of conservation earthworks plans	Changes to Application Minor changes and consolidation of Performance Criteria for clarity and brevity Updated Foundation Skills, Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSAW404 Supervise implementation of conservation earthworks plans

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, supervised the implementation of conservation earthworks, and has:

- determined operational resource requirements, including:
 - human resources
 - materials and consumables
 - tools and equipment
 - financial
- identified hazards and implemented controls for the site
- identified pests and control strategy
- planned the implementation of works
- protected natural areas from damage
- directed implementation of planned works
- monitored job performance against target and took action to rectify
- identified and addressed risks to achieving planned outcomes
- communicated with stakeholders about work undertaken
- assessed and arranged work team upskilling
- ensured workplace health and safety policies and procedures were followed
- monitored adherence to biosecurity measures and sustainability practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- conservation earthworks standards and principles, including:
 - erosion control and design principles

- sediment control principles
- natural area topsoil protection and rehabilitation principles
- impact of earthworks on the ecology
- impact of geology on soils and subsequent earthworks activity and site access
- pest control required on earthworks, including:
 - site weeds
 - soil-borne pests and pathogens
 - strategies required to control or eradicate
- supervision techniques and strategies, including:
 - working with work teams
 - assessing performance
 - rectifying performance issues
 - reporting procedures
- work sequencing and scheduling
- equipment most suitable to the constructing of erosion and sediment control works, including:
 - earthmoving principles
 - principles of machine operation
- quality assurance systems, processes and practices
- staff deployment, supervision, skills assessment and training
- application of legislations and codes of practice, including:
 - workplace health and safety
 - environmental legislation, codes of practice
 - biosecurity
 - workplace policies and procedures
 - enterprise requirements to work site
- communications strategies to ensure stakeholders are engaged and informed, including:
 - working with the media
 - special interest groups
 - general public
 - clients and senior managers
- workplace health and safety hazards associated with conservation earthworks, and the controls necessary to remove or minimise associated risks
- state/territory legislative requirements related to conservation earthworks, environmental protection and biosecurity standards.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- skills must be demonstrated on a conservation earthworks site or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - materials and other resources as specified in project plans and specifications
 - tools and equipment required to perform earthworks activities
- specifications:
 - workplace policies and procedures for safety and supervision of work
 - earthworks plans and specifications
- relationships:
 - stakeholders
 - senior managers.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSAW504 Design control measures and structures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to design erosion and sediment control measures and structures.

The unit applies to individuals who work in soil and water conservation and who analyse information and exercise judgement to complete design and development activities, demonstrating a deep understanding of the technical areas within soil and water conservation. They have accountability for the work of others and analyse, design and communicate solutions to complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soil and Water Conservation (SAW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify measures or structures to be designed	1.1 Review erosion and sediment control plan for technical accuracy and environmental impact 1.2 Confirm adherence to regulations and legislation, and record on works plans

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Confirm budget constraints for project with management or client 1.4 Apply design criteria according to industry standards
2. Apply design procedures	2.1 Calculate catchment characteristics to required accuracy 2.2 Determine design specifications for project 2.3 Use a computer aided design (CAD) program to develop draft design according to budgetary constraints and erosion and sediment control plan 2.4 Verify design against plans, budget and industry best practice with stakeholders 2.5 Review and recommend changes to the design to comply with design procedures and accepted industry practices and environmentally sustainable practices
3. Prepare specification schedule	3.1 Prepare documentation and specifications for design 3.2 Verify design and documentation complies with industry standards 3.3 Confirm suitability of design and specifications for the category of work and legislative requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, assess and critique data and information from legislation and regulations and plans for incorporation into design
Writing	<ul style="list-style-type: none"> Select appropriate conventions and stylistic devices to express precise meaning in design documentation and specifications
Numeracy	<ul style="list-style-type: none"> Use highly developed numeracy skills to interpret design criteria from catchment characteristics and costs, and perform calculations to translate into dimensions and structural design of control measure

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSAW504 Design control measures and structures	AHCSAW501 Design control measures and structures	Minor changes to Application and Performance Criteria for clarity Updated Foundation Skills, Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSAW504 Design control measures and structures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has produced at least one design for erosion and sediment control measures and structures, and has:

- identified control measures for a specified situation
- applied design procedures and prepared specifications
- costed the project and provided recommendations according to budget
- used computer aided design (CAD) program to create the design
- determined design specifications according to industry standards
- developed design plan to meet planned sediment and erosion control criteria
- verified design with stakeholders and for compliance with sustainability principles.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- erosion control and design principles:
 - soils and soil formation
 - levels and levelling
 - earthmoving principles
 - total catchment issues
 - managing peak water flows
- state and territory legislative requirements for design of control measures, including heritage and cultural regulations
- sub-surface and surface drainage principles and systems
- environmental issues related to the design
- limitations of design aids provided for industry
- CAD software for design.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated for a specified site for erosion and sediment control, or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology with CAD software
- specifications:
 - workplace documents, policies and procedures
 - catchment data for determining the design characteristics
 - legislation and codes of practice for civil design work
- relationships:
 - client/stakeholder
 - senior manager.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSAW505 Plan erosion and sediment control measures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop erosion and sediment control plans.

The unit applies to individuals who work in soil and water conservation and who analyse information and exercise judgement to complete plans and designs for erosion and sediment control. They have accountability for the work of others and analyse, design and communicate solutions to complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soil and Water Conservation (SAW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish suitability of development proposal	1.1 Access and analyse development proposal for site 1.2 Investigate development site and compile data on suitability for development 1.3 Consider changes to development proposal, and report to developer or consenting authority

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Verify development proposal complies with regulatory planning authority and environmental, heritage and cultural legislation 1.5 Confirm development proposal meets erosion and sediment control guidelines
2. Develop erosion and sediment control strategy	2.1 Develop erosion control measures for site 2.2 Develop sediment control measures for site 2.3 Apply workplace health and safety and environmentally sustainable practices to strategy 2.4 Establish erosion and sediment control strategies 2.5 Document strategies in cooperation with developer and consenting authority
3. Prepare an erosion and sediment control plan	3.1 Check earthwork structures or measures comply with selection criteria and industry guidelines 3.2 Develop erosion and sediment control plan for site 3.3 Design structures and specifications for erosion and sediment control 3.4 Compile plans, specifications and documentation into final plan, and verify compliance with industry guidelines

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and analyse ideas and information from site development documents, and compare with legislation, regulations and other compliance documents to verify the suitability and compliance of development for site
Writing	<ul style="list-style-type: none"> Demonstrate sophisticated writing skills by selecting appropriate conventions and stylistic devices to express precise meaning in plans and strategies Prepare documentation and specifications for plans and designs,

Skill	Description
	expressing ideas, exploring complex design issues and constructing the documents accurately and succinctly to industry standards
Numeracy	<ul style="list-style-type: none"> Interpret complex design ideas and perform calculations with precision and accuracy for inclusion in erosion and sediment control structures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSAW505 Plan erosion and sediment control measures	AHCSAW502 Plan erosion and sediment control measures	Minor changes to Application Minor changes and splitting of Performance Criteria for clarity Updated Foundation Skills Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSAW505 Plan erosion and sediment control measures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed at least one plan for erosion and sediment control measures according to regulatory requirements and industry standards.

There must also be evidence that the individual has:

- established suitability of development proposal to location and environment
- prepared erosion and sediment control plans to enterprise standards
- developed erosion and sediment control measures consistent with industry principles and selection criteria
- prepared an erosion and sediment control plan according to industry standards and in compliance with regulatory planning authority.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- application of relevant environmental, planning, groundwater and heritage and cultural legislation in erosion and sediment control work
- planning process for erosion and sediment control
- surface water and groundwater interactions and their influence on erosion, erosion control and design, including:
 - soils and soil formation and impact on water flow
 - levels and levelling
 - earthmoving principles
 - total catchment issues
 - managing peak water flows
 - sub-surface and surface drainage principles and systems
- computations relevant to water runoff, flow and design of erosion control

- structures and structural design principles of erosion and sediment control
- permits or approvals required for developing erosion and sediment control structures
- environmental issues related to erosion and sediment
- awareness of the limitations of design aids provided for industry
- workplace health and safety implications of implementing plans.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a development site requiring sediment and erosion control, or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology with planning and design tools and resources
- specifications:
 - workplace policies, procedures and processes for planning and design
 - site development proposals
 - legislation, regulations and industry codes of practice for controlling land degradation sediment
- relationships:
 - developer
 - consenting authority.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSDT302 Identify seeds

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to recognise and identify seeds and contribute samples to the seed reference collection. It applies to seed analysts working within enterprise requirements and procedures.

It applies to individuals who take responsibility for their work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Seed testing (SDT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for seed identification	1.1 Confirm seeds requiring identification 1.2 Prepare resources and equipment for use in identification 1.3 Identify, select and prepare for use, processes for seed identification

Element	Performance criteria
2. Identify seed	2.1 Identify specified seeds according to their general characteristics 2.2 Record botanical name of seed to species level where possible 2.3 Seek advice when necessary and where appropriate to confirm identification
3. Update the reference collection	3.1 Consult supervisor about possible addition to the reference collection 3.2 Document information and add the seed to the reference collection if appropriate

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSDT302A Identify seeds.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSDT302 Identify seeds

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare for seed identification
- recognise or identify seed to genus and, where possible, species level
- contribute to enterprise seed reference collection

Knowledge Evidence

The candidate must demonstrate knowledge of:

- binomial nomenclature
- concepts of seed identification
- enterprise and/or legal traceability requirements
- enterprise standard operating procedures (SOPs)
- relevant work health, safety and environment requirements
- seed identification techniques
- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSDT306 Perform a seed germination test

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to performing germination tests on a seed sample under laboratory conditions. It applies to seed analysts working within enterprise requirements and procedures.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Seed testing (SDT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Interpret and schedule test requirements	1.1 Identify seeds to be germinated, test methods and equipment 1.2 Recognise hazards and enterprise control measures associated with the sample, seed pre-treatment, test methods, reagents and/or equipment

Element	Performance criteria
	1.3 Plan work sequences
2. Prepare materials for test	2.1 Draw prescribed number of replicates 2.2 Select and prepare growing media 2.3 Pre-treat seed to break physiological dormancy where necessary 2.4 Check water quality and pH is within required tolerances 2.5 Check and prepare apparatus and equipment for germinating seeds
3. Plant and maintain seeds	3.1 Plant seed on or into selected media 3.2 Monitor temperature and light conditions of germination apparatus in accordance with test procedures
4. Evaluate test results	4.1 Categorise seedlings and count as normal or abnormal 4.2 Assess un-germinated seed as hard, fresh or dead 4.3 Assess other determinations for un-germinated seed if required 4.4 Record and report results
5. Maintain a safe work environment	5.1 Use safe work practices and personal protective equipment (PPE) 5.2 Minimise wastes and environmental impacts 5.3 Collect and dispose of laboratory and hazardous waste 5.4 Clean and store equipment and reagents

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSDT306A Perform a seed germination test.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSDT306 Perform a seed germination test

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- Prepare for seed germination testing
- assess seed germination
- perform germination tests on a seed sample under laboratory conditions
- prepare growing media
- record and report test results

Knowledge Evidence

The candidate must demonstrate knowledge of:

- assessment of germination and determining need for retesting
- calculations, tolerances and rounding results
- enterprise and/or legal traceability requirements
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements
- seed biology
- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSDT308 Perform tests for quality on seeds

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to perform tests on seeds and grain to determine quality. Tests are performed under laboratory conditions in accordance with industry standards.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

Seed to be processed for Certification must be sampled by an Authorised Sampler in accordance with International, Federal and State seed certification regulations.

Pre-requisite Unit

Nil

Unit Sector

Seed Testing (SDT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare seed for testing and maintain condition and purity	1.1 Identify purpose of seed tests from work instructions 1.2 Verify authenticity of seed from submitted sample documentation 1.3 Verify submitted seed sample complies with condition specified for seed test and report inconsistencies to supervisor 1.4 Prepare working test sample/s from submitted seed sample

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>according to workplace and laboratory procedures</p> <p>1.5 Store and maintain condition and quality of seed samples for testing according to seed species, workplace procedures and industry standards</p> <p>1.6 Implement procedures to prevent contamination of submitted sample and working samples</p> <p>1.7 Label and record working samples according to workplace and industry standards for traceability</p>
2. Prepare equipment for seed tests	<p>2.1 Select number of replicates for seed test according to specified test procedure and work instructions</p> <p>2.2 Prepare the required number of replicates according to specific test procedures and industry standards</p> <p>2.3 Label and store replicates according to workplace procedures and industry standards</p> <p>2.4 Compile and prepare materials required according to specified seed test procedures</p> <p>2.5 Select, clean, check and calibrate test equipment according to manufacturer instructions and seed test specifications</p> <p>2.6 Report and record faults, repairs and calibration of equipment according to workplace procedures</p> <p>2.7 Identify health and safety hazards, assess risk and implement controls according to workplace procedures</p>
3. Conduct seed tests	<p>3.1 Measure quantities of seed required for each test replicate according to test procedures</p> <p>3.2 Pre-treat or condition seed replicates ready for testing according to test procedures</p> <p>3.3 Conduct seed test according to seed test procedures and industry standards</p> <p>3.4 Maintain conditions to maintain quality and prevent contamination of replicates during testing process</p> <p>3.5 Update labelling of replicates and records according to workplace and industry standards for traceability</p>
4. Examine and assess tested seed	4.1 Identify endpoint of test and prepare replicates for assessment according to testing procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.2 Examine each replicate and record observations</p> <p>4.3 Assess observations against standards specified in workplace and industry procedures</p> <p>4.4 Record observations and test results according to workplace and industry procedures</p>
5. Prepare and report test results	<p>5.1 Calculate test results according to workplace procedures and industry standards</p> <p>5.2 Compile and document test results</p> <p>5.3 Assess test results against standards and report results according to workplace procedures</p> <p>5.4 Update records according to workplace and industry standards for traceability</p>
6. Finalise testing procedures	<p>6.1 Dispose of replicates and waste according to testing protocols and workplace waste and biosecurity procedures</p> <p>6.2 Clean and store test equipment according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret seed testing procedures and industry standards to ensure accuracy of tests performed and integrity of test results
Writing	<ul style="list-style-type: none"> Document test results accurately using industry recognised language and formatting
Numeracy	<ul style="list-style-type: none"> Perform calculations accurately and according to industry standards for seed testing

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSDT308 Perform tests for quality on seeds	AHCSDT303 Perform a fluorescence test on seeds	This unit supersedes the following units: AHCSDT303 Perform a fluorescence test on seeds, AHCSDT304 Perform a seed purity analysis, AHCSDT305 Perform a seed moisture test, AHCSDT306 Perform a seed germination test, AHCSDT307 Perform a 'Determination of Other Seeds by Number' test	Not equivalent
AHCSDT308 Perform tests for quality on seeds	AHCSDT304 Perform a seed purity analysis	This unit supersedes the following units: AHCSDT303 Perform a fluorescence test on seeds, AHCSDT304 Perform a seed purity analysis, AHCSDT305 Perform a seed moisture test, AHCSDT306 Perform a seed germination test, AHCSDT307 Perform a 'Determination of Other Seeds by Number' test	Not equivalent
AHCSDT308 Perform tests for quality on seeds	AHCSDT305 Perform a seed moisture test	This unit supersedes the following units: AHCSDT303 Perform a fluorescence test on seeds, AHCSDT304 Perform a seed purity analysis, AHCSDT305 Perform a seed moisture test, AHCSDT306 Perform a seed germination test, AHCSDT307 Perform a 'Determination of Other Seeds by Number' test	Not equivalent

<p>AHCSDT308 Perform tests for quality on seeds</p>	<p>AHCSDT306 Perform a seed germination test</p>	<p>This unit supersedes the following units: AHCSDT303 Perform a fluorescence test on seeds, AHCSDT304 Perform a seed purity analysis, AHCSDT305 Perform a seed moisture test, AHCSDT306 Perform a seed germination test, AHCSDT307 Perform a 'Determination of Other Seeds by Number' test</p>	<p>Not equivalent</p>
<p>AHCSDT308 Perform tests for quality on seeds</p>	<p>AHCSDT307 Perform a 'Determination of Other Seeds by Number' test</p>	<p>This unit supersedes the following units: AHCSDT303 Perform a fluorescence test on seeds, AHCSDT304 Perform a seed purity analysis, AHCSDT305 Perform a seed moisture test, AHCSDT306 Perform a seed germination test, AHCSDT307 Perform a 'Determination of Other Seeds by Number' test</p>	<p>Not equivalent</p>

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSDT308 Perform tests for quality on seeds

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed the following tests on seeds:

- seed purity
- germination
- fluorescence
- moisture
- 'Determination of Other Seeds by Number' test
- hybrid vigour

There must also be evidence that the individual has:

- verified compliance of seed sample with documentation, including:
 - seed species/variety
 - seed condition as submitted
 - seed condition suitable for testing
- prepared and stored samples to maintain quality and condition
- selected, prepared and used testing equipment and materials to conduct tests
- selected, and prepared replicates from working samples for testing
- conducted seed tests, examined tested seed, assessed and calculated test results
- maintained accurate labelling and records at each stage of the testing process suitable for traceability according to industry and workplace standards
- cleaned test equipment, laboratory and disposed of waste according to biosecurity and workplace procedures.

Knowledge Evidence

- An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:
- industry and enterprise standard operating procedures (SOPs) for seed tests, including:

- seed purity
- germination
- fluorescence test on seeds
- moisture
- 'Determination of Other Seeds by Number' test
- hybrid vigour
- testing equipment, setup, calibration and operation for the different seed tests
- work health, safety and environment requirements
- seed biology and relation to seed quality, condition and seed tests
- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- preparing statistically representative replicates by weight or number of seed for testing
- seed sampling methods, including:
 - hand samples
 - mechanical samples
 - authorised sampler and seed certification
- federal and state agencies overseeing seed movement in Australia and sampling and testing standards, including:
 - Australian Quarantine and Inspection Service (AQIS)
 - Organisation for Economic Co-operation and Development (OECD)
 - Association of Official Seed Certifying Agencies (AOSCA)
 - other certification agencies
- assessing seed test results against industry standards and reporting results
- recordkeeping and documentation for traceability and reporting.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in seed testing laboratory or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seeds of crops or pasture plants
 - tools and equipment to perform all the tests specified in the Performance Evidence
 - personal protective equipment
- specifications:
 - sampled seed documentation
 - workplace policies, procedures, processes and forms for seed testing
 - manufacturer operating instructions for seed sampling and testing equipment
 - specific safety data sheets for reagents used in seed testing

- workplace instructions and industry specifications for seed testing and assessment
- specific seed testing and certification regulations and industry practice
- relationships:
 - supplier of seed for testing
 - supervisor(s)
- timeframes:
 - according to seed testing times specified testing procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSDT309 Prepare a working sample

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to receive a sample of seed, reduce the sample for testing and store the working sample to maintain its quality.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Seed Testing (SDT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Receive submitted sample	1.1 Receive submitted sample and verify documentation 1.2 Assess sample for compliance with documentation and laboratory standards and report inconsistencies to supervisor 1.3 Label sample and update records according to workplace procedures and industry standards 1.4 Prepare submitted sample for testing according to timeframes

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	specified in workplace procedures and documentation 1.5 Handle and store submitted sample according to workplace procedures and industry specifications for species
2. Reduce sample	2.1 Check working area and equipment is clean and free of contaminants 2.2 Identify and use equipment suitable for dividing samples according to workplace procedures and industry specifications for species 2.3 Reduce sample size to equal or greater than required working sample according to workplace and industry procedures 2.4 Package working sample for testing according to procedures 2.5 Update sample labelling and records according to workplace procedures and industry specifications
3. Store working sample after testing	3.1 Receive tested samples and verify records and labels before storing 3.2 Handle samples according to workplace guidelines where live insects have been detected before storage 3.3 Store samples after testing in environmental conditions that minimise changes in seed quality traits

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Document samples and labels accurately using industry standards formatting and language
Numeracy	<ul style="list-style-type: none"> Calculate seed quantities and sample sizes accurately

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSDT309 Prepare a working sample	AHCSDT301 Prepare a working sample	<p>Edited Application for clarity</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSDT309 Prepare a working sample

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared a working sample of seeds for testing from at least five samples submitted and has:

- received and verified submitted samples
- obtained a working sample from a seed sample submitted for testing
- reduced samples to a size consistent with documentation and industry standards
- updated documentation and labelling accurately
- stored samples following testing to preserve their integrity.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace procedures for sampling seeds for testing
- mechanical dividers and their applications
- sample reduction methods and apparatus
- procedures for obtaining working samples for different tests
- relevant work health, safety and environment requirements
- seed handling and storage requirements to maintain seed quality
- the rules and role of the International Seed Testing Association (ISTA).

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a seed testing laboratory or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seed samples with documentation for testing
 - seed sampling equipment
 - recording and labelling materials
- specifications:
 - specific workplace procedures, processes, forms for seed sampling
 - manufacturer operating instructions for sampling equipment
 - workplace instructions and seed sampling specifications
 - industry codes of practice and standards
- relationships:
 - supervisor(s).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSDT310 Identify seeds

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to recognise and identify seeds and provide samples to the seed reference collection.

The unit applies to individuals who work as seed analysts including enterprise requirements and procedures. They have responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Seed Testing (SDT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for seed identification	1.1 Verify seeds requiring identification against documentation 1.2 Prepare resources and equipment for identification 1.3 Identify, select and prepare processes for seed identification
2. Identify seed	2.1 Examine seed and record physical characteristics

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	2.2 Identify specified seeds according to their characteristics and reference material 2.3 Record botanical name of seed according to workplace procedures 2.4 Seek advice to confirm identification when undecided
3. Update the reference collection	3.1 Consult supervisor for possible addition of seed to reference collection 3.2 Document information and add seed to reference collection according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Use reference materials to compare physical characteristics with seed species for accurate identification
Writing	<ul style="list-style-type: none"> Document identified seeds accurately according to botanical naming convention

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSDT310 Identify seeds	AHCSDT302 Identify seeds	Edited Application for clarity Minor changes to Performance Criteria for clarity Foundation Skills refined Performance Evidence and Knowledge Evidence	Equivalent

		clarified Amended structure of Assessment Conditions	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSDT310 Identify seeds

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has accurately identified the seeds of at least ten different crop plants to species level and has:

- prepared for seed identification
- identified botanical name of seed according to nomenclature specified in workplace procedures
- contributed to workplace seed reference collection.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- binomial nomenclature
- basic botany and concepts required for seed identification
- seed identification techniques
- workplace and/or legal traceability requirements
- workplace procedures
- tools and testing methods
- work health, safety and environmental requirements in seed testing conditions
- role of workplace seed reference collections
- role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a seed testing laboratory, on a farm or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seeds requiring identification
 - seed identification reference materials, tools and equipment
- specifications:
 - workplace policies, procedures, processes and forms for seed testing
 - laboratory or workplace instructions and specifications
- relationships:
 - supervisor(s).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSDT412 Perform advanced tests on seeds

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to perform advanced tests on seeds and grain to determine quality, performed under laboratory conditions in accordance with Australian and industry standards. Tests to be demonstrated include, Anguina test on annual ryegrass seed, endophytic seed test, electrophoresis test on a seed sample, tetrazolium test, seed vigour test and 1000 seed weight test.

The unit applies to senior seed analysts who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

Seed to be processed for Certification must be sampled by an Authorised Sampler in accordance with international, federal and state seed certification regulations.

Pre-requisite Unit

Nil

Unit Sector

Seed Testing (SDT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare seed for testing and maintain	1.1 Identify purpose and type of seed tests from work instructions 1.2 Verify authenticity of seed from submitted sample documentation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
condition and purity	<p>1.3 Verify submitted seed sample complies with condition specified for seed test and report inconsistencies to supervisor</p> <p>1.4 Select and implement correct personal protective equipment (PPE)</p> <p>1.5 Prepare working test sample/s from submitted seed sample according to workplace and laboratory procedures</p> <p>1.6 Store and maintain condition and quality of seed samples for testing according to seed species, workplace procedures and industry standards</p> <p>1.7 Implement procedures to prevent contamination of submitted sample and working samples</p> <p>1.8 Label and record working samples according to workplace and industry standards for traceability</p>
2. Prepare equipment and materials for seed tests	<p>2.1 Select number of replicates for seed test according to specified test procedure and work instructions</p> <p>2.2 Prepare the required number of replicates according to specific test procedures and industry standards</p> <p>2.3 Label and store replicates according to workplace procedures and industry standards</p> <p>2.4 Compile and prepare materials required according to specified seed test procedures</p> <p>2.5 Select, clean, check and calibrate test equipment according to manufacturer seed test specifications</p> <p>2.6 Rectify or arrange repair of faulty equipment according to workplace procedures</p> <p>2.7 Update records of equipment faults, repairs and calibration</p> <p>2.8 Identify health and safety hazards, assess risk and implement controls according to workplace procedures</p>
3. Implement seed testing procedures	<p>3.1 Measure quantities of seed required for each test replicate according to test procedures</p> <p>3.2 Pre-treat or condition seed replicates ready for testing according to test procedures</p> <p>3.3 Conduct seed test according to seed test procedures and industry standards</p> <p>3.4 Maintain conditions to maintain quality and prevent contamination of replicates during testing process</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.5 Update labelling of replicates and records according to workplace and industry standards for traceability
4. Examine and assess tested seed	4.1 Identify endpoint of test and prepare replicates for assessment according to testing procedures 4.2 Examine each replicate and record observations 4.3 Assess observations against standards specified in workplace and industry procedures 4.4 Record observations and test results according to workplace and industry procedures
5. Prepare and report test results	5.1 Calculate test results according to workplace procedures and industry standards 5.2 Compile and document test results 5.3 Assess test results against standards and report results according to workplace procedures 5.4 Update records according to workplace and industry standards for traceability
6. Finalise testing procedures	6.1 Dispose of replicates and waste according to testing protocols and workplace waste and biosecurity procedures 6.2 Clean and store test equipment according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret seed testing procedures and industry standards to ensure accuracy of tests performed and integrity of tests results
Writing	<ul style="list-style-type: none"> Document test results accurately using industry recognised language and formatting
Numeracy	<ul style="list-style-type: none"> Perform calculations accurately and according to industry standards for seed testing

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSDT412 Perform advanced tests on seeds	AHCSDT403 Perform an Anguina test on annual ryegrass seed	This unit supersedes the following units: AHCSDT403 Perform an Anguina test on annual ryegrass seed, AHCSDT407 Perform an endophytic seed test, AHCSDT408 Perform an electrophoresis test on a seed sample, AHCSDT409 Perform a tetrazolium test, AHCSDT410 Perform a seed vigour test, AHCSDT411 Perform a 1000 seed weight test	Not equivalent
AHCSDT412 Perform advanced tests on seeds	AHCSDT407 Perform an endophytic seed test	This unit supersedes the following units: AHCSDT403 Perform an Anguina test on annual ryegrass seed, AHCSDT407 Perform an endophytic seed test, AHCSDT408 Perform an electrophoresis test on a seed sample, AHCSDT409 Perform a tetrazolium test, AHCSDT410 Perform a seed vigour test, AHCSDT411 Perform a 1000 seed weight test	Not equivalent
AHCSDT412 Perform advanced tests on seeds	AHCSDT408 Perform an electrophoresis test on a seed sample	This unit supersedes the following units: AHCSDT403 Perform an Anguina test on annual ryegrass seed,	Not equivalent

		AHCSDT407 Perform an endophytic seed test, AHCSDT408 Perform an electrophoresis test on a seed sample, AHCSDT409 Perform a tetrazolium test, AHCSDT410 Perform a seed vigour test, AHCSDT411 Perform a 1000 seed weight test	
AHCSDT412 Perform advanced tests on seeds	AHCSDT409 Perform a tetrazolium test	This unit supersedes the following units: AHCSDT403 Perform an Anguina test on annual ryegrass seed, AHCSDT407 Perform an endophytic seed test, AHCSDT408 Perform an electrophoresis test on a seed sample, AHCSDT409 Perform a tetrazolium test, AHCSDT410 Perform a seed vigour test, AHCSDT411 Perform a 1000 seed weight test	Not equivalent
AHCSDT412 Perform advanced tests on seeds	AHCSDT410 Perform a seed vigour test	This unit supersedes the following units: AHCSDT403 Perform an Anguina test on annual ryegrass seed, AHCSDT407 Perform an endophytic seed test, AHCSDT408 Perform an electrophoresis test on a seed sample, AHCSDT409 Perform a tetrazolium test, AHCSDT410 Perform a seed vigour test, AHCSDT411 Perform a 1000 seed weight test	Not equivalent
AHCSDT412 Perform advanced tests on seeds	AHCSDT411 Perform a 1000 seed	This unit supersedes the	Not equivalent

tests on seeds	weight test	following units: AHCSDT403 Perform an Anguina test on annual ryegrass seed, AHCSDT407 Perform an endophytic seed test, AHCSDT408 Perform an electrophoresis test on a seed sample, AHCSDT409 Perform a tetrazolium test, AHCSDT410 Perform a seed vigour test, AHCSDT411 Perform a 1000 seed weight test	
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Links

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Assessment Requirements for AHCSDT412 Perform advanced tests on seeds

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed each of the following tests on seeds:

- tetrazolium test, including:
 - prepared seed and tetrazolium solution
 - stained seeds with a tetrazolium solution
- seed vigour test
- 1000 seed weight test, including:
 - calculated variance, standard deviation and coefficient of variance
 - determined the weight per 1000 pure seeds from a submitted sample

There must also be evidence that the individual has conducted at least one of the following tests:

- Anguina test on annual ryegrass seed, including:
 - identified galls on ryegrass seed
 - inspected seed samples using a diaphanoscope
 - used a microscope to detect nematode gall (*Anguina* spp.)
- endophytic seed test, including:
 - prepared endophyte staining solution
 - tested seed for endophyte presence
 - tested seedlings for endophyte presence
- electrophoresis test on a seed sample, including:
 - extracted seed and prepared gel
 - centrifuged seed and gel mixes
 - interpreted stain bands and patterns.

There must also be evidence that the individual has:

- verified compliance of seed sample with documentation

- selected and correctly used personal protective equipment (PPE)
- prepared and stored working sample and supplied sample to maintain quality and condition
- selected, prepared and used testing equipment and materials to conduct tests and complied with manufacturer specifications
- selected, and prepared replicates from working samples for testing
- conducted seed tests, examined tested seed, assessed and calculated test results
- maintained accurate labelling and records at each stage of the testing process for traceability according to industry and workplace standards
- cleaned test equipment, laboratory and disposed of waste according to biosecurity and workplace procedures
- disposed of replicates and waste
- updated records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- industry and workplace operating procedures for seed tests, including:
 - Anguina test on annual ryegrass seed
 - endophytic seed test
 - electrophoresis test on a seed sample
 - tetrazolium test
 - seed vigour test
 - 1000 seed weight test
 - testing equipment, setup, calibration and operation for the different seed tests
- work health, safety and environment requirements
- seed biology and relation to seed quality, condition and seed tests
- role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- seed sampling methods, including:
 - hand samples
 - mechanical samples
 - authorised sampler and seed certification
 - preparing statistically representative replicates by weight or number of seed for testing
- federal and state agencies overseeing seed movement in Australia and sampling and testing standards, including:
 - Australian Quarantine and Inspection Service (AQIS)
 - Organisation for Economic Co-operation and Development (OECD)
 - Association of Official Seed Certifying Agencies (AOSCA)
 - other certification agencies
- calculations and statistical analysis of seed test results

- personal protective equipment (PPE)
- assessment of seed test results and against industry standards and reporting results
- recordkeeping and documentation for traceability and reporting.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in seed testing laboratory or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seeds of crops or pasture plants
 - use of tools and equipment to perform all tests selected in the Performance Evidence
 - use of personal protective equipment
- specifications:
 - use of sampled seed documentation
 - use of workplace policies, procedures, processes and forms for seed testing
 - use of manufacturer operating instructions for seed sampling and testing equipment
 - access to specific safety data sheets for reagents used in seed testing
 - use of workplace instructions and industry specifications for seed testing and assessment
 - access to specific seed testing and certification regulations and industry practice
- relationships:
 - supplier of seed for testing
 - supervisor(s)
- timeframes:
 - according to seed testing times specified in testing procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSDT413 Handle and store seed subject to quarantine regulations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to store and handle seeds subject to quarantine or isolation to mitigate biosecurity risk, in accordance with laboratory procedures in compliance with state and federal regulations.

The unit applies to senior seed analysts who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

Federal, state and territory legislation, regulations and certification requirements apply to this unit for biological materials subject to quarantine.

Pre-requisite Unit

Nil

Unit Sector

Seed Testing (SDT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Handle and test seed subject to quarantine	1.1 Plan work practices for handling and testing of seed subject to quarantine to ensure compliance 1.2 Undertake seed testing procedures with methods and equipment fit

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	for maintaining quarantine and biosecurity regulations 1.3 Implement procedures to ensure accuracy, efficiency and compliance of equipment with regulations 1.4 Supervise and mentor team members to ensure compliance with regulations and procedures
2. Store seeds subject to quarantine	2.1 Identify laboratory requirements for storage facilities and associated documents according to quarantine regulations 2.2 Store seeds subject to quarantine according to regulations and workplace procedures 2.3 Secure stored seed subject to quarantine to prevent unauthorised access and mitigate biosecurity risk
3. Report non-compliance	3.1 Report incidents and occurrences of non-compliance with storage or handling of seeds subject to quarantine according to workplace and regulatory obligations 3.2 Provide supervision and training for laboratory personnel to meet compliance 3.3 Redesign or adjust workplace practices to prevent repetition of non-compliance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interprets quarantine regulations for application to seed handling and storage

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCSDT413 Handle and store seed subject to quarantine regulations	AHCSDT405 Handle and store quarantinable seeds	<p>Title change for clarity. Edited Application for clarity</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified</p> <p>Amended structure of Assessment Conditions</p>	Equivalent
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Links

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Assessment Requirements for AHCSDT413 Handle and store seed subject to quarantine regulations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has complied with state and federal regulations for handling and storing seed subject to quarantine and biosecurity regulations on at least one occasion, and has:

- handled, tested and stored seeds subject to quarantine
- maintained records and documentation of seed in compliance with state and federal quarantine and biosecurity regulations
- designed work procedures to prevent non-compliance
- reported non-compliance according to workplace and regulatory obligations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- state and federal regulations for handling and storing seeds subject to quarantine
- biosecurity regulations governing the importation and transportation of seeds in Australia
- laboratory systems, records and reporting procedures for dealing with seed subject to quarantine and biosecurity regulations
- testing methods and equipment
- relevant work health, safety and environment requirements
- statutory and legal compliance requirements for seeds.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in quarantine compliant laboratory or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seeds subject to quarantine restrictions
 - access to tools, equipment and materials subject to quarantine regulations
 - access to training and mentoring materials and equipment
- specifications:
 - use of workplace policies, procedures and processes
 - access to specific legislation, regulations and codes of practice for quarantine compliant laboratories
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSDT414 Maintain a quarantine approved laboratory

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to maintain and monitor a quarantine approved laboratory that meets federal and state government certification requirements.

The unit applies to senior seed analysts who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

Federal, state and territory legislation, regulations and certification requirements apply to this unit for biological materials subject to quarantine.

Pre-requisite Unit

Nil

Unit Sector

Seed Testing (SDT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Interpret and communicate quarantine requirements	1.1 Maintain information on quarantine and biosecurity requirements impacting laboratory operations 1.2 Distribute information on responsibilities of work team to maintain laboratory's compliance according to state and federal regulations

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Explain implications of non-compliance with regulations to personnel within laboratory
2. Ensure that work practices are compliant	2.1 Plan work practices to ensure compliance 2.2 Implement testing procedures for methods and equipment in compliance with regulations 2.3 Implement systems to ensure accuracy and/or efficiency of equipment 2.4 Coach and mentor team members compliance according quarantine and biosecurity procedures
3. Review, modify and implement laboratory procedures	3.1 Identify, rectify and report problems with compliance 3.2 Minimise potential non-compliance through on-going review of procedures and supervision of activities 3.3 Advise laboratory personnel of strategies to improve compliance 3.4 Communicate new and improved procedures to laboratory personnel
4. Investigate, rectify and report non-conformance	4.1 Investigate and manage incidents and occurrences of non-compliance 4.2 Provide training for laboratory personnel to acquire and apply competencies to meet compliance 4.3 Redesign or adjust work practices to ensure that non-compliance is not repeated 4.4 Maintain systems, records and reporting procedures according to state and federal quarantine regulations

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and comply with documented federal, state and territory quarantine regulations

Skill	Description
Writing	<ul style="list-style-type: none"> Document clearly defined work practices for work team to follow
Oral Communication	<ul style="list-style-type: none"> Communicate quarantine procedures to work team

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSDT414 Maintain a quarantine approved laboratory	AHCSDT401 Maintain a quarantine approved laboratory	<p>Edited Application for clarity</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Foundation Skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSDT414 Maintain a quarantine approved laboratory

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion maintained a quarantine approved laboratory and has:

- monitored a quarantine approved laboratory meeting federal and state regulations and certification
- planned work processes and initiated action to rectify instances of non-compliance
- maintained records and reporting according to quarantine and biosecurity regulations
- designed and negotiated changes to work practices and procedures to comply with quarantine and biosecurity regulations
- provided information, coaching and mentoring support to laboratory work team to comply with required work practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- state and federal quarantine and biosecurity regulations for approved laboratories
- compliant laboratory systems, records and reporting procedures
- workplace procedures
- health, safety and environment requirements for approved quarantine laboratories
- statutory and legal compliance requirements
- coaching and mentoring strategies
- communication and supervision skills/techniques.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in quarantine compliant laboratory or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools, equipment and materials subject to quarantine regulations
 - training and mentoring materials and equipment
- specifications:
 - workplace policies, procedures and processes
 - specific legislation, regulations and codes of practice for quarantine compliant laboratories and biosecurity
- relationships:
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG407 Prepare shearing team wages

Modification History

Release	Comments
Release 1	This version released with Agriculture Horticulture and Conservation and Land Management Training Package 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare the wages for shearing teams.

This unit applies to individuals who manage shearing teams, who take responsibility for their own work and use discretion and judgement in the selection, allocation and use of available resources.

All work must be carried out to comply with workplace procedures, legislative requirements and workplace health and safety policies.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Maintain staff records	1.1 Confirm that all employees are signed on and declaration forms are completed and signed 1.2 Collect tax file and superannuation numbers and maintain confidentially

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Arrange employment agreements for staff 1.4 Ensure number and type of sheep shorn is recorded accurately 1.5 Record total units of work for each employee relevant to basis of engagement 1.6 Maintain staff injury records
2. Calculate earnings	2.1 Obtain relevant awards and current pay rates 2.2 Follow employment contracts and agreements 2.3 Calculate gross earnings for each employee
3. Calculate deductions and net pay	3.1 Calculate taxation deductions 3.2 Produce payslips for individuals 3.3 Transfer tax to the Australian Taxation Office 3.4 Calculate and document superannuation 3.5 Transfer superannuation payment to appropriate fund
4. Pay staff	4.1 Schedule electronic transfer of funds to individuals, in accordance with the relevant award 4.2 Arrange cash advances on request

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access and interpret legislation and regulations relevant to taxation and superannuation
Get the work done	<ul style="list-style-type: none"> Effectively navigate online banking systems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSHG407 Prepare shearing team wages	AHCSHG406 Prepare shearing team wages	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet at: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG407 Prepare shearing team wages

Modification History

Release	Comments
Release 1	This version released with Agriculture Horticulture and Conservation and Land Management Training Package 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared wages for three shearing team members from different employee categories, using manual or computer-based systems, and including:

- maintained staff records
- calculated earnings, deductions and net pay
- arranged electronic transfers for individual's pay
- produced individual's pay slips.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- physical and financial recording systems
- accounting system software programs
- how wages are calculated for different employment categories, such as piece work, daily, per run, per fleece
- types of records kept during shearing, including the number and types of sheep shorn, the number of bales produced, the size of the shed
- roles of a shearing team, including shearers, learner shearers, crutchers, shearing cooks, shed hands, wool pressers, shearing shed experts and wool classers
- additional allowances that can be claimed, such as for mess, travel, vehicle
- Commonwealth and/or state and territory awards relevant to the shearing industry
- maintenance of employment and payment records
- Australian Tax Office requirements including Goods and Services Tax, Pay As You Go withholding tax and Super Guarantee Charge
- legislative requirements for keeping records of contracts, wage payments and payment summaries
- Commonwealth or state/territory legislation relevant to hiring shearing contractors.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - information about shearing activity over a pay period
 - access to internet banking
- specifications:
 - access to relevant award for shearing operations, and ATO and superannuation requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet at: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL202 Assist with soil or growing media sampling and testing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to assist with the sampling and testing of soil or growing media sampling and testing.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Soils and media (SOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Collect soil or media samples for testing	1.1 Discuss task requirements with supervisor and seek clarification where necessary 1.2 Prepare tools and materials for collecting samples

Element	Performance criteria
	1.3 Take and prepare samples as instructed 1.4 Assist with labelling and recording samples if required
2. Perform basic tests on soil or media sample	2.1 Recognise basic features of a soil profile 2.2 Assist with testing or inspecting physical properties of samples 2.3 Assist with testing chemical properties of samples 2.4 Relate soil test results to suitability of the soil or media for growing

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSOL201A Determine basic properties of soil and/or growing media.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL202 Assist with soil or growing media sampling and testing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- collect soil and media samples
- perform basic descriptive tests for soil texture, salinity and pH
- describe soils or media using commonly used descriptive terms
- assist with the use of simple soil testing equipment for testing pH and salinity
- prepare records of soil sampling results as required

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for recognising soils or growing media properties
 - basic soil or media field tests
 - soil or media chemical properties
 - soil or media physical properties
 - soil or media plant relationships
 - soil sampling techniques

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL203 Assist with soil or growing media sampling and testing

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to assist with the sampling and testing of soil or growing media, including collecting soil or media samples, performing basic tests on soil or media samples, and completing sampling and testing activities.

The unit applies to individuals who assist with soil or growing media sampling and testing under general supervision with limited autonomy or accountability.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soils and Media (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect soil or media samples for testing	1.1 Confirm with supervisor soil or growing media to be sampled 1.2 Select soil or growing media sampling tools and materials 1.3 Follow environmental and biosecurity procedures when sampling and testing soil and growing media, to minimise impact

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Select, fit and use personal protective equipment applicable to the task 1.5 Take samples as instructed 1.6 Assist with labelling and recording samples as required
2. Perform basic tests on soil or media sample	2.1 Recognise basic features of soil or growing media 2.2 Assist with testing and inspecting physical properties of samples 2.3 Assist with testing chemical properties of samples 2.4 Relate soil or growing media test results to suitability for plant requirements
3. Complete sampling and testing activities	3.1 Remove and dispose of waste material 3.2 Clean and return tools and materials to required location 3.3 Identify and report unserviceable tools and materials according to workplace procedures 3.4 Record soil or growing media test results according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about soil and growing media sampling and testing
Writing	<ul style="list-style-type: none"> Use clear language and accurate industry terminology to prepare and record soil and media test results
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm soil and media to be sampled and to report tool and materials unserviceability

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL203 Assist with soil or growing media sampling and testing	AHCSOL202 Assist with soil or growing media sampling and testing	Minor changes to application Element and performance criteria added Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL203 Assist with soil or growing media sampling and testing

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has sampled and tested soil or growing media on at least two occasions, and has:

- selected and used soil and growing media sampling tools and material
- minimised environmental impacts associated with testing soil and media
- followed industry and workplace biosecurity procedures
- applied workplace health and safety requirements
- collected and described soil and media samples
- performed basic descriptive tests for soil or media properties
- assisted with the use of simple soil testing equipment for testing pH and salinity
- removed and disposed of waste material
- recorded soil and media test results and reported unserviceable tools and materials.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental impacts associated with testing soil or growing media
- industry and workplace biosecurity procedures applicable to soil and growing media testing
- workplace requirements applicable to health and safety in the workplace for testing soil or growing media
- principles and practices for recognising soils or growing media properties, including:
 - basic soil or media tests
 - basic soil or media chemical properties
 - basic soil or media physical properties
 - soil or media plant relationship

- soil or media sampling techniques.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - soil and growing media sampling and testing tools and materials
 - personal protective equipment applicable to soil and growing media sampling and testing
- specifications:
 - workplace requirements applicable to health and safety in the workplace, and sampling and testing soil and growing media
 - industry and workplace biosecurity procedures applicable to sampling and testing soil and growing media
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL301 Prepare growing media

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to determine the requirements of a growing media for various plants and preparing and storing the media in accordance with the production specifications.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Soils and media (SOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to work	1.1 Clarify work instructions with supervisor 1.2 Prepare tools and equipment 1.3 Identify hazards, assess risks and implement control measures 1.4 Select and use personal protective equipment (PPE)

Element	Performance criteria
2. Confirm specifications of growing media	2.1 Investigate and select various media components for specific plant requirements 2.2 Determine nutrient requirements for growing period 2.3 Determine growing media by plant requirements and accepted industry practice 2.4 Investigate sources of nutrients for their suitability 2.5 Analyse growing media for chemical, physical and biological characteristics to confirm suitability for plants 2.6 Determine sterilisation methods of the growing media
3. Prepare and store growing media	3.1 Establish growing media composition 3.2 Maintain soil mixing equipment in a clean and effective condition 3.3 Store components in a safe and hygienic manner 3.4 Weigh and mix components into the growing media 3.5 Dispose of waste in an environmentally safe manner 3.6 Store growing media is stored in safe and hygienic manner 3.7 Keep records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSOL301A Prepare growing media.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL301 Prepare growing media

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- collect and analyse data
- confirm specifications of growing media
- interpret chemical labels
- prepare growing media
- store growing media

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for preparing growing media
 - alternative methods of incorporating ingredients into a growing media
 - hygiene in the preparation and storage of the media
 - ingredients used in the preparation of growing media
 - physical, chemical and biological characteristics required of the media
 - plant nutrition
 - properties of the various ingredients used in the preparation of the growing media
 - requirements of a growing media
 - volume and weight determination

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL303 Implement soil improvements for garden and turf areas

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide information about and determine its suitability for garden beds or turf areas and determine ameliorants or additives to improve it.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Soil (SOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare and collect soil samples for testing	1.1 Determine reasons for testing of soil 1.2 Prepare tools and materials for collecting samples

Element	Performance criteria
	1.3 Take samples according to recognised sampling techniques 1.4 Label and record samples
2. Determine physical characteristics of sample	2.1 Conduct tests for texture and structure on the samples 2.2 Determine soil colour and the presence of organic matter 2.3 Determine characteristics of soil profile where required 2.4 Determine depth of topsoil and determine if sufficient for the requirements of the plants to be installed 2.5 Determine the ability of soil to drain or retain water 2.6 Assess the physical characteristics of soil and determine improvements needed
3. Determine chemical characteristics of sample	3.1 Conduct tests for pH and salinity 3.2 Determine the suitability of soil for particular plants 3.3 Determine the soil's fertility and the need for additional fertiliser or other amendments 3.4 Determine the chemical characteristics of soil and improvements needed
4. Prepare soils for planting or replanting	4.1 Improve physical characteristics of garden or lawn areas as required 4.2 Adjust pH and salinity of soil in garden or lawn areas as required 4.3 Incorporate additional soil as needed to establish final levels 4.4 Finish soil level and consolidate ready for planting according to planting plans and enterprise procedures

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

Unit is not equivalent to AHCSOL302A Construct a soil profile.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL303 Implement soil improvements for garden and turf areas

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- conduct tests to determine soil physical properties of texture and structure
- conduct tests to determine soil chemical properties of pH and salinity
- make observations about fertility, mineral and organic matter content based on sample colour
- make observations about soil drainage and water holding capacity
- make recommendations to improve soils based on results of simple soil tests

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for providing information on soils or growing media
 - physical properties of soils and media
 - chemical properties of soils and media
 - products and processes for improving soils and media
 - sample collection, testing and methods used to perform tests
 - water holding capacity and readily available water
 - organic matter in soil and media
 - soil ameliorants and improvement techniques
 - nutrient availability in soils

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL304 Implement soil improvements for garden and turf areas

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to collect and test soil samples for their physical and chemical characteristics and take corrective action to improve the soil for garden beds and turf areas.

The unit applies to individuals who carry out soil improvements under general direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soil (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare and collect soil samples for testing	1.1 Identify purpose and method of soil sampling and testing 1.2 Select tools, equipment and materials required for safely collecting soil samples according to testing procedures 1.3 Collect representative soil samples for testing

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Package and label soil samples ready for testing according to laboratory procedures
2. Determine physical characteristics of sample	<p>2.1 Conduct tests to determine the physical characteristics of soils according to laboratory procedures and safe work practices</p> <p>2.2 Identify depth of topsoil and assess suitability for cultural requirements of plants to be grown</p> <p>2.3 Assess soil physical characteristic test results to determine drainage and water holding performance</p> <p>2.4 Identify and select soil improvements required to meet cultural requirements of plants to be grown</p> <p>2.5 Prepare a soil improvement plan for improving physical characteristics</p>
3. Determine chemical characteristics of sample	<p>3.1 Conduct tests to determine chemical properties of soil according to laboratory procedures and safe work practices</p> <p>3.2 Assess soil chemical properties test results to determine effect on cultural requirements of plants to be grown</p> <p>3.3 Identify and select soil chemical improvements required to meet cultural requirements of plants to be grown</p> <p>3.4 Update soil improvement plan for improving chemical characteristics</p>
4. Prepare soils for planting or replanting	<p>4.1 Select tools, equipment and materials required to safely incorporate soil treatments according to soil improvement plan</p> <p>4.2 Calibrate equipment to ensure application of soil improvement material complies with improvement plan</p> <p>4.3 Implement soil improvement plan for garden and turf areas</p> <p>4.4 Adjust soil levels and consolidate ready for planting</p> <p>4.5 Record and report work outcomes according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Complete workplace documentation accurately and clearly using industry terminology, correct spelling and required format
Numeracy	<ul style="list-style-type: none"> Perform weight and volumetric measurements when preparing and assessing soil tests Calculate soil improvement materials to include in the soil improvement plan, including distance, area, volume and ratio

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL304 Implement soil improvements for garden and turf areas	AHCSOL303 Implement soil improvements for garden and turf areas	Performance criteria clarified Foundation skills added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL304 Implement soil improvements for garden and turf areas

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has collected soil samples, including:

- determined the purpose for collecting and testing soil samples
- collected representative soil samples for testing and packaged and labelled them according to workplace and laboratory requirements
- collected samples of at least three different soil types, and:
 - conducted tests safely to determine soil physical and chemical properties according to industry standards
 - assessed test results and prepared soil improvement plan to meet the requirements and conditions required for the plant species to be cultivated.

There must also be evidence that, on at least one occasion, the individual has, according to workplace procedures:

- selected tools, materials and equipment required for implementing soil improvement plan
- calibrated equipment prior to application of soil improvement materials
- adjusted physical and chemical properties according to cultural requirements of the plants to be grown
- maintained records and reported soil test outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- physical properties of soils and media and methods for testing, including:
 - colour
 - organic matter
 - texture tests using field and sieve analysis techniques

- structure
- air filled porosity
- moisture holding capacity
- soil bulk density
- infiltration rate and drainage properties, including hydraulic conductivity
- perched water tables
- wettability
- chemical properties of soils and media, and methods for testing, including:
 - pH using colorimetric and pH meters
 - salinity, total dissolved salts and electrical conductivity
 - types of nutrient tests and their purpose
- soil sampling, collecting and testing procedures, including:
 - tools and equipment required
 - procedures for testing
 - procedures for sampling, securing, packaging and labelling
- soil and media improvement strategies for physical and chemical characteristics, including:
 - products and processes for improving soil and media physical condition
 - soil ameliorants and improvement techniques
 - bio-stimulants
 - organic matter and effect on soil and media
 - water holding capacity and readily available water, including wetting agents and penetrants
 - soil biological organisms and their impact
 - effect of pH, salinity and fertilisers on availability of nutrients
 - soil profile both natural and constructed
 - Australian standards AS4454:2012 Composts, soil conditioners and mulches, and AS4419:2018 Soils for landscaping and garden use
- assessment and interpretation of soil test results for physical and chemical properties and their relationship to cultivated plants relevant to workplace
- basic mathematics for calculating rates of application of soil additives, water holding capacity, air filled porosity and measuring and weighing materials to perform accurate soil tests
- using test results to determine soil improvements
- safe field and laboratory practices when collecting and testing soils and media
- record keeping and reporting procedures for soil collecting, testing and planning procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
 - at least three separate soil sites or media for collecting and testing
- resources, equipment and materials:
 - soil testing equipment, including pH meter and pH colour test kit, conductivity meter, soil colour charts, NPK colour test kit
 - equipment for storing and handling samples
 - accurate measuring equipment for soil testing
 - personal protection and other safety equipment required for safe handling and testing of soils
- specifications:
 - workplace procedures and instructions related to soil testing and soil improvement
 - industry standards for testing and interpreting soil test results.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL305 Prepare growing media

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare growing media for various plants, including preparing for work, confirming specifications for growing media and preparing and storing the media.

The unit applies to individuals who prepare growing media under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soils and media (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to work	1.1 Clarify work instructions with supervisor 1.2 Prepare required tools and equipment for the task 1.3 Recognise workplace hazards and report safety concerns 1.4 Select, fit, use and maintain personal protective equipment according to the task and workplace safety requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Confirm specifications of growing media	2.1 Investigate and select various media components for specific plant requirements according to growing media specifications 2.2 Determine plant nutrient requirements for growing period 2.3 Determine growing media by plant requirements and accepted industry practice 2.4 Investigate sources of nutrients and their suitability for plant requirements 2.5 Analyse growing media for chemical, physical and biological characteristics to confirm suitability for plants 2.6 Determine and applied sterilisation methods for the growing media
3. Prepare and store growing media	3.1 Establish growing media composition according to specifications 3.2 Maintain mixing equipment in a clean and effective condition 3.3 Store components in a safe and hygienic manner 3.4 Weigh and mix components into the growing media 3.5 Dispose of waste in an environmentally safe manner 3.6 Store growing media in a safe and hygienic manner 3.7 Record growing media preparation activities according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations and products
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare growing media preparation activity records
Oral Communication	<ul style="list-style-type: none"> Use clear language to confirm work instructions

Skill	Description
Numeracy	<ul style="list-style-type: none"> Access growing media specification data Calculate and weigh growing media components
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Get the work done	<ul style="list-style-type: none"> Take responsibility for routine decisions about confirming specifications, preparing and storing growing media, and reflect on outcomes to identify effectiveness of decisions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL305 Prepare growing media	AHCSOL301 Prepare growing media	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL305 Prepare growing media

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared growing media on at least two occasions and has:

- applied workplace health and safety requirements
- collected and analysed data
- confirmed specifications of growing media
- analysed growing media chemical, physical and biological characteristics
- disposed of waste in an environmentally safe manner
- stored growing media.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace requirements applicable to health and safety in the workplace for preparing growing media
- principles and practices for preparing growing media
- alternative pre-prepared growing media options, including coconut fibre bags
- alternative methods of incorporating ingredients into a growing media
- plant nutrition requirements for growing period
- ingredients used in the preparation of growing media
- physical, chemical and biological characteristics required of the media
- properties of the various ingredients used in the preparation of the growing media
- requirements of a growing media
- hygiene in the preparation and storage of the media
- volume and weight determination
- environmentally safe disposal of waste.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to growing media preparation
 - growing media tools and equipment
 - growing media ingredients
 - mixing and weighing equipment
 - personal protective equipment applicable to growing media preparation
- specifications:
 - growing media specifications
 - work instructions and workplace procedures for preparing growing media
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or current standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL401 Sample soils and interpret results

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to take a soil sample and interpret the test results.

This unit applies to individuals whose job role includes undertaking soil or growing media sampling and interpreting the results as a foundation for further horticultural operations such as nutrition programs and irrigation scheduling.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Soils and media (SOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Prepare for soil sampling	1.1 Identify the soils to be surveyed, surveying activity and contractors 1.2 Select tools, equipment and machinery as required by the testing agency requirements 1.3 Carry out pre-operational and safety checks on tools, equipment and machinery 1.4 Identify areas of homogeneous soil types for sampling 1.5 Locate services in consultation with the supervisor 1.6 Identify work and safety hazards, assess risks and implement controls 1.7 Select and use suitable safety equipment and personal protective equipment (PPE) 1.8 Maintain a clean and safe work area throughout and on completion of work
2. Determine soil characteristics by performing soil sampling	2.1 Determine the density and depth for a representative sampling of the area 2.2 Excavate holes at identified sampling sites 2.3 Collect and prepare, label, package and dispatch samples for off-site testing 2.4 Determine the physical and chemical characteristics of the soil 2.5 Clean and store sampling and testing tools and equipment 2.6 Record results
3. Interpret results of soil analysis	3.1 Classify the soil types of the sample area according to standards for soil classification 3.2 Determine, from published data and records, the acceptable soil physical and chemical parameters for a specified plant 3.3 Compare collected analytical results with acceptable physical and chemical parameters for a specified plant 3.4 Evaluate soil characteristics to determine whether they can be altered to meet plant needs 3.5 Determine the Readily Available Water values for irrigation sites

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSOL401A Sample soils and interpret results.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL401 Sample soils and interpret results

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- collect soil and media samples using appropriate sampling methodology
- file and record analytic results for future use
- implement a nutrient and nutrition program
- prepare soil and media samples for dispatch to soil analysis laboratory
- receive and interpret analytic results

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of soils sampling
 - environmental implications associated with soil surveying activities and the application of analytical results
 - practical understanding of the range of sample collection, testing and analytical methods that may be used to perform soil surveys, and the association of surveying methods with site conditions, environmental implications and intended horticultural use of the surveyed site
 - soil ameliorants and soil improvement techniques for addressing site limitations identified through surveying
 - the capacity of soils to provide water to plants
 - the importance of organic matter in soil in relation to the intended horticultural use
 - the physical and chemical properties of soils in relation to their ability to support specified horticultural production

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL402 Develop a soil use map for a property

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop a soil use map for a property.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Soils and media [SOL]

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Collect information for soil mapping	1.1 Confirm soils samples collected for off-site assessment by soil testing agencies used recommended procedures 1.2 Collect soil physical, chemical and biological information

Element	Performance criteria
	1.3 Determine the acceptable soil parameters for specified plants from published data and records 1.4 Collect information about areas of cultural significance and habitats of biodiversity on the property 1.5 Collate research outcomes
2. Analyse soil information	2.1 Classify the soil types of the sample area according to standards for soil classification 2.2 Compare collected results with established parameters for land use and production 2.3 Evaluate soil characteristics to determine whether they can be altered to meet land use needs 2.4 Determine readily available water values for irrigation sites
3. Plot topography and soil survey data on property map	3.1 Map interpreted results 3.2 Identify potential uses of the soil for purposes of land classing, land capability, areas of cultural significance and habitats of biodiversity 3.3 Define property boundaries and features 3.4 Identify paddocks or irrigation areas 3.5 Plot contour or spot level information 3.6 Plot soil sampling sites on map 3.7 Determine soil profile and irrigation characteristics for each sampling site and irrigation area and index to the map 3.8 Index the Readily Available Water values for irrigation sites 3.9 Plot areas of specific concern on the map and index descriptions to the map

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSOL402A Develop a soil use map for a property.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL402 Develop a soil use map for a property

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- analyse survey results
- determine soil characteristics
- identify adverse environmental impact of irrigation activities and take appropriate action
- interpret soil analyses results
- perform a soil survey
- plot topography and soil survey data on a property map

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for developing soil use maps
 - environmental impacts of irrigation, using water from any ground or underground source
 - methods and techniques of soil sampling
 - nutrient availability in soils
 - physical and chemical properties of soils
 - readily available water
 - soil analyses results
 - soil quality factors
 - soil types and profiles
 - soil water retention testing techniques
 - water table and salinity

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL403 Prepare acid sulphate soil management plans

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop management plans that address the relevant legislation and issues associated with land and ground water disturbing activities for acid sulphate soil (ASS).

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Soils and media [SOL]

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Conduct assessment of the disturbing activity	1.1 Establish and document current or proposed land use following discussions with landholder and relevant consent authority

Element	Performance criteria
for ASS risk	1.2 Assess site data following industry guidelines and relevant consent authority standards 1.3 Establish compliance issues with relevant regulatory authority or environmental legislation or industry procedures 1.4 Communicate site investigations to landholder and establish agreement to develop a management plan in accordance with relevant consent authority requirements
2. Develop ASS remediation or management strategy	2.1 Review field investigation and laboratory test data and match to strategy options consistent with industry principles and relevant consent authority standards 2.2 Identify ASS management options consistent with industry guidelines and relevant consent authority requirements 2.3 Identify and document remediation or management strategies in consultation with the landholder and relevant consent authority
3. Prepare an ASS site management plan	3.1 Check remediation or management strategies against industry guidelines and relevant consent authority requirements 3.2 Incorporate design specifications for structures in management plan details 3.3 Detail monitoring strategies for the site in line with prevailing site factors and relevant consent authority standards 3.4 List on site responsibilities following industry guidelines and relevant consent authority requirements 3.5 Ensure contingency procedures in accordance with industry guidelines and relevant consent authority requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSOL403A Prepare acid sulphate soil management plans.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL403 Prepare acid sulphate soil management plans

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- collect and use field and test data to identify strategies to remediate and manage the site
- complete a desktop assessment of the land for actual and potential ASS risk based on current and proposed land use, site data and compliance issues
- document an ASS management plan and effectively communicate it to the landowner, relevant consent authority and contractors
- support implementation of ASS management plan by reports on materials management and remediation and site rehabilitation

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for preparing acid sulphate soil management plans
 - ASS assessment tools
 - earthmoving principles
 - environmental impact issues
 - environmental impacts of ASS
 - environmental plans, strategies and options for management and remediation
 - managing acid leachate water flows
 - planning process for remediation and management plans
 - principles of duty of care and due diligence
 - relevant environmental, planning and groundwater legislation
 - soils and soil chemistry
 - subsurface and surface drainage principles and systems

- total catchment issues

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL405 Provide information on fertilisers and soil ameliorants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to gather and provide information on fertilisers and soil ameliorants.

The unit applies to individuals who apply specialist skills and knowledge to provide information on fertilisers, soil ameliorants and related environmental information. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soils and Media (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Gather information on the requirements of the	1.1 Identify fertiliser or soil ameliorant requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
customer	1.2 Evaluate planned use of fertiliser or soil ameliorant according to legislative requirements, environmental guidelines and food safety regulations
2. Research and provide information on nutrient management program	2.1 Provide information on soil, plant tissue and water sampling to the customer 2.2 Provide customer with relevant sampling kits and advice on sampling procedures 2.3 Provide information on fertiliser and soil ameliorant products, including workplace health and safety, biosecurity, food safety and environmental issues 2.4 Provide information on use of nutrient management tools 2.5 Provide information on application method or timing 2.6 Research and update knowledge and understanding of fertilisers, soil, ameliorants and related products from authoritative sources 2.7 Research local workplace and district requirements for fertilisers, soil, ameliorants and related products
3. Finalise customer advice	3.1 Provide customer with information regarding transporting, storing and handling fertiliser and soil ameliorants 3.2 Refer customer to a specialist adviser if required 3.3 Record details of information provided

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about fertilisers, soil ameliorants and related products, and legislative requirements Interpret fertiliser and soil ameliorant product labels
Oral communication	<ul style="list-style-type: none"> Use clear language with customers to gather information and evaluate planned product use, and explain sampling procedures

Skill	Description
	and product use, transportation, storage and handling

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL405 Provide information on fertilisers and soil ameliorants	AHCMER406 Provide information on fertilisers and soil ameliorants	Unit code and sector changed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL405 Provide information on fertilisers and soil ameliorants

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has provided information on fertilisers and soil ameliorants on at least three occasions, and has:

- considered the following when providing information:
 - applicable workplace health and safety procedures
 - manufacturer requirements
 - chemical safety and food safety legislation and regulations
 - biosecurity and environmental guidelines for using
 - transportation, storage and handling of fertiliser and soil ameliorants
- explained the use of nutrient management tools
- recorded details of information provided to the customer.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- crop nutrient requirements, including both macro and micro nutrients
- effect of soil ameliorants in dispersion and adjustment for acidity or alkalinity (pH)
- workplace health and safety procedures, manufacturer requirements, chemical safety and food safety legislation and regulations, biosecurity and environmental guidelines for using, transportation, storage and handling of fertiliser and soil ameliorants
- packaging and dispatch procedures for samples
- physical, chemical and biological properties related to a healthy soil and environment
- sampling tools and methods, including:
 - soil, plant tissue and water tests
 - yield monitoring

- electrical conductivity survey
- workplace health and safety and environmental procedures in operating sampling equipment
- impact of climate on soil productivity
- environmental impacts, including:
 - soil structural decline
 - fertility decline
 - acidification and salinity
 - erosion
 - loss of organic matter
 - water quality
 - fertiliser and soil ameliorant impurities
 - greenhouse gas emissions
- major nutrient management risks of leach, run-off, load, blow, and mine, and how these impact on the environment
- nutrient management advisory tools and processes used by advisers in making a crop nutrition recommendation
- fertiliser and soil ameliorant application methods, including timing and frequency of fertiliser and soil ameliorant application to minimise losses
- industry production regimes and fertiliser practices.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - fertilisers and soil ameliorants
 - soil, plant tissue and water sampling tools
 - nutrient management tools
- specifications:
 - workplace health and safety procedures, manufacturer requirements, chemical safety and food safety legislation and regulations, biosecurity and environmental guidelines applicable to fertiliser and soil ameliorant use, transportation, storage and handling
- relationships:
 - customers, specialist adviser.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL406 Sample soils and interpret results

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to prepare for soil sampling, collect soil samples and interpret test results.

The unit applies to individuals who apply specialist skills and knowledge to sample soils and interpret results. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soils and Media (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for soil sampling	1.1 Identify soil to be sampled and sampling method 1.2 Select tools, equipment and machinery required for safely collecting soil samples according to testing agency requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify areas of homogeneous soil types for sampling 1.4 Locate services in consultation with site supervisor 1.5 Identify hazards and assess risks in the workplace, and implement controls to manage risks according to workplace health and safety procedures 1.6 Select, fit and use safety and personal protective equipment according to workplace procedures 1.7 Prepare a clean and safe work area and maintain throughout and on completion of work
2. Determine soil characteristics by performing soil sampling	2.1 Determine the density and depth for a representative sampling of the area 2.2 Take soil sub-samples at identified sampling sites 2.3 Collect soil samples for testing 2.4 Prepare, package, label and dispatch samples for off-site testing 2.5 Document the physical and chemical characteristics of the soil 2.6 Clean and store sampling and testing tools, equipment and machinery according to workplace requirements
3. Interpret results of soil analysis	3.1 Classify the soil types of the sample area according to standards for soil classification 3.2 Determine, from published data and records, the acceptable soil physical and chemical parameters for a specified plant 3.3 Compare collected analytical results with acceptable physical and chemical parameters for a specified plant 3.4 Evaluate soil characteristics to determine whether they can be altered to meet plant needs 3.5 Determine the Readily Available Water (RAW) values for irrigation sites 3.6 File and record results according to workplace procedures 3.7 Provide recommendations to improve soil characteristics

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information regarding testing agency requirements and standards for soil classification
Numeracy	<ul style="list-style-type: none"> Interpret and compare numerical information from published data and records with analytical results to determine acceptable soil physical and chemical parameters for a specified plant Calculate RAW values for irrigation site

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL406 Sample soils and interpret results	AHCSOL401 Sample soils and interpret results	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL406 Sample soils and interpret results

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has sampled soils and interpreted results on at least two occasions, and has:

- identified and collected soil samples using appropriate sampling methodology
- applied testing agency requirements applicable to sampling soils
- applied workplace health and safety requirements applicable to sampling soils
- prepared soil samples for dispatch to soil analysis laboratory
- received, interpreted and compared published data and records with analytical results
- filed and recorded results according to workplace procedures
- provided soil improvement recommendations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- testing agency requirements applicable to sampling soils
- workplace health and safety requirements applicable to sampling soils
- principles and practices of soil sampling, including:
 - environmental implications associated with soil sampling activities and the application of analytical results
 - practical understanding of the range of sample collection, testing and analytical methods that may be used to perform soil samples, and the association of sampling methods with site conditions, environmental implications and intended horticultural use of the sampled site
 - soil ameliorants and soil improvement techniques for addressing site limitations identified through sampling
 - the capacity of soils to provide water to plants

- the importance of organic matter in soil in relation to the intended horticultural use
- the physical and chemical properties of soils in relation to their ability to support specified horticultural production
- workplace filing and recording procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - soil sampling and testing tools, equipment and machinery
 - safety and personal protective equipment applicable to soil sampling
 - principles and practices of soil sampling
- specifications:
 - testing agency requirements applicable to sampling soils
 - workplace health and safety requirements applicable to sampling soils
 - workplace filing and recording procedures
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL407 Develop a soil use map for a property

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to collect information for soil mapping, analyse soil information and develop a soil use map for a property.

The unit applies to individuals who apply specialist skills and knowledge to developing a soil use map for a property. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soils and Media (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect information for soil mapping	1.1 Confirm soil samples for off-site assessment were collected according to testing agency requirements 1.2 Collect soil physical, chemical and biological information

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Determine, from published data and records, the acceptable soil physical and chemical parameters for specified plants</p> <p>1.4 Collect information on areas of cultural significance and habitats of biodiversity on the property</p> <p>1.5 Collate and record research results</p>
2. Analyse soil information	<p>2.1 Classify the soil types of the sample area according to standards for soil classification</p> <p>2.2 Compare collected results with acceptable parameters for land use and production</p> <p>2.3 Evaluate soil characteristics to determine whether they can be altered to meet land use needs</p> <p>2.4 Determine the Readily Available Water (RAW) values for irrigation sites</p>
3. Plot topography and soil survey data on property map	<p>3.1 Interpret results from analysed data and add to property map</p> <p>3.2 Identify potential uses of the soil for purposes of land classing, land capability, areas of cultural significance and habitats of biodiversity</p> <p>3.3 Define property boundaries and features</p> <p>3.4 Identify paddocks or irrigation areas</p> <p>3.5 Plot contour or spot level information</p> <p>3.6 Plot soil sampling sites on map</p> <p>3.7 Determine soil profile and irrigation characteristics for each sampling site and irrigation area, and index to the map</p> <p>3.8 Index RAW values for irrigation sites</p> <p>3.9 Plot areas of specific concern on the map, and index descriptions to the map</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information regarding testing agency requirements, areas of cultural significance, habitats of biodiversity and standards for soil classification
Numeracy	<ul style="list-style-type: none"> Interpret and compare numerical information from published data and records with analytical results to determine acceptable parameters for land use and production for specified plants Calculate and index RAW values for irrigation sites

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL407 Develop a soil use map for a property	AHCSOL402 Develop a soil use map for a property	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL407 Develop a soil use map for a property

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed a soil use map for a property on at least one occasion, and has:

- confirmed soil samples were collected according to testing agency requirements
- determined soil characteristics and parameters
- interpreted and compared published data and records with analytic results
- determined areas of cultural significance and habitats of biodiversity on the property
- interpreted soil analysis test results
- determined RAW values for irrigation sites, and indexed on property map
- plotted topography, soil survey data and areas of concern on property map.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- testing agency requirements applicable to sampling soils
- principles and practices for developing soil use maps, including:
 - environmental impacts of irrigation, using water from any ground or underground source
 - methods and techniques of soil sampling
 - nutrient availability in soils
 - physical and chemical properties of soils
 - readily available water
 - soil analyses results
 - soil quality factors
 - soil types and profiles

- soil water retention testing techniques
- water table and salinity.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - soil sampling test results
 - information on areas of cultural significance and habitats of biodiversity on the property
 - principles and practices for developing soil use maps
- specifications:
 - testing agency requirements applicable to soil sampling
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL409 Supervise acid sulphate soil remediation and management projects

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan and supervise acid sulphate soil (ASS) remediation and management projects.

The unit applies to individuals who apply specialist skills and knowledge to supervising ASS remediation and management projects. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soils and Media (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan implementation	1.1 Review and relate ASS management plan, work schedule and specifications to the worksite

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Plan and record work sequences in line with work schedule 1.3 Maintain compliance with relevant consent authority standards, environmental legislation and industry guidelines
2. Carry out environmental site induction	2.1 Communicate specific site workplace health and safety and environmental issues to stakeholders 2.2 Describe and communicate project objectives and duty of care responsibilities to stakeholders 2.3 Brief plant operators, contractors and other staff on special aspects of performance relating to using specific equipment and handling hazardous materials 2.4 Determine monitoring requirements for the site, and identify individual responsibilities as stated in ASS management plan
3. Direct implementation of planned works	3.1 Monitor work according to ASS management plan and implement contingency procedures if required 3.2 Maintain compliance with ASS management plan, work schedule, specifications and regulatory requirements
4. Review works and site environment	4.1 Review works and site environment to ensure outcomes are reviewed according to the ASS management plan, work schedule and specifications 4.2 Provide instructions to staff and contractors 4.3 Determine if changes are required to works in consultation with ASS management plan provider and take appropriate action

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information regarding ASS management plan, work schedule and specifications, and relevant consent authority standards, environmental legislation and industry guidelines for ASS management

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with stakeholders, plant operators, contractors and staff, using clear language to describe and communicate ASS management plan Use clear language to discuss changes to works with ASS management plan provider

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL409 Supervise acid sulphate soil remediation and management projects	AHCSOL404 Supervise acid sulphate soil remediation and management projects	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL409 Supervise acid sulphate soil remediation and management projects

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supervised an acid sulphate soil (ASS) remediation and management project on at least one occasion, and has:

- reviewed ASS management plan and planned work schedule
- applied relevant consent authority standards, environmental legislation and industry guidelines applicable to ASS remediation management
- described and communicated objectives of the project, workplace health and safety and environmental issues to stakeholders and individual contractors
- monitored works identified in the ASS management plan and compliance with work schedule, specifications and regulatory requirements
- reviewed completed works and made changes in consultation with ASS management plan provider where necessary.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- ASS management plan
- relevant consent authority standards, environmental legislation and industry guidelines applicable to ASS remediation management
- principles and practices of ASS remediation, including:
 - ASS and soil chemistry
 - equipment most suited to ASS site remediation and management
 - quality assurance systems, processes and practices
 - relevant environmental, planning and groundwater legislation
 - subsurface and surface drainage principles and systems.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - ASS management plan
 - principles and practices of ASS remediation
- specifications:
 - relevant consent authority standards, environmental legislation and industry guidelines applicable to ASS remediation management
- relationships:
 - stakeholders, plant operators, contractors, staff and ASS management plan provider
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL505 Monitor and manage soils for production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to research soil information, apply soil testing information to production or management plan, develop and monitor soil amendment practices, review and document soil management plan.

The unit applies to individuals who apply specialised skills and knowledge to the monitoring and management of soils for production, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soils and media (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research information about soil	1.1 Research and analyse soil type, characteristics and properties 1.2 Identify particular soil properties that are relevant to the workplace and research for further enquiry 1.3 Determine, from published data and records, acceptable soil

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	physical and chemical parameters for a specified crop 1.4 Identify relevant properties of soils and areas of homogenous soils for testing 1.5 Take soil samples from the land under production 1.6 Collect, package, label and dispatch soil samples according to testing agency requirements
2. Apply information from soil testing to production or management plan	2.1 Classify soil types from the sample area according to standards for soil classification 2.2 Compare results from soil testing with the identified soil physical and chemical parameters for the specified crop 2.3 Compare results from soil testing with soil records and production history 2.4 Review the comparative results and record differences 2.5 Develop production or management plan and record testing and comparative results
3. Develop soil amendment practices	3.1 Identify soil properties capable of being ameliorated 3.2 Identify relevant soil ameliorants or cultural practices and include in production plan 3.3 Cost soil ameliorating activities and include in production plan 3.4 Quantify and purchase soil ameliorants
4. Monitor soil amendment practices	4.1 Sample areas of ameliorant activities for testing across a representative sampling area 4.2 Analyse results to measure the performance of soil amelioration activities 4.3 Record monitoring program and include in the production plan
5. Review and document the soil management plan	5.1 Record analysis of the sampling methods and amend methods as required 5.2 Review monitoring program, amend for effectiveness and record 5.3 Document production plan incorporating reviews and reports

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding soil types, characteristics and properties
Numeracy	<ul style="list-style-type: none"> Access and analyse published data regarding soil physical and chemical parameters for specified crops Interpret soil test data results and compare with published data Calculate and document soil ameliorant activity costs
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL505 Monitor and manage soils for production	AHCSOL501 Monitor and manage soils for production projects	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL505 Monitor and manage soils for production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has monitored and managed soils for at least one product project and has:

- interpreted soil analytical data for the purposes of developing management or production plans
- identified particular soil properties that are relevant to the workplace and researched for further enquiry
- applied information from soil testing to production or management plan
- documented the soil management plan or production plan
- developed soil improvement programs
- reviewed ongoing soil monitoring programs.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for managing soils for production, including:
 - basic soil field tests
 - interpreting laboratory results
 - soil chemical properties
 - soil conservation strategies and sustainable production techniques
 - soil physical properties
 - soil sampling techniques
 - soil types
 - strategies to ameliorate soil properties.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - published data and records
 - production history
 - soil sampling equipment
 - soil test results
- specifications:
 - testing agency requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL506 Manage erosion and sediment control

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify areas with erosion and sediment problems, and develop, implement, manage and evaluate an erosion and sediment control plan.

The unit applies to individuals who apply specialist skills and knowledge to the management of erosion and sediment control, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soils and Media (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Conduct an audit and identify areas with	1.1 Identify soils susceptible to erosion and sediment loss and relationship to land classes for erosion potential

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
erosion and sediment problems	<p>1.2 Conduct a property or site audit and document details using appropriate methodology</p> <p>1.3 Identify and classify types of erosion and sediment loss</p> <p>1.4 Identify environmental and manmade factors that influence rates and effects of erosion and sediment</p> <p>1.5 Estimate the economic and environmental losses caused by erosion and sediment losses</p> <p>1.6 Identify appropriate external sources of support to assist in the planning processes</p> <p>1.7 Identify regulatory planning authorities and environmental legislation relevant to current and future project planning</p>
2. Develop erosion and sediment control plan	<p>2.1 Investigate erosion and sediment control measures consistent with industry guidelines</p> <p>2.2 Develop and record erosion and sediment control strategies for project area in cooperation with landowner, relevant government and planning authorities, and stakeholders</p> <p>2.3 Identify contingency procedures for potential problems that may require future rectifications</p> <p>2.4 Develop erosion and sediment control plan to meet design principles including environmental concerns, physical impacts, land use, production systems and personnel</p> <p>2.5 Develop monitoring processes for evaluating and reporting performance against erosion and sediment control plan for achieving short-term and long-term outcomes</p> <p>2.6 Determine and communicate roles and responsibilities of personnel and stakeholders</p> <p>2.7 Document erosion and sediment control plan</p>
3. Implement and manage the erosion and sediment control plan	<p>3.1 Implement tasks according to erosion and sediment control plan and design principles</p> <p>3.2 Assess the workplace health and safety risks and environmental impacts associated with control plan activities, and implement suitable controls</p> <p>3.3 Manage the communication process, including strategies for conflict resolution and problem solving</p> <p>3.4 Monitor progress to ensure time, performance, cost and quality of</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	work are achieved 3.5 Investigate and negotiate proposed variations to plan with key stakeholders
4. Evaluate the erosion and sediment control plan	4.1 Conduct inspection to review work completion and collate monitoring data 4.2 Identify alterations or modifications to the plan, and report to key stakeholders, developer or consent authority 4.3 Review outcomes of completed erosion and sediment control plan against agreed short-term and long-term objectives and report to key stakeholders

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information on regulatory planning authorities and environmental legislation relevant to current and future project planning
Oral communication	<ul style="list-style-type: none"> Initiate discussions with landowner, relevant government and planning authorities, and stakeholders using clear language to discuss erosion and sediment control strategies Use clear communications with personnel and key stakeholders to confirm their roles and responsibilities, and with developer or consent authority to discuss and report alterations or modifications to the plan and review outcomes of completed plan

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL506 Manage erosion and sediment control	AHCSOL503 Manage erosion and sediment control	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL506 Manage erosion and sediment control

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed erosion and sediment control on at least one occasion, and has:

- applied environmental and biosecurity practices and workplace procedures applicable to managing erosion and sediment control
- identified appropriate erosion and sediment control strategy methods
- developed and documented erosion and sediment control plan
- communicated and collaborated effectively with stakeholders for planning and conflict resolution
- prepared plans and reports on erosion and sediment control plans
- monitored, evaluated and analysed effectiveness of erosion and sediment control plan outcomes
- organised required resources and key stakeholders
- applied workplace health and safety requirements applicable to managing erosion and sediment control.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of erosion and sediment control management, including:
 - environment and sustainability as a whole farm system approach
 - environmental issues with regard to water catchment, ecosystems, habitats and waste minimisation
 - erosion control and design principles
 - planning processes for erosion and sediment control

- project and risk management techniques and tools for the management of erosion and sediment control
- soils and soil formation
- earthmoving principles and practices
- subsurface and surface drainage principles and systems
- environmental and biosecurity practices and workplace procedures applicable to managing erosion and sediment control, including licences and permits to implement erosion and sediment control activities
- workplace health and safety requirements applicable to managing erosion and sediment control.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - regulatory planning authority and environmental legislation relevant to erosion and sediment control planning
 - principles and practices of erosion and sediment control management
- specifications:
 - workplace health and safety requirements applicable to managing erosion and sediment control
 - environmental and biosecurity practices and workplace procedures applicable to managing erosion and sediment control
- relationships:
 - landowner, personnel, stakeholders, developer, relevant government and planning authorities, and consent authority
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL507 Develop and manage a plan to reclaim land affected by salinity

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to review the saline area, manage water use and movement, protect and manage natural areas, implement a strategy to reduce salinity, and document a long-term plan to reclaim land affected by salinity.

The unit applies to individuals who apply specialist skills and knowledge to the development and management of a plan to reclaim land affected by salinity, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soils and Media (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review the saline area to increase productivity	<p>1.1 Map the property and determine the type and severity of the salinity</p> <p>1.2 Select, fit and use safety and personal protective equipment applicable to the task being undertaken</p> <p>1.3 Install fencing to subdivide classes of land and salt-affected areas for appropriate management of each area</p> <p>1.4 Assess area for water logging, determine cause and recommend strategies to divert water or drain water from the area</p> <p>1.5 Review and select suitable plant and pasture species and management options available to reclaim saline area</p> <p>1.6 Calculate cost and beneficial returns of reclaiming the area, including financial, environmental and social benefits</p> <p>1.7 Outline reclaimed area management to protect it at vulnerable times of the year and certain times in the plant reproduction cycle</p>
2. Manage water use and movement	<p>2.1 Install fencing to protect the watercourses through the property</p> <p>2.2 Test and modify salinity and pH of the water entering and leaving the property</p> <p>2.3 Calculate water use and establish targets to reduce the quantity by improving irrigation methods and general management practices</p>
3. Protect and manage natural areas	<p>3.1 Plan a strategy to protect the natural area from increased salinity and other stresses</p> <p>3.2 Develop strategies to increase biodiversity</p> <p>3.3 Plan to manage soil structure and fertility to improve soil biota</p> <p>3.4 Identify and document review indicators</p>
4. Implement a strategy to reduce salinity in the area, and document the plan	<p>4.1 Communicate with adjacent property landowners, relevant authorities and community groups to reduce extent and cause of local saline areas by monitoring quality and quantity of water</p> <p>4.2 Monitor and review productivity against current innovations and salinity management techniques</p> <p>4.3 Document long-term plan to reclaim land affected by salinity</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Research current innovations and salinity management techniques

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL507 Develop and manage a plan to reclaim land affected by salinity	AHCSOL504 Develop and manage a plan to reclaim land affected by salinity	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL507 Develop and manage a plan to reclaim land affected by salinity

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed and managed a plan to reclaim land affected by salinity on at least one occasion, and has:

- assessed land forms and soil types
- determined categories of saline land
- assessed the level of degradation and damage through salinity
- identified salinity indicator plant species
- managed the crop and animal selected for the farm to utilise the saline area
- calculated the costs of the project
- calculated benefits of salinity reduction to the property
- taken soil and water samples for testing
- communicated with adjacent property landowners, relevant authorities and community groups
- researched the latest innovations and salinity management techniques
- documented a long-term plan to reclaim land affected by salinity.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for reclaiming land affected by salinity, including:
 - salt tolerant plant and pasture species, and the management of each
 - range of methods for reclaiming saline land
 - strategies to profit from the saline area
 - value of using natural species and natural systems to improve farm production
 - benefits of biodiversity on plant production and the animal enterprise
 - strategic and responsible use of susceptible land

- consequences of poor management or removal of vegetation on the land.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - principles and practices for reclaiming land affected by salinity
 - fencing tools and equipment
 - water sampling and testing tools and equipment
 - safety and personal protective equipment applicable to reclaiming land affected by salinity
 - industry publications and internet sources of information relevant to researching the latest innovations and salinity management techniques
- relationships:
 - adjacent property landowners, relevant authorities and community groups
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSOL508 Manage soils to enhance sustainability

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify and assess soil characteristics, develop and implement a plan to improve the health of soils, and monitor and review results.

The unit applies to individuals who apply specialist skills and knowledge to the management of soils to enhance sustainability, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soils and Media (SOL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify characteristics of regional and local	1.1 Identify common characteristics and limitations of regional and local soils

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
soils to assess their current health	1.2 Refer to paddock assessment to establish soil characteristics 1.3 Research soil biota and its relationship to soil fertility 1.4 Evaluate current production practices and their contribution to land degradation and soil problems 1.5 Identify and select land preparation methods matched to machinery and equipment to maintain and improve soil productivity and structure
2. Develop a plan to improve and maintain the health of soils	2.1 Identify the impact of weather and climate on operational activities, soil structure and fertility, and develop contingency plans to account for climatic or other events 2.2 Compare and interpret soil test analysis with historical data, and incorporate into plan 2.3 Select nutrients to meet specific plant or crop requirements 2.4 Evaluate alternative strategies or products to improve soil fertility 2.5 Develop a soil amendment strategy, including soil ameliorating activities and soil ameliorant products to enhance sustainability of soil health 2.6 Select appropriate production crops suitable for soil type and climate for a land use rotation plan to improve or maintain soil productivity 2.7 Determine soil conservation strategies to minimise soil erosion and increase soil capacity, productivity and sustainability 2.8 Assess the environmental implications of chemical use, and consider and document alternative methods and organic preventive methods 2.9 Develop a strategy to improve and maintain the health of soils 2.10 Develop a strategy to monitor and report soil health and productivity 2.11 Document the soil health and productivity plan, and communicate to stakeholders
3. Implement plan for improvement and maintenance of a healthy soil	3.1 Implement a schedule for soil improvement, taking into account seasonal, geographical and resource factors, and stock or crop rotation 3.2 Implement strategies to integrate methods of soil improvement operations with land use rotation 3.3 Determine key staff responsibilities for specific implementation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	processes, and allocate duties 3.4 Modify plan to meet contingencies, and communicate to staff 3.5 Record and file soil management activities according to workplace procedures
4. Review plan, implementation strategy and the outcomes and determine necessary modifications	4.1 Analyse effectiveness of the soil improvement management plan through evaluation at key points, making adjustments where outcomes fall outside plan projections 4.2 Prepare recommendations for future strategies, based on the analysis of paddock observations and production data, to further enhance soil ecosystem and production

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret textual information regarding common characteristics and limitations of regional and local soils, and soil biota and its relationship to soil fertility relevant to soil health and productivity management and planning
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff and stakeholders using clear language to discuss soil health and productivity plan and communicate modifications to plan
Numeracy	<ul style="list-style-type: none"> Calculate nutrient requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL508 Manage soils to	AHCSOL502 Manage soils to enhance	Performance criteria clarified	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
enhance sustainability	sustainability	Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSOL508 Manage soils to enhance sustainability

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed soils to enhance sustainability on at least one occasion, and has:

- researched information on soils
- assessed soil type, texture and structure in the paddock
- diagnosed areas with soil problems or potential soil problems
- developed, implemented, monitored and evaluated a plan to achieve healthy soils through application of soil science
- diagnosed and interpreted soil sample test results, and determined priorities for improving soil health
- calculated amounts of nutrients required, and prepared a fertiliser program that reflects needs and priorities
- considered and selected alternatives, including organic products and methods for improving soil health
- recorded and filed soil management activities according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- physical, chemical and biological properties of soils
- extent and nature of soil microorganisms
- soil biota types, role in cycling nutrients and improving soil structure
- natural cycling of nutrients, including:
 - carbon
 - nitrogen
 - phosphorous

- the role of soil biota
- factors affecting soil biota, including:
 - moisture
 - temperature
 - aeration
 - nutrient supply
 - pH
 - organic matter
- basic chemistry concepts related to interpreting soil test analysis, including:
 - symbols, elements and compounds
 - valency, anions, cations
 - reactions
 - EC (electrical conductivity)
 - CEC (Cation Exchange Capacity)
 - organic matter
 - pH and its importance in the availability of nutrients
 - role of macronutrients and micronutrients in plant nutrition
 - the concept of limiting factors for production
- basic biology, including:
 - chemical basis of plants and animals
 - basic plant structure and function
- plant nutrition, including:
 - water
 - proteins
 - sugar
 - nitrate
 - lignin content
- potential problems with the use of conventional chemical fertilisers, including:
 - acidification
 - contamination of soil and associated water contamination
 - harm to soil biota
- alternative methods to improve soil fertility, including:
 - products
 - aeration and mulching machinery
- workplace recording and filling procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - workplace recording and filling procedures
- relationships:
 - staff and stakeholders
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSP0309 Process planting seed

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to operate seed processing machinery and equipment to clean, grade, and prepare grains and seeds for planting or further pre-planting treatments.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Seed Processing (SPO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select and prepare for processing of planting seeds and grains	1.1 Determine seed type, location and volume for processing from work plan and storage schedule 1.2 Confirm seed processing requirements and specifications from work plan 1.3 Confirm transfer and storage requirements of pre and post seed

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	processing according to work plan and seed storage schedule
2. Select and prepare seed processing machinery and equipment	2.1 Select, check and use personal protective equipment (PPE) according to workplace health and safety procedures 2.2 Select seed processing machinery and equipment according to work plan 2.3 Prepare seed processing machinery and equipment according to work plan 2.4 Conduct pre-operational checks of machine according to manufacturer specifications, workplace requirements and biosecurity procedures 2.5 Identify work health and safety hazards, assess risk and implement controls 2.6 Calibrate and adjust settings of machinery and equipment to comply with seed processing specifications 2.7 Perform a sample seed run to confirm settings and seed processing performance against specifications according to workplace procedures
3. Operate seed processing machinery and equipment	3.1 Transfer seeds for processing to storage bins and hoppers according to work plan, operator requirements and seed storage schedule 3.2 Use seed processing machinery and equipment safely according to manufacturer operating procedures 3.3 Monitor the performance and efficiency of machinery operation and make adjustments to maintain optimum performance and safety 3.4 Sample and monitor processed seed and make adjustments to machinery to maintain specified quality standards 3.5 Monitor input and output seed storage capacities and implement mitigation procedures to maintain safe and efficient seed storage levels according to workplace procedures and storage schedule
4. Complete seed processing machinery and equipment operation	4.1 Implement seed processing machinery shut-down procedures according to manufacturer specifications and workplace requirements 4.2 Implement operator level maintenance procedures for seed treatment machinery and equipment according to workplace and manufacturer specifications 4.3 Identify and report faults and performance problems of seed processing machinery and equipment according to workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	procedures 4.4 Clean, secure and store seed processing machinery and equipment according to biosecurity requirements and to prevent cross contamination
5. Maintain records and reporting for processed seed	5.1 Update records of processed seeds and grains according to workplace procedures 5.2 Update records of seed storage according to storage schedule and workplace procedures 5.3 Identify and report seed processing and machinery irregularities according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret work plans, seed processing quality specifications, seed processing equipment manufacturer specifications and operator instruction
Oral Communication	<ul style="list-style-type: none"> Use industry language and concepts, and tone and pace appropriate for reporting to supervisor
Numeracy	<ul style="list-style-type: none"> Adjust and calibrate seed processing machinery and equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSPO309 Process planting seed	AHCSPO301 Operate a screen cleaner for seed processing	This unit supersedes the following units: AHCSPO301 Operate a screen cleaner for seed	Not equivalent

		<p>processing</p> <p>AHCSPO302 Operate an indent cylinder</p> <p>AHCSPO303 Operate a gravity table</p> <p>AHCSPO304 Operate seed modification machinery</p> <p>AHCSPO306 Operate specialised seed processing machinery</p>	
AHCSPO309 Process planting seed	AHCSPO302 Operate an indent cylinder	<p>This unit supersedes the following units:</p> <p>AHCSPO301 Operate a screen cleaner for seed processing</p> <p>AHCSPO302 Operate an indent cylinder</p> <p>AHCSPO303 Operate a gravity table</p> <p>AHCSPO304 Operate seed modification machinery</p> <p>AHCSPO306 Operate specialised seed processing machinery</p>	Not equivalent
AHCSPO309 Process planting seed	AHCSPO303 Operate a gravity table	<p>This unit supersedes the following units:</p> <p>AHCSPO301 Operate a screen cleaner for seed processing</p> <p>AHCSPO302 Operate an indent cylinder</p> <p>AHCSPO303 Operate a gravity table</p> <p>AHCSPO304 Operate seed modification machinery</p> <p>AHCSPO306 Operate specialised seed</p>	Not equivalent

		processing machinery	
AHCSPO309 Process planting seed	AHCSPO304 Operate seed modification machinery	<p>This unit supersedes the following units:</p> <p>AHCSPO301 Operate a screen cleaner for seed processing</p> <p>AHCSPO302 Operate an indent cylinder</p> <p>AHCSPO303 Operate a gravity table</p> <p>AHCSPO304 Operate seed modification machinery</p> <p>AHCSPO306 Operate specialised seed processing machinery</p>	Not equivalent
AHCSPO309 Process planting seed	AHCSPO306 Operate specialised seed processing machinery	<p>This unit supersedes the following units:</p> <p>AHCSPO301 Operate a screen cleaner for seed processing</p> <p>AHCSPO302 Operate an indent cylinder</p> <p>AHCSPO303 Operate a gravity table</p> <p>AHCSPO304 Operate seed modification machinery</p> <p>AHCSPO306 Operate specialised seed processing machinery</p>	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSPO309 Process planting seed

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion processed planting seed or grains according to a defined quality specification and must include at least 3 of the following processes:

- separated seed from impurities and contaminants
- graded seed by size
- graded seed by weight/density
- graded seed by deformity
- graded seed by colour
- modified seed

There must also be evidence that the individual has:

- identified seed, location and volume requiring processing
- coordinated access and storage of seeds with seed storage schedule
- selected, set up and prepared seed processing machinery and equipment
- fitted and used PPE
- operated seed processing machinery safely within manufacturer specifications and identified irregularities
- complied with biosecurity guidelines to prevent cross contamination
- monitored seed processing and implemented mitigation procedures to maintain quality
- maintained safe and efficient seed storage during processing
- shut down, cleaned and maintained seed processing equipment
- maintained records and reporting according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic understanding of seed biology in relation to viability and seed cleaning processes

- principles and practices for operating seed processing machinery, including:
 - safety equipment and safe operation of machinery
 - operator servicing and maintenance
 - calibration and settings for quality outcomes of different seed and grain types
- the basic principles of seed processing equipment, their operation and effects on seeds, including:
 - screen cleaners
 - indent cylinder
 - gravity tables
 - airlegs and winnowers
 - seed modification machinery for de-awners, clippers and scarifiers
 - optical/colour sorters
 - floatation tanks
 - magnetic rollers
 - dryers
 - spirals
 - velvet rollers
- workplace health and safety in the seed treatment process, including personal protective equipment (PPE)
- basics of programmable logic controller/treatment control systems and electrical process for seed processing equipment
- operation and maintenance of seed processing machinery
- seed storage requirements and scheduling during seed processing
- biosecurity and cross contamination during seed processing
- seed and grain quality standards affecting seed processing, equipment setup and monitoring
- record keeping and reporting procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a seed processing plant, a farm or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seed processing machinery and equipment
 - tools and equipment for calibration and adjustments
 - use of specific items of personal protective equipment
- specifications:
 - workplace procedures

- manufacturer operating instructions for equipment
- workplace instructions and specifications
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSP0310 Treat planting seed

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to apply a range of treatments to planting seed using specialised seed treatment machinery and equipment.

The unit applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Seed Processing (SPO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select and prepare for treatment of planting seeds and grains	1.1 Determine seed type, location and volume for treatment according to work plan and storage schedule 1.2 Confirm seed treatment requirements and specifications from work plan 1.3 Confirm seed is in a suitable pre-treatment condition according to specifications

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Confirm transfer and storage requirements of pre and post seed treatment according to work plan and seed storage schedule 1.5 Select and prepare seed treatment materials and consumables according to workplace procedures and treatment specifications
2. Select and prepare seed treatment machinery and equipment for use	2.1 Identify and ready seed processing machinery and equipment according to work plan 2.2 Conduct pre-operational checks on machine according to manufacturer specifications, workplace requirements and biosecurity procedures 2.3 Identify work health and safety hazards, assess risk and implement controls 2.4 Calibrate and adjust settings of machinery and equipment to comply with seed processing specifications 2.5 Charge machinery with treatments according to workplace procedures and manufacturer instructions 2.6 Perform a sample seed treatment run to confirm settings and seed treatment performance against specifications according to workplace procedures
3. Operate seed treatment machinery and equipment	3.1 Select, check and use personal protective equipment (PPE) according to workplace health and safety procedures 3.2 Transfer seeds for treatment to storage bins and hoppers according to work plan, operator requirements and seed storage schedule 3.3 Commence usage of seed treatment machinery and equipment safely according to manufacturer operating procedures 3.4 Monitor the performance and efficiency of machinery operation and make adjustments to maintain optimum treatment performance and safety 3.5 Sample and monitor treated seed and make adjustments to machinery to maintain specified quality standards 3.6 Monitor input and output seed storage capacities and implement mitigation procedures to maintain safe and efficient seed storage levels
4. Complete and report on seed treatment machinery and	4.1 Implement seed treatment machinery shut-down procedures to manufacturer specifications and workplace requirements 4.2 Implement operator level maintenance procedures for seed

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
equipment operation	<p>treatment machinery and equipment according to workplace and manufacturer requirements</p> <p>4.3 Identify and report faults and performance problems of seed treatment machinery and equipment according to workplace procedures</p> <p>4.4 Clean, secure and store seed treatment machinery and equipment according to workplace and environmental procedures</p> <p>4.5 Retrieve and store unused treatment materials and consumables and store/dispose according to workplace and environmental procedures</p>
5. Maintain records and reporting for treated seed	<p>5.1 Update records of treated seeds and grains according to workplace procedures</p> <p>5.2 Update records of treated seed storage according to storage schedule and workplace procedures</p> <p>5.3 Identify and report seed treatment and machinery irregularities according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret work plans, manufacturer specifications and operator instruction for using a screen cleaner for seed
Oral communication	<ul style="list-style-type: none"> Use industry language and concepts, and tone and pace appropriate for reporting to supervisor
Numeracy	<ul style="list-style-type: none"> Calculate volumes and ratios relevant to the preparation of treatments for seed and the calibration of equipment for application of treatments

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSPO310 Treat planting seed	AHCSPO305 Operate seed treatment machinery	Change to title. Major changes and additions to Elements, and Performance Criteria. Foundation skills refined Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSPO310 Treat planting seed

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion treated seed using seed treatment machinery and equipment and has:

- prepared the seed resources and machinery for treatment
- set up and prepared seed treatment machinery
- calculated, calibrated and measured dose rates
- formulated chemical mix to achieve treatment goals according to specifications
- maintained safe and efficient seed storage during processing
- fitted and used PPE
- operated seed treatment machinery and equipment safely, efficiently and according to manufacturer specifications
- cleaned and stored machinery, equipment according to workplace, and environmental procedures
- maintained and reported seed treatment operations according to workplace procedures
- updated records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for operating seed treatment machinery, including:
 - basics of programmable logic controller/treatment control systems and electrical process
 - drying, scalping and aspiration of treated seed
 - expectations and limitations of different types of seed coating machines
 - interaction of biological components and their effect on other chemicals, powders, polymers and heat
 - use and differences in biological components in seed coatings

- types of seed treatment machinery and equipment
- seed treatments their purpose and application, including:
 - chemical types and classes
 - difference between coating and pelleting which includes <5% weight gain film coating (insecticide/fungicide) or >5% weight gain is pelleting
 - disposal of waste chemical
 - hazards of chemicals
 - labelling requirements associated with coated seed
 - methods of applying chemical and basic recipe formula
 - methods of applying powders
- workplace health and safety considerations in the seed treatment process, including personal protective equipment (PPE)
- rules and regulations for storage, transportation and bunding.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a seed processing plant, a farm or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seed treatment machinery
 - seed treatment consumables, materials and chemicals
 - tools and equipment for calibration and adjustments
 - use of personal protective equipment
- specifications:
 - workplace procedures
 - manufacturer operating instructions for equipment
 - workplace instructions and specifications
 - safety data sheets (SDS)
- relationships:
 - supervisor

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSP0311 Handle, package and store commercial quantities of seed

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to store and handle processed seed and all methods of transfer of the product from grading to packaging and storage.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Seed Processing (SPO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select and prepare seed packaging and labelling machinery and equipment for use	1.1 Identify and ready seed transferring, storing, packaging and labelling machinery and equipment according to job requirements and confirm against work plan 1.2 Complete routine pre-operational checks of the machine according

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>to manufacturer specifications and workplace requirements</p> <p>1.3 Check information for labelling against work orders and job descriptions</p> <p>1.4 Report machine performance, efficiency and irregularities to supervisor</p> <p>1.5 Identify work health and safety hazards, assess risks and implement controls according to workplace health and safety policies</p>
2. Operate seed transferring, storing, packaging and labelling machinery and equipment	<p>2.1 Operate machinery and equipment in a safe and controlled manner and monitor for performance and efficiency</p> <p>2.2 Identify risks to the environment and implement and report mitigation action</p> <p>2.3 Select, use, maintain and store personal protective equipment (PPE)</p>
3. Complete and report on seed transferring, storing, packaging and labelling machinery and equipment operation	<p>3.1 Complete shut-down procedures according to manufacturer specifications and workplace requirements</p> <p>3.2 Complete and maintain operational records according to workplace procedures</p> <p>3.3 Report malfunctions, faults and observation of irregular performance of equipment</p> <p>3.4 Clean, secure and store machinery and equipment</p>
4. Move and store packaged seed	<p>4.1 Handle and load packaged seed onto pallets ready for moving and storage</p> <p>4.2 Store and retrieve packaged seed</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret work plans, manufacturer specifications and operator instruction for using seed packaging equipment

Skill	Description
Writing	<ul style="list-style-type: none"> Prepare labels with accurate information according to workplace labelling requirements
Oral Communication	<ul style="list-style-type: none"> Use industry language and concepts, and tone and pace appropriate for reporting to supervisor
Numeracy	<ul style="list-style-type: none"> Calculate weights and measures to ensure packaged seed complies with quantities specified in job requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSPO311 Handle, package and store commercial quantities of seed	AHCSPO307 Handle, package and store commercial quantities of seed	<p>Edited Application and Performance Criteria for clarity</p> <p>Foundation skills refined</p> <p>Performance Evidence and Knowledge Evidence clarified</p> <p>Amended structure of Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSP0311 Handle, package and store commercial quantities of seed

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has on at least one occasion handled, packaged and stored commercial quantities of seed and has:

- packaged seed which must include:
 - prepared packaging equipment
 - prepared packaging
 - operated packaging and labelling machinery
 - operated label printers and label and apply stickers and labels
 - operated industrial sewing machines
 - sealed seed packages
 - labelled and stencilled seed containers
- handled packed seed which must include:
 - moved and stored packaged seed
 - operated a pallet wrapper to shrink wrap palletised seed
 - operated bag and pallet transportation systems
 - operated bulk seed transportation equipment
 - operated palletising equipment
- performed basic machinery maintenance
- selected, used and maintained personal protective equipment (PPE)
- identified work health and safety hazards, assess risks and implemented controls
- moved and stored and retrieved seed
- set up and prepare machinery for use.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for handling commercial quantities of seed, including:
 - types of packaging
 - seed packaging methods and equipment and
 - methods for sealing bags
 - regulations and legislation for labelling of packaged seed
 - chemical warnings and seed details required on packages
 - labelling requirements and equipment
- bulk seed storage and planning storage of raw and packaged materials, including:
 - controlled environment
 - pest control and contamination
 - segregation of seed types and grades
- types of machinery, operation and safety, including:
 - basic equipment preparation and maintenance
 - packaged product transport and storage
 - relevant manufacturer specifications
- workplace health and safety policies and procedures, including:
 - confined space and working at heights
 - handling of chemically treated seed
 - manual handling techniques
 - implications of packaging operations on the natural environment and risk mitigation.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a seed processing plant, a farm or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - seed packaging machinery including palletiser
 - seed to package
 - seed labelling and packaging consumables
 - tools and equipment for adjustments
 - personal protective equipment (PPE)
- specifications:
 - workplace procedures
 - manufacturer operating instructions for equipment

- workplace instructions and specifications
- relationships:
 - supervisor(s).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
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AHCSP0312 Sample seed before and after processing

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to sample seed on arrival at a processing plant and following processing for quality and certification purposes.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

Seed to be processed for Certification must be sampled by Authorised Sampler in accordance with International, Federal and State seed certification regulations.

Pre-requisite Unit

Nil

Unit Sector

Seed Processing (SPO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Sample seed before cleaning or processing	1.1 Prepare the seed lot for sampling according to job requirements and relevant federal and state agencies overseeing seed movement and sampling standards 1.2 Follow workplace health and safety standards, including fitting and using personal protective equipment (PPE) 1.3 Select sampling equipment according to type of seed and job

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.4 Inspect samples visually for contaminants and biosecurity risk 1.5 Record or report results of sampling 1.6 Direct seed load for storage according to workplace procedures 1.7 Label, record and store seed samples
2. Sample seed after processing	2.1 Prepare the seed lot for sampling according to job requirements 2.2 Select sampling equipment according to type of seed and job requirements 2.3 Take samples according to specified sampling techniques 2.4 Batch and label samples according to industry standards and workplace procedures 2.5 Package samples with accompanying labelling and forward for testing according to workplace and laboratory procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Maintain accurate records and ensure labels are accurately marked with required details
Numeracy	<ul style="list-style-type: none"> Calculate, weigh and measure samples of seed according to specifications for seed type

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSP0312 Sample seed before and after	AHCSP0308 Sample seed before and after	Edited Application for clarity	Equivalent

processing	processing	Minor changes to Performance Criteria for clarity Foundation Skills refined Performance Evidence and Knowledge Evidence clarified Amended structure of Assessment Conditions	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSP0312 Sample seed before and after processing

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has sampled seed using industry and workplace sampling methods on at least one occasion for the following situations:

- graded and/or treated seed
- delivery truck on arrival at a processing plant/farm
- bulk containers and/or sacks

In doing so, there must be evidence that the individual has:

- completed sampling documentation including packaged and labelled seed samples and prepared samples for despatch
- recognised common weed seeds and other seed contaminants in sample
- recorded workplace information for seed samples
- selected sampling equipment for a representative sample according to workplace procedures and certification authority
- collected seed samples for testing by other agencies according to their specifications and procedures
- completed record and labels accurately according to specifications
- used tools for sampling and prepared a sample for despatch
- followed workplace health and safety standards, including fitted and used personal protective equipment (PPE).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of seed sampling, including:
 - purpose and correct methods of sampling
 - workplace records and other documentation

- seed handling and the importance of seed moisture content in seed samples
- recognised seed/grain types, including contaminating seed and biosecurity threats
- seed sampling protocols required by farm and/or agencies
- federal and state agencies overseeing seed movement in Australia and sampling standards, including:
 - federal and state quarantine and biosecurity regulators
 - Organisation for Economic Co-operation and Development (OECD)
 - Association of Official Seed Certifying Agencies (AOSCA)
 - other certification agencies
- workplace health and safety when sampling seed, including:
 - personal protective equipment used for sampling treated seed
 - working in confined spaces
 - safety barriers
 - working at heights.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a seed processing plant, a farm or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - bulk unprocessed seed
 - bulk processed seed
 - seed sampling equipment
 - seed record keeping and labelling resources
 - personal protective equipment
- specifications:
 - seed sampling procedures and standards
 - manufacturer operating instructions for equipment
 - workplace instructions and specifications
- relationships:
 - supervisor(s).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTHH401 Develop a therapeutic horticulture design brief

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to develop a therapeutic horticulture (TH) design brief. It includes undertaking research, identifying client requirements, determining the **therapeutic horticulture benefits of plant species**, potential site and materials, and documenting a design brief.

The unit applies to individuals who apply specialist skills and knowledge to develop a therapeutic horticulture design brief. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Therapeutic Horticulture (THH)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Undertake therapeutic horticulture research	1.1 Determine research strategies and sources of information 1.2 Research and investigate latest developments in TH principles and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	practices 1.3 Analyse the health benefits of TH for individuals and stakeholder groups
2. Identify client requirements	2.1 Identify and clarify the needs and requirements of client and end user 2.2 Conduct risk assessment based on client brief and regulatory requirements 2.3 Determine existing client resources and budgetary constraints 2.4 Communicate information on health benefits of TH to clients 2.5 Determine potential of site for TH project 2.6 Determine specific applications of TH principles and practices related to client resources, needs and requirements
3. Determine therapeutic horticulture benefits of plant species	3.1 Research plant growth and performance characteristics, using authoritative sources 3.2 Obtain and compare plant samples or images to plants 3.3 Use problem-solving techniques to compare, assess and evaluate therapeutic horticulture benefits of plants 3.4 Determine best choice of plants for specific TH applications based on reasoned argument, evidence, sound principles, client and end user needs 3.5 Record TH benefits and recommendations
4. Determine therapeutic benefits of potential site and materials	4.1 Research tactile and sensory characteristics of landscape materials 4.2 Analyse potential site for orientation, aspect, borrowed landscape hazards, opportunities and amenities 4.3 Document and present design brief to client

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding TH principles and practices, and their health benefits for individuals and stakeholder groups
Oral communication	<ul style="list-style-type: none"> Initiate discussions with client, using clear language to discuss and establish design purpose, conduct risk assessment, and present design brief

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTHH401 Develop a therapeutic horticulture design brief	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTHH401 Develop a therapeutic horticulture design brief

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed a therapeutic horticulture (TH) design brief on at least one occasion, and has:

- researched, interpreted and applied information relevant to TH principles and practices
- consulted with clients
- conducted risk assessment
- interpreted and applied local council, legislative and regulatory requirements relevant to TH design
- assessed site
- documented and presented TH design brief.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- local council, legislative and regulatory requirements relevant to TH design
- principles and practices of TH, including:
 - sources of information and resources relevant to TH principles and practices
 - health and wellbeing benefits of TH
 - TH activities relevant to individual and stakeholder groups
 - communication strategies to promote TH
 - interpreting client project requirements
 - client consultation strategies
 - risk assessment
 - site assessment techniques
 - project timelines, scope and reports.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - site plans, client brief
 - software and hardware to source and document information
- specifications:
 - local council, legislative and regulatory requirements applicable to TH design
- relationships:
 - clients
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF102 Support turf work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to assist with turf maintenance and growing activities to industry standards and deadlines for the green keeping and turf production industry.

The unit applies to individuals who maintain turf under direct supervision in most situations and exercise limited autonomy within established and well-known parameters. They identify and seek help with simple problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare materials, tools and equipment for turf work	1.1 Confirm work activity and identify resources required with supervisor 1.2 Check availability and serviceability of materials, tools and equipment, and report problems and faults to supervisor 1.3 Identify workplace health and safety hazards, and report to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	supervisor 1.4 Load and unload materials according to workplace health and safety procedures 1.5 Select, check and use personal protective equipment according to work health and safety requirements
2. Undertake turf work as directed	2.1 Follow supervisor instructions and directions and seek clarification when unclear of activity 2.2 Interact with team members and turf users in a professional manner 2.3 Use tools and equipment safely according to supervisor instructions 2.4 Handle and dispose of materials according to workplace policies, procedures and practices 2.5 Report problems or difficulties for complying with standards or work timelines
3. Handle materials and equipment	3.1 Store plant debris and waste material produced during turf work 3.2 Handle and transport materials, equipment and machinery according to workplace health and safety procedures 3.3 Maintain a clean and safe work site while completing turf activities
4. Clean up on completion of turf work	4.1 Store or dispose of materials according to supervisor instructions 4.2 Clean, maintain and store tools and equipment 4.3 Report work outcomes to supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> • Use active listening techniques to obtain information • Use industry terminology when communicating with team

Skill	Description
	members

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF102 Support turf work	AHCTRF101 Support turf work	Performance criteria clarified Foundation skill added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF102 Support turf work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, supported others in turf work according to workplace procedures, including:

- confirmed instructions and prepared materials, tools and equipment ready for turf work
- used tools and equipment and assisted with turf work according to supervisor instructions
- handled materials and equipment safely while completing turf activities
- cleaned up and stored equipment on completion of turf work
- disposed of waste materials according to workplace procedures
- reported work outcomes to their supervisor.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- safe operation and storage of turf machinery and equipment, including:
 - cylinder, rotary and electrical mowers and mowing patterns
 - mower settings for required turf surface
 - cultivation hand tools, including rakes and spades
 - whipper snippers
 - lawn edgers
 - wheelbarrow
 - level lawn and screed
 - powered blowers
 - self-propelled mowers
 - walk-behind mowers and rollers
 - marking out equipment, including string lines, tape measures, pegs and frames
- safe work practices required for turf work sites, including:

- personal protection
- machine operator safety
- materials handling
- hazard identification and reporting
- turf and facility maintenance requirements and practices, including:
 - mowing
- enterprise procedures for disposing of turf waste, including:
 - methods of disposal
 - impact of waste disposal on the environment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports turf facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - basic machinery including cylinder mowers, rotary mowers and rotary hoe
 - hand tools and equipment for turf cultivation
 - personal protective equipment
- specifications:
 - workplace procedures and instructions for turf work
- relationships:
 - team members and supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF201 Assist with turf construction

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to support workers in a team who are constructing soil profiles for the establishment of turf.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for soil profile construction	1.1 Locate services using site and construction plans and in consultation with the supervisor 1.2 Identify work health and safety hazards, assess and report risks 1.3 Select suitable safety equipment for the soil profile construction program

Element	Performance criteria
	1.4 Prepare the construction site according to the construction plan
2. Prepare equipment for soil profile construction	2.1 Select construction tools, equipment and machinery 2.2 Carry out pre-operational and safety checks on tools, equipment and machinery 2.3 Select, use and maintain suitable personal protective equipment (PPE)
3. Undertake soil profile construction	3.1 Grade and consolidate the base to the specified level and on a consistent slope to achieve uniform compaction over the site 3.2 Dig trench lines to the specified depth, width and fall, with all superfluous material evacuated and stored safely
4. Restore the site after drainage and irrigation installation	4.1 Back fill trenches with specified construction materials, consolidate and level 4.2 Level the site as each layer of the soil profile is installed 4.3 Water the site thoroughly on completion 4.4 Remove and dispose of waste material from the site 4.5 Clean, maintain and store tools, equipment and machinery 4.6 Maintain a clean and safe area 4.7 Record or report work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCTRF201A Assist with turf construction.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF201 Assist with turf construction

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- clean, maintain and store turf construction machinery and equipment
- follow procedures and sequence work during the course of the construction
- use a range of turf construction machinery and equipment
- work in a team on a turf construction project

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of turf construction
 - different soil preparations for construction
 - effective and safe use of tools and machinery
 - influences on the selection of tools, machinery and safety equipment
 - irrigation and/or drainage installation procedures and operational techniques
 - purpose of turf construction in maintaining turf presentation
 - relationship between a well-constructed soil profile for the quality and appearance of the turf

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF202 Prepare turf surfaces for play

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare sports turf surfaces for play.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare the site to be mown	1.1 Locate services affecting the turf surface using site plans 1.2 Identify permanent obstacles and work health and safety hazards, assess risks and implement controls 1.3 Remove and replace obstacles before and after mowing 1.4 Report abnormal conditions or changes in the appearance of the

Element	Performance criteria
	site
2. Prepare equipment for mowing	2.1 Select appropriate tools, equipment and machinery 2.2 Calibrate the mower and adjust to height according to the manufacturer's guidelines 2.3 Complete pre-operational checks of tools, equipment and machinery 2.4 Select, use and maintain suitable personal protective equipment (PPE) 2.5 Erect suitable safety warning notices during work periods
3. Mow playing surface	3.1 Assess grass appearance and report changes in appearance 3.2 Match the mower to any implement attached to it 3.3 Maintain continuous oversight of mowing activities
4. Undertake final preparation of playing surface	4.1 Select appropriate line marking tools 4.2 Measure lengths and angles to locate markers and match play equipment 4.3 Complete marking out for to the intended playing surface use 4.4 Place markers and play equipment where necessary 4.5 Record or report work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCTRF202A Prepare turf surfaces for play.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF202 Prepare turf surfaces for play

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine the condition of the existing surface with advice from senior greenkeepers for subsequent routine preparations, treatments and turf cultural practices
- prepare a turf surface or sports playing field according to the rules of the game
- use turf surface preparation machinery and equipment safely according to manufacturer's specifications to achieve the desired playing surface outcome

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of turf preparation for play
 - competition playing requirements affecting preparation of the turf surface
 - effect of adverse outdoor climatic conditions
 - effective and safe use of tools and machinery
 - high performance uses of turf surfaces
 - irrigation and drainage system design and operational techniques
 - potential public nature of turf renovation work sites
 - purpose of turf surface preparation in maintaining turf presentation
 - various requirements of turf species and their cultural requirements

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF203 Renovate grassed areas

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to undertake basic seasonal renovation practices to restore turf health and condition on a range of grassed areas.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare turf area for renovation	1.1 Locate services using site and construction plans 1.2 Identify work health and safety hazards 1.3 Select suitable safety equipment for the turf renovation program 1.4 Identify and report the environmental implications of the turf renovation program

Element	Performance criteria
	1.5 Carry out preparation of turf area
2. Prepare equipment for turf renovation	2.1 Select appropriate hand tools and renovation machinery 2.2 Carry out pre-operational and safety checks on hand tools and renovation machinery 2.3 Select, use and maintain suitable personal protective equipment (PPE)
3. Undertake turf renovation	3.1 Erect safety barriers around trench lines, holes and other disturbed surfaces during and between work periods 3.2 Use correct manual handling techniques when lifting or moving heavy loads 3.3 Operate turf renovation tools and machinery safely and effectively
4. Complete turf renovation	4.1 Dispose of plant debris and waste material removed from the site in an environmentally aware and safe manner 4.2 Clean, maintain and store tools and machinery 4.3 Maintain a clean and safe area throughout and on completion of work 4.4 Record work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCTRF203A Renovate grassed areas.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF203 Renovate grassed areas

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- establish the purpose of turf renovation programs in maintaining turf presentation, particularly in relation to the end use of the turf
- record turf maintenance activities as required by the enterprise
- transport, clean and store turf renovation machinery and equipment
- use turf renovation machinery and equipment to restore turf health and condition

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of grass area renovation
 - different soil preparations for renovation
 - effect of adverse outdoor climatic conditions
 - effective and safe use of tools and machinery
 - hazards and responsibilities working near public access
 - influences on the selection of tools, machinery and safety equipment
 - potential public nature of turf renovation work sites

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF204 Support turf establishment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to establish turf by seed, sod or other methods.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to establish a planted area	1.1 Select materials, tools, equipment and machinery for planting 1.2 Carry out pre-operational and safety checks on tools, equipment and machinery 1.3 Identify the environmental implications of the turf establishment program

Element	Performance criteria
2. Prepare the planting area	2.1 Determine layout of services before undertaking earthworks 2.2 Control existing weeds 2.3 Check soil for moisture, tilth, compactness, depth and organic matter 2.4 Apply soil additives as instructed 2.5 Rake the surface evenly to achieve a consistent surface and level as required 2.6 Water the planting site 2.7 Remove and disposed of debris and rubbish
3. Plant turf	3.1 Inspect turf plant material before planting and discard material with defects 3.2 Ensure seed is evenly distributed over the whole planting area with no overlap or areas missed 3.3 Rake surface evenly and water thoroughly 3.4 Position sods and roll evenly onto a moist surface 3.5 Water newly laid turf thoroughly to encourage establishment
4. Provide post-planting care	4.1 Protect the site from animals, pedestrian and vehicular traffic 4.2 Roll the site evenly and efficiently with no disturbance 4.3 Mow turf according to a specified pattern and height 4.4 Apply top dressing evenly to the required depth over the whole area and is work or rub into the surface 4.5 Water dry or under-watered plants 4.6 Check watering patterns for dry spots
5. Complete establishment of the planted area	5.1 Remove and dispose of waste material 5.2 Clean, maintain and store tools, equipment and machinery 5.3 Maintain a clean and safe work area throughout and on completion of work 5.4 Record and report work outcomes to the supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCTRF204A Support turf establishment.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF204 Support turf establishment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- erect safety equipment
- follow procedures and sequence work during the course of the growing-in period
- handle manual loads correctly
- transport, clean and maintain and store turf establishment machinery and equipment
- use turf establishment machinery and equipment

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practice for supporting turf establishment
 - different soil preparations for establishment
 - effective and safe use of tools and machinery
 - requirements of turf species and their cultural requirements

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF205 Assist in the preparation of turf surfaces for play

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare sports turf surfaces for play.

The unit applies to individuals who prepare sports turf surfaces for play and undertake defined routine activities under supervision. They exercise limited autonomy within established and well-known parameters, providing solutions to a limited range of predictable problems.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare the site for sports turf preparation activities	1.1 Confirm sports turf set-up plan and work activity with supervisor 1.2 Identify workplace health, safety and environmental hazards, and assess risks and implement controls 1.3 Check the site condition and report irregularities to supervisor
2. Collect equipment required for sports turf	2.1 Select, ensure serviceability of, fit and use personal protective

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
preparation	<p>equipment</p> <p>2.2 Select and check tools and equipment and rectify or report faults to supervisor</p> <p>2.3 Carry out pre-start checks according to supervisor instructions</p> <p>2.4 Transport equipment safely to site according to regulatory requirements</p> <p>2.5 Identify and manage permanent and temporary obstacles according to workplace set-up procedures</p> <p>2.6 Follow site safety requirements and monitor and direct sports users</p>
3. Use equipment to prepare turf grass playing surface	<p>3.1 Check equipment and attachments to ensure fit and adjustments according to set-up plan and operator instructions</p> <p>3.2 Operate equipment in a consistent and uniform manner</p> <p>3.3 Collect and dispose of waste materials according to workplace and environmental procedures</p>
4. Mark out playing surface for play	<p>4.1 Select and check turf surface marking tools and equipment, and report faults according to workplace procedures</p> <p>4.2 Locate lines, markers and match play equipment according to set-up plan, rules and regulations of intended sport</p> <p>4.3 Place lines, markers and match play equipment according to set-up plan and intended sport, and to reduce wear on playing surface</p> <p>4.4 Conduct preparation and marking-out activities within the timeframe of the sports event schedule and set-up plan</p> <p>4.5 Maintain continuous oversight of turf preparation activities, and report any irregularities to supervisor</p> <p>4.6 Report work outcomes to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Interpret turf set-up plan to identify key information for preparing turf surfaces according to rules of sport
Oral communication	<ul style="list-style-type: none"> Use appropriate terminology to communicate and clarify work requirements with supervisor

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF205 Assist in the preparation of turf surfaces for play	AHCTRF202 Prepare turf surfaces for play	<p>Title changed</p> <p>Elements and performance criteria clarified</p> <p>Foundation skill added</p> <p>Performance evidence, knowledge evidence and assessment conditions expanded</p>	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF205 Assist in the preparation of turf surfaces for play

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared turf surfaces for play on at least one of the following types of sports turf surface:

- a golf course
- a lawn bowling green
- a cricket ground
- a sporting field
- a horse race track.

There must also be evidence that the individual has:

- identified safety hazards and risks and implemented controls to ensure personal and users' safety when performing work
- selected, checked, adjusted, transported and operated equipment on the turf site safely
- assessed turf condition and confirmed preparation requirements against set-up plan, and reported changed conditions to supervisor
- prepared a consistent and uniform sports turf playing surface according to the rules and regulations of the game
- collected and disposed of waste
- selected, checked and used marking-out equipment, materials and procedures to accurately lay out a sports turf play surface
- reported work outcomes, faults and irregularities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of turf preparation for play, including:

- effect of adverse climatic conditions on turf preparation
- the use of turf in high performance sport environments
- purpose of turf surface preparation in maintaining turf presentation
- various cultural requirements of turf grass species
- biological factors of turf grass species affected by turf preparation activities, including:
 - moving golf holes
 - reasons for moving markers
 - height of cut for grass species and sport
 - effect of rollers on compaction and turf growth
 - effect of mower cutting type
- assessment of turf grass condition when reporting irregularities to supervisor prior, including:
 - colour and length of sward in relation to turf health
 - set-up equipment requirements and selection criteria
- conducting mowing operations, including:
 - ensuring uniform cut
 - maintaining a consistent pattern
 - implications of repetitive activity on equipment wear and tear and grain, and the need to vary direction of cut
- marking out sports turf surfaces for play, including:
 - preparation and use of tools and equipment for marking out
 - line marking methods for sports turf surfaces
 - basic calculations for line marking
 - rules and regulations for marking and layout of sports turf surfaces
- markers and other sports turf match play requirements, including:
 - holes
 - tee markers
 - out of bounds markers
- water and its effect on sports play, preparation activities, and how to rectify, including:
 - soil water requirements
 - turf surface water condition, including dew and rain
 - effect on play condition
 - water and dew removal techniques
- work health and safety hazards, risks and controls when preparing turf surfaces for play, including:
 - rapid risk assessment for safety of self, the community and the environment
 - safe transport of equipment to site
 - legal requirements when transporting equipment on public roads
- maintaining a safe work site, including:
 - safety barriers

- signage and notifications
- managing pedestrian user traffic flow
- obstacles affecting sports turf set-up, and methods for managing them during preparation activities, including:
 - permanent obstacles
 - temporary obstacles
 - identifying hazards to players and playing conditions
- adjustment and safe use of equipment commonly used for preparation of sports turf, including:
 - mowers and height adjustments
 - sports turf edgers
 - rollers
 - water soppers and blowers
 - line marking equipment
- equipment checks, including:
 - electrical cords
 - checking and testing procedures
 - identifying, tagging and reporting faulty equipment
 - pre-start checks
 - post-work checks
 - fault reporting procedures
- waste materials disposal procedures and environmental considerations
- record keeping requirements and their purpose.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports turf facility or an environment that accurately represents workplace conditions in which to demonstrate the preparation and layout of at least one type of sports turf surface specified in the performance evidence
- resources, equipment and materials:
 - turf set-up equipment, including cylinder and rotary mowers, edger, roller and marking-out materials and equipment
 - measuring and layout equipment, including tape measures and string lines
- specifications:
 - workplace procedures and instructions for turf preparation
 - set-up plan for a specific sports playing surface
- relationships:
 - supervisor
- timeframe:

- sports turf play schedule.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF206 Assist with turf construction

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to assist in the construction of soil profiles for the establishment of a turf surface.

The unit applies to individuals who support turf construction and undertake defined routine activities under supervision. They exercise limited autonomy within established and well-known parameters, providing solutions to a limited range of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for soil profile construction	1.1 Interpret site and construction plans to locate services in consultation with the supervisor 1.2 Identify workplace health, safety and environmental hazards, assess risks and implement controls in consultation with supervisor 1.3 Select safety equipment, signage and barriers required according to the construction plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Install safety equipment to ensure construction site is secure
2. Prepare equipment for soil profile construction	<p>2.1 Select tools, equipment and machinery according to construction project requirements</p> <p>2.2 Carry out pre-operational and safety checks on tools, equipment and machinery</p> <p>2.3 Report faulty or defective equipment and machinery according to workplace procedures</p> <p>2.4 Select, ensure serviceability of, fit and use personal protective equipment</p>
3. Undertake soil profile construction	<p>3.1 Interpret site construction plan to establish grades, levels and boundaries of works</p> <p>3.2 Use basic survey equipment to assist construction team to mark out and define grades, levels and boundaries</p> <p>3.3 Use hand tools and machinery to grade and consolidate the base according to specifications</p> <p>3.4 Excavate drainage and irrigation trenches to depth, width and fall specified in the construction plan</p> <p>3.5 Remove and store excavated material safely according to construction plan specifications</p>
4. Restore the site after drainage and irrigation installation	<p>4.1 Back fill trenches, consolidate and level the site to construction plan specifications</p> <p>4.2 Restore the soil profile, maintaining levels of each layer</p> <p>4.3 Irrigate the restored site according to soil profile requirements</p> <p>4.4 Collect and dispose of waste material from the site</p>
5. Clean and store equipment and machinery	<p>5.1 Clean and maintain tools, equipment and machinery according to workplace procedures</p> <p>5.2 Collect and store tools, equipment, machinery and unused materials</p> <p>5.3 Report work outcomes to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret construction plans to identify key information, including symbols and text
Oral communication	<ul style="list-style-type: none"> Use open and closed questions logically to clarify work instructions Use industry terminology to communicate with team members
Numeracy	<ul style="list-style-type: none"> Estimate and calculate distance, area, volume and ratio

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF206 Assist with turf construction	AHCTRF201 Assist with turf construction	Element 5 added Performance criteria added to elements 2 and 3 Performance criteria clarified Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF206 Assist with turf construction

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, assisted in the construction of a turf surface project using a construction plan, including:

- assisted in locating services and established construction site grades, levels and boundaries from the plan
- used basic survey equipment and assisted with the layout of construction grades, levels and boundaries
- selected and checked machinery and equipment required to perform levelling, grading, excavation and consolidation
- reported faults and defects in machinery and equipment
- safely used tools, equipment and machinery to perform levelling, grading, excavation and consolidation tasks
- safely cleaned, maintained and stored turf construction tools, equipment and machinery
- followed workplace procedures, including health, safety and environmental
- worked collaboratively and productively within a team
- reported work outcomes on completion.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of turf construction, including:
 - different soil preparations for construction
 - purpose of turf construction in maintaining turf presentation
 - relationship between a well-constructed soil profile and the quality and appearance of the turf
 - purpose, effect, methods and equipment used for compacting turf profiles

- materials used in developing a profile for turf
- selection, effective use and safe operation of tools and machinery
- basic irrigation and drainage installation techniques relevant to turf construction
- basic awareness of survey techniques and equipment required to support survey work, including:
 - principles of surveying, including laser levels, dumpy levels
 - purpose and use of surveyor staff and lenses
 - purpose and use of tape measures
- basic survey calculations used for determining levels, grades and boundaries, including:
 - 3,4,5 triangle for right angles
 - calculating grades
 - measurements and units of measure
- basic plan reading skills required for supporting turf construction operations and to identify:
 - services
 - measurements
 - levels and grades
- safe handling and disposal of construction waste materials
- workplace health and safety hazards, risks and control measures when constructing new turf, including:
 - site safety
 - personal safety
 - safe use and operation of tools, equipment and machinery
- reporting procedures relevant to turf construction.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports turf facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - excavation and grading equipment
 - personal protection and other safety equipment
 - measuring and layout equipment including levels, tape measures, string lines
 - basic levelling tools
- specifications:
 - professionally drawn sports turf site and construction plans that include site layout, existing services, proposed services, excavation levels, fill materials, fill profiles and finished levels
 - workplace procedures and instructions for sports turf construction

- workplace health, safety and environmental procedures related to sports turf construction
- relationships:
 - work team and supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF207 Renovate grassed areas

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to renovate sports turf surfaces.

The unit applies to individuals who renovate turf and undertake defined routine activities under supervision. They exercise limited autonomy within established and well-known parameters, providing solutions to a limited range of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for turf area renovation program	1.1 Interpret site plans and locate services in consultation with supervisor 1.2 Confirm sports turf renovation work activity with supervisor 1.3 Identify workplace health, safety and environmental hazards, assess risks and implement controls in consultation with supervisor 1.4 Report abnormal health and safety and environmental issues

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select, ensure serviceability of, fit and use personal safety equipment
2. Prepare materials, machinery and equipment for turf renovation program	<p>2.1 Select and check hand tools, equipment and machinery for renovation work according to renovation program, and report faults according to workplace procedures</p> <p>2.2 Select and safely store soil treatment materials required for renovation work</p> <p>2.3 Select and store turf grass propagation material required for the renovation program to preserve its viability</p> <p>2.4 Identify work site safety requirements according to workplace safety procedures and renovation site requirements</p>
3. Undertake turf renovation	<p>3.1 Conduct pre-operational and safety checks on hand tools and renovation machinery and equipment according to workplace procedures and operator instructions</p> <p>3.2 Implement site safety requirements and monitor and direct play area users</p> <p>3.3 Operate turf renovation tools, equipment and machinery safely and effectively to renovate turf surface</p>
4. Complete turf renovation	<p>4.1 Collect and dispose of waste material according to workplace environmental procedures</p> <p>4.2 Clean, maintain and store tools and machinery according to workplace procedures</p> <p>4.3 Report work outcomes to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret symbols and text on turf renovation plans and instructions to identify key information and sequence renovation activities

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use open and closed questions logically to clarify work instructions Use industry terminology to communicate with supervisor
Numeracy	<ul style="list-style-type: none"> Estimate and calculate distance, area, volume and ratio

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF207 Renovate grassed areas	AHCTRF203 Renovate grassed areas	Performance criteria clarified Foundation skill added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF207 Renovate grassed areas

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, renovated a sports turf area according to a renovation plan, including:

- identified work site impediments and the required renovation activity in consultation with supervisor
- identified hazards and risks and implemented control measures for personal and site-specific safety
- prepared materials, equipment, machinery and turf propagation materials ready for implementation
- performed turf renovation activities safely using equipment, machinery and materials
- collected waste from renovation works and disposed of safely
- safely transported, cleaned and stored turf renovation machinery and equipment
- reported turf renovation activities, faults and issues to supervisor.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of grass area renovation activities, including:
 - purpose of turf renovation programs for maintaining turf presentation and use
 - soils and soil preparation for renovation
 - turf grass species and effect on mat, thatch and dethatching techniques
 - soil aeration and compaction, including core, solid tyne, and water injection
 - impact of soil compaction and thatch on irrigation and infiltration rate
 - turf grass improvements using topdressing, dusting, shaving, scarifying and grooming
 - effect of adverse weather conditions on renovation activities
 - levelling turf surfaces

- effective and safe use of equipment commonly used during sports turf renovation programs, including:
 - scarifier
 - sod cutter
 - corer
 - slicer
 - shaver
 - top dresser
 - drag mat
 - fertiliser spreader
 - transporter
 - loader, bobcat or similar
 - hand tools, tynes, shovels, spades, level lawns, and wheelbarrows
 - influences on the selection of tools, machinery and safety equipment
 - common pre-operational and post-operational checks of equipment
 - adjustments and settings for renovation equipment
- assessment of safety hazards and risks when renovating turf areas, including:
 - responsibilities of working near the public
 - barriers and exclusion zones
 - signage
 - personal protection and equipment
 - manual handling techniques for lifting or moving heavy loads and materials
- chemical amendments for renovations, including:
 - fertilisers
 - ameliorants
 - growth regulators
- turf repairs and regeneration procedures, including:
 - over sowing
 - sprigging
 - chaffing
 - plugging
 - rolled turf/turf replacement
 - divot replacement
- waste materials handling and disposal, including environmental considerations
- reporting procedures and requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- a facility that has sports turf requiring renovation or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - turf renovation machinery and equipment
 - turf renovation hand tools
 - fertiliser, ameliorants and growth regulators
 - top dressing sand/materials
 - turf propagation materials
- specifications:
 - sports turf area renovation plan
 - workplace procedures and instructions related to sports turf renovation, including health, safety and environment
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF208 Support turf establishment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to establish turf by seed, sod or other methods.

The unit applies to individuals who establish turf and undertake defined routine activities under supervision. They exercise limited autonomy within established and well-known parameters, providing solutions to a limited range of predictable problems

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to establish a planted area	1.1 Select materials, tools, equipment and machinery for planting according to turf establishment program 1.2 Carry out pre-operational and safety checks on tools, equipment and machinery according to workplace procedures and operator instructions 1.3 Identify workplace health, safety and environmental hazards,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>assess risks and implement controls in consultation with supervisor</p> <p>1.4 Select, ensure serviceability of, fit and use personal protective equipment</p>
2. Prepare the planting area	<p>2.1 Interpret site plans to locate and avoid services while undertaking earthworks in consultation with the supervisor</p> <p>2.2 Implement weed control strategies according to turf establishment program and supervisor instructions</p> <p>2.3 Check soil condition to ensure it meets turf establishment program specifications</p> <p>2.4 Apply soil additives according to turf establishment program and supervisor instructions</p> <p>2.5 Prepare the soil surface and moisture conditions ready to receive the turf propagation material</p> <p>2.6 Collect and dispose of waste according to workplace environmental procedures</p>
3. Plant turf	<p>3.1 Check turf propagation material against turf establishment specifications and report defects to supervisor</p> <p>3.2 Distribute turf propagation material on turf area</p> <p>3.3 Implement irrigation requirements to newly propagated turf according to supervisor instructions</p>
4. Provide post-planting care	<p>4.1 Protect the site from disturbance and damage</p> <p>4.2 Implement turf mowing practices during the establishment phase</p> <p>4.3 Apply top dressing to level the turf area according to turf establishment specifications</p> <p>4.4 Apply fertiliser amendments to enhance plant health in consultation with the supervisor</p> <p>4.5 Assess turf site soil moisture condition and rectify according to supervisor instructions</p>
5. Complete establishment of the planted area	<p>5.1 Clean and maintain tools, equipment and machinery according to workplace procedures</p> <p>5.2 Collect and store tools, equipment, machinery and unused materials</p> <p>5.3 Report work outcomes to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret symbols and text from turf product supplier packaging and other information sources to identify critical information for safety and application
Oral communication	<ul style="list-style-type: none"> Use open and closed questions logically to clarify work instructions Use industry terminology to communicate with supervisor
Numeracy	<ul style="list-style-type: none"> Estimate and calculate distance, area, volume, percentage and ratio

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF208 Support turf establishment	AHCTRF204 Support turf establishment	Performance criteria clarified Foundation skill added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF208 Support turf establishment

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has established a turf surface using at least three different propagation materials, including:

- seed (hand seed sowing, mechanical seed sowing, hydro-seeding, drilling)
- sod (turf rolls or sheets)
- and one of following:
 - sprigs (hand sprigging, hydro sprigging, mechanical sprigging)
 - plugs.

There must also be evidence that the individual has:

- interpreted site plans and turf establishment instructions to determine work site impediments and required turf establishment activities
- identified hazards and risks and implemented control measures for personal and site-specific safety
- prepared materials, equipment, machinery and turf propagation materials ready for implementation
- performed turf establishment activities safely using equipment, machinery and materials
- collected and disposed waste from turf establishment site
- safely transported, cleaned, maintained and stored turf establishment machinery and equipment
- reported turf renovation activities, faults and issues.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for supporting turf establishment, including:

- propagation methods for new turf, including seed, sod, sprigs and plugs
- distributing/laying/planting turf propagation materials to establish even coverage
- applications of propagation methods for sports turf
- sports turf grass species and their propagation and establishment
- handling and assessing turf propagation materials for defects
- irrigation requirements for establishment of newly propagated turf
- soil types and their preparation for establishing new turf, including:
 - basic checks to assess soil condition, including soil moisture, tilth, compactness, depth and organic matter
 - soil preparation additives, including fertilisers, ameliorants, moisture control materials and growth regulators
 - calculations for rates of application
 - methods for incorporation of soil additives
 - soil preparation requirements for turf propagation techniques
- tools and machinery used in preparing new turf surfaces, including:
 - sod cutter
 - rotary hoe
 - transporters
 - bobcat or loader
 - scarifier
 - self-propelled cylinder mower
 - ride-on mower
 - fertiliser application equipment
 - top-dresser
 - drag mat
 - hand tools, including shovels, spades, turf pluggers, buckets, level lawns
 - equipment pre-start checks
 - care and storage of tools, equipment and machinery
- post-turf propagation treatments, including:
 - protection for seed, sod, sprigs and plugs during first weeks of establishment
 - basic irrigation practices, and recognising turf establishment needs and problems
 - rolling and mowing practices for new turf
 - monitoring nutrient, pest, diseases and damage
 - top dressing
- workplace health and safety hazards, risks and control measures when constructing new turf, including:
 - site safety
 - personal safety
 - safe use and operation of tools, equipment and machinery
- reporting procedures relevant to turf construction.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports turf facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - soil preparation hand tools, equipment and machinery
 - personal protection safety equipment
 - soil amendments and treatment materials
 - turf grass species and propagation materials
- specifications:
 - turf establishment program and specifications
 - workplace procedures and instructions for turf establishment, including health, safety and environmental procedures
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF301 Construct turf playing surfaces

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to construct soil profiles for the establishment of high-performance sports and recreational turf surfaces.

It applies to the construction of turf playing surfaces in new projects and to the complete renovation of existing soil profiles in sporting, commercial and public recreational open spaces such as golf greens and tees, cricket pitches and other turfed sporting surfaces.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Plan for construction activities	1.1 Identify the construction site and the construction method 1.2 Take representative samples for soil tests 1.3 Locate services and utilities, check depths against the site plan and report discrepancies to the supervisor 1.4 Consider the site history when planning construction details 1.5 Determine likely consequences of site aspect, features and run-off from adjacent sites and incorporated in construction plans 1.6 Identify work health and safety hazards, assess risks, implement controls 1.7 Select, use and maintain suitable safety equipment and personal protective equipment (PPE)
2. Survey and lay out the construction site	2.1 Set up surveying equipment and establish and record existing levels and temporary benchmark 2.2 Set new levels and place pegs according to specifications 2.3 Determine the existing lay of the land and proposed contours 2.4 Shape new contours into the proposed site
3. Prepare for construction work	3.1 Obtain or develop plans for the new construction profile 3.2 Estimate and cost materials 3.3 Schedule work in a logical, timely and effective manner
4. Set out site for construction	4.1 Check and verify boundaries and features against the actual site and existing features 4.2 Check finishing levels, provision for drainage and irrigation to ensure nominated levels are workable 4.3 Check all measurements against the construction plan, peg out the construction area and account for variances
5. Excavate the construction site	5.1 Remove and stockpile excess soil in a designated area 5.2 Grade the base to the level and slope specified in the design 5.3 Consolidate the base of the profile to achieve uniform compaction over the entire site 5.4 Install sub-surface irrigation system components to the required depth and design specified in the plan
6. Install drainage system	6.1 Dig drainage trenches to the depth specified in the plan 6.2 Lay drainage material on the base of the trench, install pipes and cover trenches
7. Install soil profile	7.1 Calculate quantities of material to be spread over the area 7.2 Compact each profile layer to reflect the final contour 7.3 Ensure the interface between profile layers is uniform and unbroken

Element	Performance criteria
	7.4 Mix soil amendments thoroughly and apply evenly over the area 7.5 Give the finished surface a final levelling and consolidate in readiness for planting

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCTRF301A Construct turf playing surfaces.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF301 Construct turf playing surfaces

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine turf construction requirements from plans
- implement a turf construction project
- interpret existing site and construction plans and specifications
- organise work and use tools and equipment for turf construction project

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for constructing turf playing surfaces
 - environmental implications associated with construction and excavation activity, drainage and irrigations systems, soil amendments and waste disposal procedures
 - materials, tools, equipment and machinery available to the enterprise for construction of soil profiles, including soil amendments and base construction materials
 - practical understanding of surveying principles and techniques
 - range of construction methods that may be used to construct soil profiles for high performance turf surfaces, and the association of construction methods with site limitations, environmental implications, and end use of the turf surface
 - soil testing techniques and the application of results to the construction process

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF302 Establish turf

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to establish turf by sowing, turf laying, sprigging and chaffing or stolonization in sporting, public recreational open space, commercial and residential sites.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Sample soil for testing	1.1 Take and test site soil samples from a representative area 1.2 Use test results to guide soil preparation for establishing turf
2. Plant turf	2.1 Select tools and equipment for the task being undertaken and use safe working practices

Element	Performance criteria
	2.2 Prepare planting site and sow seed or roll out lawn 2.3 Water and top-dress newly planted turf as required
3. Maintain newly established turf	3.1 Water and fertilise newly established turf 3.2 Mow turf according to a specified pattern and height 3.3 Monitor newly established turf, identify problems and report any changes 3.4 Apply top dressing according to the establishment plan
4. Report and repair areas of damaged turf	4.1 Monitor turf condition for quality and repair as necessary 4.2 Prepare work reports and recommendations

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCTRF302A Establish turf.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF302 Establish turf

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- demonstrate turf establishment by sowing, turf laying, sprigging and chaffing/stolonization
- determine turf establishment methods and requirements
- implement successful turf establishment works
- operate and store turf establishment machinery and equipment
- organise work and use tools, equipment and machinery for a turf establishment project

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for establishing turf:
 - common weeds, pests and diseases
 - fertiliser use and application
 - soils and turf nutrition
 - turf identification and growth characteristics
 - turf establishment methods
 - watering practices

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF303 Implement a grassed area maintenance program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain and repair grassed areas.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for grassed area maintenance work	1.1 Clarify with supervisor requirements of the maintenance program 1.2 Identify equipment and material resource requirements according to the scope of the coordination work 1.3 Identify the priorities for maintenance activities and time allocation

Element	Performance criteria
2. Maintain and repair grassed areas	2.1 Mow lawns and trim edges 2.2 Undertake coring and scarifying as necessary 2.3 Undertake top dressing and fertilising as required 2.4 Spread fertiliser as necessary 2.5 Undertake control measures for broad leaf weeds and grass weeds 2.6 Perform repairs to irrigation systems as required
3. Coordinate and report on grassed area maintenance activities	3.1 Instruct machinery operators of appropriate use and their responsibilities in respect to operational maintenance requirements of machinery and equipment 3.2 Monitor personnel, activities, timelines and materials usage 3.3 Recognise contingency situations and take corrective actions 3.4 Prepare a report of work undertaken

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCTRF303A Implement a grassed area maintenance program.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF303 Implement a grassed area maintenance program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- conduct a risk assessment for work in a turf area
- determine the maintenance requirements for a turf area
- carry out weed control measures
- repair irrigation systems
- safely adjust and use turf maintenance machinery and equipment
- coordinate and report on grassed area maintenance activities
- write a report on the maintenance program activities

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of grassed area maintenance
 - growth rates and cultural requirements of specific turf types
 - methods and practices for maintaining grassed areas
 - range, use and availability of materials, equipment and machinery that may be required for the project
 - turf grass physiology as it applies to grassed area maintenance
 - types of turf and specific maintenance requirements
 - work schedule programming
 - work health and safety issues

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF304 Monitor turf health

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor the health and condition of high performance sports turf playing surfaces.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for monitoring activities	1.1 Identify the turf site to be monitored, the nature and regularity of monitoring and time constraints for delivering reports 1.2 Identify plant tissue and soil analysis consultants and determine their sampling specifications in consultation with the supervisor and/or consultants

Element	Performance criteria
	1.3 Select monitoring tools and equipment
2. Collect soil and plant tissue samples	2.1 Perform on-site soil tests according to testing instrument instructions 2.2 Collect samples for off-site testing from a representative area and prepare, package and despatch 2.3 Replace divots from soil sampling sites and dispose of waste materials 2.4 Clean sampling tools and equipment and return to storage 2.5 Record and compare results of analysis with acceptable parameters 2.6 Make recommendations to address identified deficiencies and to meet target chemical balances
3. Visually monitor turf health	3.1 Assess indicators of turf health visually with reference to researched and experiential awareness 3.2 Identify deficiencies in turf health and quality visually with reference to researched and experiential awareness 3.3 Make reports and recommendations according to the playing requirements and desired objectives of the enterprise

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCTRF304A Monitor turf health.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF304 Monitor turf health

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess turf health
- identify deficiencies and diseases in turf
- inspect and report on the condition of turfed surfaces
- perform soil sampling and analyse results
- prepare turf maintenance recommendations according to the playing requirements and desired objectives of the enterprise

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of turf health
 - botany and turf physiology as it applies to turf health
 - main, simple and compound fertiliser products available to the enterprise including analysis, solubility, salt index, rates and cost
 - rates and regularity of recommended fertiliser and pesticide application to achieve optimum plant health objectives while minimising external environment impact through leaching, excessive spraying and overuse
 - role of trace elements and nutrients required by turf grass plants, and symptoms of toxicities and deficiencies
 - soil and plant tissue analysis as a monitoring and turf management tool, the main elements of analysis and their significance as indicators of nutritional deficiency and toxicity
 - turf grass diseases, including commonly occurring regional diseases, seasonality, site history and visual disease symptoms

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHC TRF305 Renovate sports turf

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement renovation or remediation of a sports turf area for minor projects and seasonal renovations in the turf industry.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to renovate turf	1.1 Identify the turf renovation site and extent of works 1.2 Select turf and renovation materials 1.3 Identify work health and safety hazards, assess risks and implement controls

Element	Performance criteria
	1.4 Select, use and maintain safety and personal protective equipment (PPE)
2. Prepare renovation equipment	2.1 Carry out pre-operational and safety checks on tools, equipment and machinery 2.2 Calibrate and adjust tools, equipment and machinery
3. Implement sports turf renovation	3.1 Identify renovation works from the program and schedule work in a sequential, timely and effective manner 3.2 Review renovation tasks and undertake remedial action 3.3 Maintain a clean and safe work area throughout and on completion of work
4. Complete renovation activities	4.1 Remove and dispose of waste material in an environmentally aware and safe manner 4.2 Clean, maintain and store tools, equipment and machinery 4.3 Record and report work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCTRF305A Renovate sports turf.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF305 Renovate sports turf

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- conduct a site hazard identification and risk control assessment
- implement a sports turf renovation program
- prepare, check and calibrate turf renovation machinery and equipment
- record outcomes of renovation works
- renovate a sports turf for successful high performance use
- use turf renovation machinery and equipment to restore turf health and condition

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of turf renovation
 - field measurement techniques such as infiltration rate, organic fines, hardness, traction, surface smoothness, and turf sward height
 - nutrition and plant growth regulators
 - planting, care and renovation scheduling requirements of grass species and cultivars
 - specialist turf renovation practices to achieve high performance turf
 - standards for turf surface appearance and quality
 - structure of a sports turf soil profile

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF306 Prepare sports turf surfaces for play

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to plan, prepare the turf and mark out the sports surfaces ready for play, complying with the rules and regulations of the sport.

The unit applies to individuals who prepare turf surfaces for play under general direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare the site for sports surface preparation activities	1.1 Establish sports surface set-up plan and work activity according to sport rules and specifications 1.2 Identify and manage permanent and temporary obstacles according to sport set-up procedures 1.3 Identify workplace health, safety and environmental hazards,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	assess risks and implement controls 1.4 Identify and select equipment and resources for setting up the sport surface according to the sport's rules and regulations 1.5 Check and adjust profile moisture condition according to sport rules, regulations and workplace procedures
2. Select and prepare equipment and machinery required for sports surface preparation	2.1 Select and check tools, equipment and machinery and rectify, report and tag faults 2.2 Calibrate equipment and adjust according to sport set-up plan 2.3 Conduct pre-operational checks of tools, equipment and machinery 2.4 Implement site safety requirements and monitor and direct sport users 2.5 Select, check, use and maintain personal protective equipment
3. Use machinery and equipment to prepare sports turf playing surface	3.1 Assess turf preparation area for moveable obstacles, and relocate during preparation activities 3.2 Operate machinery and equipment to prepare sports surface in a consistent and uniform manner 3.3 Collect and dispose of waste and return obstacles according to workplace and environmental procedures
4. Finalise preparation of playing surface	4.1 Select and check sports surface marking tools, equipment and machinery, and rectify or report faults 4.2 Use measuring equipment, geometry and calculations to position lines, markers and match play equipment according to rules and regulations of intended sport 4.3 Conduct marking-out activities according to the timeframes in the sports surface set-up plan 4.4 Use measurement equipment to test playing surface performance 4.5 Check sports turf play area for potential hazards to players, and report or rectify 4.6 Clean and store equipment and dispose of waste materials according to workplace and environmental procedures 4.7 Record sports preparation activities according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret symbols and text on plans
Numeracy	<ul style="list-style-type: none"> Calculate distance, area, volume, percentage, time and ratio

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF306 Prepare sports turf surfaces for play	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF306 Prepare sports turf surfaces for play

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared sports surfaces for play for at least three of the following:

- a single hole for a golf course with tee and surrounds, rough, fairway and green, and including moving the hole and location of tee markers
- a bowling green, including the assessment of the pace of green
- a cricket ground, including preparation of wicket surface, line marking of wicket and outfield and stump installation
- a ball sport surface selected from Australian Rules football, soccer or rugby, including outfield line marking
- a horse race track surface preparation, including line marking, and rail positioning installation
- a sports surface selected from lawn tennis, lacrosse, hockey, polo or croquet.

There must also be evidence that the individual has:

- determined the condition required for playing surface and planned the work requirements according to sport rules and regulations
- identified safety hazards, assessed risks and implemented controls to ensure personal and user safety when performing work
- selected, checked, adjusted and operated equipment and machinery on the sport site safely
- assessed sports surface condition and confirmed preparation requirements
- prepared a consistent and uniform sports playing surface
- collected and disposed of waste
- selected, checked and used marking-out equipment, materials and procedures to accurately lay out sports surfaces
- checked playing surface performance and potential hazards to players, and reported or rectified
- cleaned and stored tools, equipment and machinery

- prepared a report on sports surface preparation activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of turf preparation for play, including:
 - golf courses, lawn bowls, cricket, race courses, sports fields and tennis
 - effect of adverse climatic conditions on turf preparation
 - use of turf in high performance sport environments
 - purpose of turf surface preparation in maintaining turf presentation
 - cultural requirements of warm and cool turf grass species
- turf surface performance measurement equipment and benchmarks for play, including:
 - stimpmeter
 - bowling green speed
 - clegg hammer
 - traction meter
 - moisture sensor
 - bounce and ball roll/smoothness
- artificial surfaces and their preparation, including:
 - cleaning
 - grooming
 - watering
 - decompacting
 - sterilisation
- biological factors of turf grass species affected by turf preparation activities, including:
 - moving golf holes
 - reasons for moving markers
 - height of cut for grass species
 - effect of rollers on compaction and turf growth
 - effect of mower cutting type
- assessment of turf grass condition prior to setting up, including:
 - colour of sward
 - length of sward and cutting heights
 - set-up equipment requirements and selection criteria
 - moisture content
- conducting mowing operations, including:
 - ensuring uniform cut
 - maintaining a consistent pattern

- implications of repetitive activity on equipment wear, tear and grain, and the need to vary direction of cut
- marking out sports surfaces for play, including:
 - tools and equipment for marking out, and their preparation and use, including pegs, measuring equipment and string lines
 - line marking methods for sports surfaces
 - basic calculations and geometry relevant to layout and line marking
 - rules and regulations for marking and layout of sports surfaces
 - common terms for sport markers and line marking
- markers and other sports surface obstacles for match play requirements, including:
 - holes
 - tee markers
 - out of bounds markers
- water and its effect on sports play and preparation activities, including:
 - soil water requirements
 - turf surface water condition, dew and rain
 - water and dew removal techniques
 - turf covers, their application and consequences of use
- work health and safety hazards, risks and controls when preparing turf surfaces for play, including:
 - rapid risk assessment
 - safe transport of equipment to site
 - legal requirements when transporting equipment on public roads
- maintaining a safe work site, including:
 - safety barriers
 - signage and notifications
 - managing pedestrian traffic flow
- obstacles affecting sports surface set-up, and methods for managing them during preparation activities, including:
 - permanent obstacles
 - temporary obstacles
 - identifying and rectifying hazards to players and playing conditions
- calibration, adjustment and safe use of equipment commonly used for preparation of sports surfaces, including:
 - mowers and height adjustments
 - sports surface edgers
 - rollers
 - water soppers and blowers
 - line marking equipment
- pre-operational and post-operational machinery and equipment checks, including:
 - electrical cords

- checking and testing procedures
- identifying, tagging and reporting faulty equipment
- fault reporting procedures
- waste materials disposal procedures and environmental considerations
- record keeping and report preparation procedures and their purpose.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports surface facility or an environment that accurately represents workplace conditions in which to demonstrate the preparation and layout of at least three sports stipulated in the performance evidence
- resources, equipment and materials:
 - turf set-up equipment, including cylinder and rotary ride-on mowers, edger, roller
 - marking-out materials and equipment
 - measuring and layout equipment, including tape measures and string lines
 - turf surface performance measuring equipment
- specifications:
 - turf preparation and set-up plan for at least three specific sports play surfaces stipulated in the performance evidence
 - workplace procedures and instructions for turf preparation for play
- timeframe:
 - sports play schedule.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF307 Construct turf playing surfaces

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to construct the soil profile for the establishment of high-performance sports and recreational turf for new or complete renovation projects in sporting, commercial and public recreational spaces.

The unit applies to individuals who construct turf playing surfaces under general direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for construction activities	1.1 Read and interpret plans and specifications to determine scope of turf construction project 1.2 Collect representative soil samples for the site for testing 1.3 Test soil samples and interpret and record results according to workplace procedures and industry standards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Locate services and impediments to construction on site, and report discrepancies from construction plan 1.5 Assess the surrounding area relative to construction site and identify potential impact on construction activities 1.6 Identify workplace health, safety and environmental hazards, assess risks and implement controls according to workplace health, safety and environmental procedures 1.7 Document a working plan for the construction
2. Survey and peg out levels for construction site	2.1 Survey construction site and establish and record existing levels and temporary benchmarks according to turf construction and working plans 2.2 Mark out construction site with new levels and contours according to specifications
3. Prepare for construction work	3.1 Read and interpret plans and specifications to determine measurements relevant to materials and quantities 3.2 Identify type of materials required for the turf construction soil profile from construction specifications 3.3 Compute an estimate of materials and costs required for the project and submit for approval 3.4 Develop a construction logistics program for the construction 3.5 Prepare a schedule of works and obtain approvals
4. Set out site for construction	4.1 Reconcile and verify planned boundaries and features of construction works are within actual site constraints 4.2 Verify finishing levels for site, drainage and irrigation are within nominated construction plan specifications 4.3 Transfer measurements for the construction area using markers, and account for variances from construction plan
5. Excavate the construction site	5.1 Select, check, use and maintain safety and personal protective equipment 5.2 Excavate the site within the marked boundaries, and stockpile excess soil according to working plan 5.3 Grade and consolidate the sub-base to levels specified in the construction plan
6. Install irrigation and	6.1 Excavate trenches in sub-surface to receive irrigation and drainage

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
drainage system	components 6.2 Install irrigation system components according to construction plan 6.3 Install drainage system according to construction plan 6.4 Return disturbed sub-surface to levels specified in construction plan
7. Install soil profile	7.1 Install and consolidate soil profile layers according to construction plans and specifications 7.2 Ensure the interface between profile layers is uniform and unbroken 7.3 Ensure soil profile is level and consolidated within specifications ready for planting
8. Complete soil profile construction works	8.1 Clean, maintain and store tools, equipment and machinery according to workplace procedures 8.2 Collect and store unused materials and dispose of waste 8.3 Record and report work outcomes according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret symbols and text on plans and specifications
Writing	<ul style="list-style-type: none"> Prepare working plans, drawings and simple procedures for implementing a turf playing surface construction project
Numeracy	<ul style="list-style-type: none"> Make calculations, including distance, area, volume and ratio, when marking out the construction site and estimating materials for construction works

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF307 Construct turf playing surfaces	AHCTRF301 Construct turf playing surfaces	Performance criteria clarified Foundation skill added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF307 Construct turf playing surfaces

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has contributed to the completion of a sports turf construction project of a minimum of 100 square metres, individually or as part of a team, from concept to completion, including:

- developed a working plan and drawings to scale, including:
 - selected root zone materials
 - determined construction method according to industry standards
 - assessed the site layout
 - obtained, read and interpreted site and construction plans and specifications
 - selected the drainage system
 - estimated materials and costs for the project
- planned the construction of a turf profile, including:
 - conducted and interpreted soil tests
 - identified hazards and assessed the risks and implemented controls
 - used surveying equipment and techniques to accurately set out the site
- constructed the turf profile according to plans and specifications, including:
 - excavated to planned levels
 - installed sub-base to specification
 - installed drainage system to specification
 - installed and consolidated soil profile to specified grade and levels
- complied with local environmental requirements
- scheduled and organised construction work tasks according to construction project
- identified hazards and risks, and implemented control measures for personal, environmental and site-specific safety requirements
- operated, cleaned, maintained and stored tools and excavation and load shifting equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- interpretation of plans and specifications for the scope of sports turf construction, including:
 - location of site
 - implication of impediments and services on construction activities, including irrigation pipes, overhead and underground power, drainage, telecommunications, gas, root system of trees
 - dimensions of construction for determining list of materials
- sports turf soil profile construction principles, methods and resources, including:
 - range of construction methods for specific applications (e.g. golf and bowling greens, cricket wickets, sports fields, race tracks, lawn tennis)
 - Australian and international standards for sports turf construction
 - United States Golf Association (USGA) greens construction profiles
 - Californian method
 - local construction methods
 - natural construction
 - push up greens
 - sand over clay
 - working with a perched water table
- drainage installation methods and materials, including:
 - pipes
 - drainage materials
 - root zone layer and uniformity in depth of horizons
- materials, tools, equipment and machinery for construction of soil profiles, including:
 - soil amendments
 - base construction materials
 - turf growing media and quality
- safe operation of machinery and equipment for constructing profiles, including:
 - excavating to known levels, including the cut and fill quantities
 - working to a consistent level and grade from sub-base to final level
 - methods of compacting and testing the compaction of the sub-base
- practical understanding of surveying principles and techniques, including:
 - using survey equipment to establish benchmarks and levels on a construction site
 - interpreting and constructing basic contour drawings
 - transferring and pegging out contours to a construction site
- soil testing techniques and the application of results to the construction process, including:
 - texture (particle size)
 - pH

- electrical conductivity
- infiltration rates
- site constraints and their impact on constructing turf surface, including:
 - aspect
 - site history
 - trees and other vegetation
 - location of services
 - water quality and reclaimed sources of water
- workplace health and safety hazards, risks and control measures when constructing new turf, including:
 - site safety
 - personal safety
 - safe use and operation of tools, equipment and machinery
- planning and scheduling construction works to ensure a logical, timely and effective process
- laying out a construction area from plans and drawings, including:
 - measuring techniques
 - finding and marking levels
 - types of markers, including paint, pegs, stringlines, flags
- calculations relevant to costing and estimating a turf construction project, including:
 - excavation volumes
 - volume of construction materials
 - labour time and costs
- environmental practices and procedures relevant to turf construction sites, including:
 - implications associated with construction and excavation activity
 - waste disposal procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports turf facility or an environment that accurately represents workplace conditions of a minimum of 100 square metres
- resources, equipment and materials:
 - personal protective equipment and other site safety equipment
 - surveying equipment
 - hand tools, excavation and load shifting equipment
 - soil testing equipment for pH, electrical conductivity, texture and infiltration rates
- specifications:
 - workplace procedures and instructions for construction of sports turf playing surfaces

- sports turf project construction drawings, plans and specifications
- workplace safety and environmental procedures related to construction of sports turf playing surfaces.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF308 Establish turf

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to establish turf by sowing, turf laying, sprigging and chaffing or stolonisation in sporting, public recreational open space, commercial and residential sites.

The unit applies to individuals who establish turf under general direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a turf establishment plan	1.1 Collect representative soil samples of turf establishment area for testing 1.2 Package and label soil samples for laboratory testing according to laboratory requirements 1.3 Perform field tests of soil and record results

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify and select turf grass species and propagation method according to workplace or client planned outcomes</p> <p>1.5 Assess the site for physical and cultural impediments to turf establishment and record results</p> <p>1.6 Interpret results and prepare a turf establishment plan</p>
2. Prepare to establish a new turf area	<p>2.1 Select materials, tools, equipment and machinery for planting according to turf establishment plan</p> <p>2.2 Carry out pre-operational and safety checks on tools, equipment and machinery</p> <p>2.3 Identify workplace health, safety and environmental hazards, assess the risks and implement controls</p> <p>2.4 Select, check, use and maintain personal protective equipment</p> <p>2.5 Implement weed control strategy in preparation for turf establishment activities</p>
3. Prepare soil and plant turf	<p>3.1 Prepare planting site, incorporate soil additives and ensure soil moisture is within specification</p> <p>3.2 Distribute turf propagation material on turf area according to turf establishment plan</p> <p>3.3 Implement irrigation requirements to newly propagated turf</p> <p>3.4 Collect and dispose of waste according to workplace and environmental procedures</p> <p>3.5 Clean, store and maintain tools, equipment and machinery</p>
4. Maintain turf establishment	<p>4.1 Protect the site from disturbance and damage according to workplace procedures</p> <p>4.2 Assess soil moisture condition and rectify according to workplace irrigation practices</p> <p>4.3 Implement turf mowing practices during establishment according to workplace procedures and turf establishment plan</p> <p>4.4 Apply top dressing to level the turf area according to turf establishment plan</p> <p>4.5 Apply nutrients and amendments according to turf establishment plan</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Report and repair areas of damaged turf	5.1 Monitor turf condition for quality, and repair according to turf establishment plan 5.2 Record and report work outcomes according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret symbols and text on plans Interpret soil test procedures and test results for establishing turf grass
Writing	<ul style="list-style-type: none"> Complete workplace documentation using industry terminology and required format
Numeracy	<ul style="list-style-type: none"> Estimate and calculate distance, area, volume, percentage and ratio

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF308 Establish turf	AHCTRF302 Establish turf	Performance criteria clarified Foundation skills added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF308 Establish turf

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has established a turf surface using:

- seed (hand seed sowing, mechanical seed sowing, hydro-seeding or drilling)
- sod (turf rolls or sheets)
- and one of the following methods:
 - sprigs (hand sprigging, hydro sprigging, mechanical sprigging)
 - plugs
 - chaffing or stolonisation.

There must also be evidence that the individual has:

- collected and prepared soil samples for testing and interpreted results
- identified impediments to turf establishment and recorded results
- determined turf establishment species, methods and requirements
- prepared an establishment plan to meet client or workplace requirements
- identified hazards and risks and implemented control measures for personal and site-specific safety
- prepared materials, equipment, machinery and turf propagation materials ready for implementation
- performed turf establishment activities safely using equipment, machinery and materials
- collected waste and disposed of it safely
- selected, safely used, cleaned, maintained and stored turf establishment machinery and equipment
- maintained turf establishment records and reported outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for establishing, turf, including:

- preparing a turf establishment plan
- turf grass identification, propagation and growth characteristics
- turf establishment methods, including seed, sod, sprigs, plugs, chaffing and stolonisation
- handling and assessing turf propagation materials for defects
- distributing, laying and planting turf propagation materials to establish even coverage
- fertiliser use and application
- soils and turf nutrition
- overseeding warm season grasses and allelopathy
- common weeds, pests and diseases, and control measures for establishing new turf, including field tests to identify problems
- physical and chemical properties of soils and effect on establishing new turf, including:
 - compaction
 - pH
 - salinity and nutrition
 - texture and soil type
 - soil sampling techniques and preparation for laboratory testing
 - field testing techniques for soils
- irrigation requirements for establishment of new and establishing turf
- soil types and their preparation for establishing new turf, including:
 - basic checks to assess soil condition, including soil moisture, tilth, compactness, depth and organic matter
 - soil preparation additives, including fertilisers, ameliorants, moisture control materials, pesticides and herbicides
 - methods for incorporation of soil additives
 - soil preparation requirements for different turf propagation techniques
- calculations to determine application rates of amendments, fertiliser and planting material, including distance, area, volume, percentage and ratio
- tools, equipment and machinery used in preparing new turf surfaces, including:
 - types of equipment and their effective and safe operation
 - pre-start checks
 - care and storage of tools, equipment and machinery
- turf propagation treatments for establishment, including:
 - protection for seed, sod, sprigs and plugs during first weeks of establishment
 - basic irrigation practices and recognising turf establishment needs and problems
 - rolling and mowing practices for new turf
 - monitoring and control of disorders
 - top dressing purpose and procedures
 - nutrients and amendments used for establishing turf
- workplace health and safety hazards, risks and control measures when constructing new turf, including:

- site safety
- personal safety
- safe use and operation of tools, equipment and machinery
- record keeping and reporting procedures relevant to turf establishment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports turf facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - hand tools, stringlines, buckets, shovels, rakes, spades, level lawns and wheelbarrows
 - equipment, sod cutter, scarifier, transporter, roller, fertiliser and chemical application equipment
 - dry sand, propagation material and turf plugger
 - personal protection equipment
 - soil amendments and treatment materials
 - soil testing equipment
 - the two types of turf propagation materials and at least one of the propagation methods specified in the performance evidence
- specifications:
 - turf grass species specifications and requirements
 - workplace procedures and instructions for establishing turf.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF309 Implement a grassed area maintenance program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to maintain general turf grass surfaces involving the general procedures for cutting and trimming grass, dethatching older grassed areas, applying fertilisers and treatments for managing grass health.

The unit applies to individuals who maintain turf surfaces under general direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for grassed area maintenance work	1.1 Clarify requirements for maintenance program with supervisor 1.2 Identify permanent and temporary obstacles on grassed area and manage according to maintenance program 1.3 Identify workplace health and safety and environmental hazards, and assess risks and implement controls

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify and select equipment and resources according to the maintenance program 1.5 Identify priorities and schedule maintenance activities
2. Prepare equipment and machinery required for grassed area maintenance work	2.1 Select and check tools, equipment and machinery, and rectify, report or and tag faults 2.2 Adjust and calibrate equipment according to maintenance program and manufacturer instructions 2.3 Conduct pre-operational checks of tools, equipment and machinery according to manufacturer instructions and workplace procedures 2.4 Select, check, use and maintain personal protective equipment
3. Implement grassed area maintenance activities	3.1 Assess site-specific safety hazards and implement controls according to workplace safety procedures 3.2 Implement pre-start checks and start-up procedures for machinery according to operator instructions 3.3 Operate machinery and equipment on grassed area according to maintenance plan, operator instructions and workplace procedures 3.4 Implement shut-down procedures for machinery according to manufacturer instructions 3.5 Clean and store equipment and dispose of waste materials according to workplace and environmental procedures
4. Finalise grassed area maintenance activities	4.1 Reconcile outcomes of work maintenance activities against maintenance plan 4.2 Identify discrepancies in outcomes and recommend corrective action 4.3 Discuss recommendations with supervisor and modify maintenance plan and schedules 4.4 Record and report grassed area maintenance activities according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Accurately interpret maintenance plans and operator instructions
Writing	<ul style="list-style-type: none"> Accurately record and update maintenance plans and schedules using clear language and correct spelling, grammar and industry terminology
Numeracy	<ul style="list-style-type: none"> Make calculations, including distance, area, volume, ratio, percentage and time

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF309 Implement a grassed area maintenance program	AHCTRF303 Implement a grassed area maintenance program	Elements and performance criteria clarified Foundation skills added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF309 Implement a grassed area maintenance program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, implemented a grassed area maintenance program, including:

- clarified the maintenance requirements for a grassed area with supervisor
- conducted a risk assessment and implemented controls for grassed area maintenance work
- identified fixed and temporary obstacles, and implemented procedures to avoid damage to obstacles
- identified and selected equipment and resources required for the maintenance activities
- prioritised and scheduled maintenance activities
- ensured workplace safety practices were implemented for all grassed area maintenance works
- selected, checked and used personal safety equipment
- selected, checked and adjusted equipment and machinery.

There must also be evidence that the individual has:

- operated equipment and machinery safely to maintain at least 100 square metres of grassed area and has performed the following tasks:
 - used mowers and trimmers to cut grass to a specified height
 - used coring or scarifying equipment to manage thatch
 - used mechanical spreader to apply fertilisers or amendments at a specified rate
 - used manual methods to control broad leaf and grass weeds
 - used manual or mechanical equipment to apply liquid treatments to control weeds at a specified rate
- followed operating procedures for pre-start checks, start-up, operation and shut-down for all machinery and equipment used
- reviewed grassed area maintenance activities and recommended changes to the maintenance plan with supervisor
- recorded and reported grassed area maintenance activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- maintenance and management of grassed areas, including:
 - recognising local turf grass species
 - growing conditions and cultural requirements of warm and cool climate turf grass species
 - purpose of grass and selection of mowing height
 - thatch and impact on grass health and vigour, and methods for reducing thatch
 - basic nutrient requirements of grass and commonly used fertilisers
 - fertiliser application methods and rates
 - turf grass physiology as it applies to grassed area maintenance
- methods of applying fertiliser and chemical treatments to grassed areas, including:
 - liquid treatments using drenches and sprayers and basic application equipment
 - broadcasting granular and powder applications by hand or mechanical means
- health, safety and environmental policies and procedures in a workplace, including:
 - identifying hazards, assessing and controlling risk
 - protecting the environment during operations and waste
 - personal protection and equipment
- methods and practices for mowing grassed areas, including:
 - setting the height of cut
 - obtaining uniform cut
 - maintaining consistent pattern
 - variation of cut direction to reduce wear and tear
- tools, equipment and machinery used for grass maintenance, including:
 - rotary and cylinder mowers and other grass cutting and trimming equipment
 - operation of coring or scarifying equipment, including the potential damage to irrigation and drainage infrastructure
 - mechanical spreaders
 - hand or motorised spray equipment
- equipment operation and maintenance, including:
 - pre-start checks, start-up and shut-down procedures
 - clean-up and storage
- impediments to safe maintenance activities and action to be taken, including:
 - people and animals
 - proximity to roadways, pathways and other public spaces
 - assets and other facilities that may be damaged
- weed species and control strategies in turf grasses, including:

- broad leaf weeds
- grass weeds
- mosses and other invasive plant species
- record keeping and recording procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a grassed area of at least 100 square metres
- resources, equipment and materials:
 - rotary and cylinder mowers, coring and scarifying equipment or machines
 - fertiliser spreaders, and spray and drenching equipment
 - measuring equipment for treatments and fertilisers
 - fertilisers, amendments and weed treatments
 - fuel, oil, tools and equipment required to adjust and operate machinery
- specifications:
 - workplace procedures and instructions related to implementing grassed area maintenance programs, including safety and environmental procedures
 - operating instructions for machinery and equipment
 - specifications for rates of application of fertilisers and weed treatments
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF310 Monitor turf health

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to monitor the health and condition of sports turf playing surfaces.

The unit applies to individuals who monitor turf health under general direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for monitoring activities	1.1 Establish the scope, regularity and time constraints for monitoring and reporting turf health 1.2 Identify turf grass species and assess common health issues attributed to the species 1.3 Identify plant health specialist advisor and determine their scope of support and sampling specifications

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify and select tools and equipment required to monitor and sample turf plant health according to specialist advice
2. Assess the health of turf grass area	<p>2.1 Inspect and record signs and symptoms of abnormal turf grass health</p> <p>2.2 Assess extent of turf grass health problem, and report according to workplace procedures</p> <p>2.3 Conduct field diagnoses and tests to aid in identifying plant health issue</p> <p>2.4 Collect, secure, label and despatch samples for laboratory testing according to specialist advisor specifications</p> <p>2.5 Repair sample sites, clean tools and equipment and dispose of waste materials according to workplace and environmental procedures</p> <p>2.6 Communicate with specialist advisors to establish diagnoses of plant health problem</p> <p>2.7 Assess diagnoses and compare results with acceptable parameters</p> <p>2.8 Prepare recommendations to address identified plant health problems</p>
3. Monitor and report turf health and condition	<p>3.1 Examine turf for poor health and substandard quality indicators in a scheduled manner</p> <p>3.2 Identify poor turf health and deviations in turf quality according to expected sporting standards and workplace requirements</p> <p>3.3 Compile examination results and report with recommendations</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret laboratory test procedures and results
Writing	<ul style="list-style-type: none"> Accurately document turf health assessment and recommendations using clear language, correct spelling, grammar and industry

Skill	Description
	terminology
Oral communication	<ul style="list-style-type: none"> Use active listening skills Interpret verbal and non-verbal communication
Numeracy	<ul style="list-style-type: none"> Perform calculations to check test results

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF310 Monitor turf health	AHCTRF304 Monitor turf health	Performance criteria clarified Foundation skill added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF310 Monitor turf health

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has monitored the health of a warm and a cool season turf species and reported recommendations for turf health, including:

- established the scope and scheduling for monitoring turf health for a warm season turf grass species and the common health issues
- established the scope and scheduling for monitoring turf health for a cool season turf grass species and the common health issues
- identified turf health specialist advisors and their requirements to support monitoring procedures
- identified and selected tools and equipment required to monitor and sample turf health issues
- inspected and assessed turf grass for signs of common turf health problems and assessed the extent of the problems, including:
 - pests
 - diseases
 - nutritional
 - environmental causes
- conducted field tests to aid in diagnosing turf grass health issues, including:
 - pH
 - electrical conductivity (EC)
 - drainage and infiltration rate
 - soil temperature
- collected and despatched samples for laboratory testing and repaired sample sites
- assessed diagnosis from field and specialist advisor results and determined acceptable parameters
- prepared recommendations according to the sports play standards
- monitored turf grass during growing season.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- 15 turf grass species or cultivars, their common name, genus and species, and growth habit, including warm and cool grass species
- importance of plant physiology in plant health, including:
 - photosynthesis
 - transpiration
 - structural components of turf grasses and relation to turf grass health
 - basic metabolic and physiological processes for disease resistance in turf grass
 - nutrients, nutrient uptake and role in plant growth
 - basic physiology processes for insect and disease resistant turf
 - basic endophyte infection of turf
 - allelopathy in turf grass species
- specialist advisors, their purpose and method of engagement to support turf health diagnosis
- turf grass species selection for plant health management, including:
 - disease tolerance
 - mowing height
 - playing requirements
 - dormancy
 - salinity
 - resilience, wear and recovery
 - water requirements
- turf grass species and common regional health issues, including:
 - basic biology, symptoms and controls of pests
 - basic biology, symptoms and controls of diseases
 - symptoms and controls of disorders, including soil condition, nutrition
 - environmental disorders (e.g. frost, poor drainage, shade)
- tools, equipment and process for diagnosing turf health and disorders
- expectations and quality indicators for turf grass and sports turf standards
- rates and recommended treatments to achieve optimum turf grass health objectives, including:
 - simple and compound fertilisers used in the turf industry and their effect on turf health
 - fertiliser types and nutrient release rates
 - common pesticide types and methods of application
 - external environment impact of treatments through leaching, excessive spraying, off target damage and overuse
 - interpretation of labels and safety data sheets for treatments
 - use of growth regulators and concept of 'growing degree days'

- calculating nutrient application according to fertiliser rates
- role of trace elements and nutrients required by turf grass plants, and symptoms of toxicities and deficiencies
- soil and plant tissue analysis for monitoring and managing turf health, including:
 - main elements of analysis
 - significance as indicators of nutritional deficiency and toxicity.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports turf facility or an environment that accurately represents workplace conditions
 - a sports play area with warm season turf grass species to monitor for health issues
 - a sports play area with cool season turf grass species to monitor for health issues
- resources, equipment and materials:
 - test equipment and resources for pH, soluble salts and soil moisture analysis
 - sampling equipment and materials for collecting, storing and despatching soil, plant, pest and disease test samples
 - examples of pests, diseases and disorders for identification purposes
 - turf health specialist advisory reports
- specifications:
 - workplace procedures and instructions related to monitoring turf health
- relationships:
 - specialist advisor
- timeframe:
 - a scheduled period of time for monitoring a turf grass area for health issues.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF311 Renovate sports turf

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to implement renovation or remediation of a sports turf area for minor projects and seasonal renovations in the turf industry.

The unit applies to individuals who renovate sports turf under general direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to renovate turf	1.1 Assess the turf renovation site and determine extent of works according to renovation program 1.2 Identify turf grass species, materials and resources and calculate quantities required for renovation program 1.3 Collect soil samples and conduct or arrange tests to establish physical and chemical condition of the soil according to industry

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	standards 1.4 Identify, select and check hand tools, equipment and materials required for renovation work 1.5 Identify workplace health, safety and environmental hazards, assess their risks and implement controls 1.6 Prepare a schedule of works according to site assessment and soil conditions
2. Prepare renovation equipment	2.1 Select, check, use and maintain safety and personal protective equipment 2.2 Carry out pre-operational and safety checks on tools, equipment and machinery and rectify, report or tag faults 2.3 Calibrate and adjust tools, equipment and machinery for turf renovation
3. Implement sports turf renovation	3.1 Operate turf renovation tools, equipment and machinery safely and effectively to renovate turf surface 3.2 Assess and review renovation activities against scheduled works and undertake remedial action where out-of-specification 3.3 Maintain a clean and safe work area throughout and on completion of work
4. Complete renovation activities	4.1 Collect and dispose of waste material according to workplace and environmental procedures 4.2 Clean, maintain and store tools, equipment and machinery 4.3 Record and report work outcomes according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret symbols and text on plans

Skill	Description
	<ul style="list-style-type: none"> Interpret soil test procedures and test results for establishing turf grass
Writing	<ul style="list-style-type: none"> Complete workplace documentation using industry terminology and required format
Numeracy	<ul style="list-style-type: none"> Estimate and calculate distance, area, volume, percentage, time, temperature and ratio Apply numerical information to determine application rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF311 Renovate sports turf	AHCTRF305 Renovate sports turf	Performance criteria clarified Foundation skill added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF311 Renovate sports turf

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, renovated a sports turf surface, including:

- assessed the site and renovation program to determine the extent of works and required renovation activities
- identified turf grass, materials and resources and calculated quantities required
- collected and tested soil samples and established the soil condition for renovation site
- prepared a schedule of works for renovation activities
- identified hazards and risks, and implemented control measures for personal and site-specific safety
- selected and prepared materials, equipment, machinery and turf propagation materials ready for renovation works
- performed turf renovation activities safely using equipment, machinery and materials according to renovation schedule and workplace procedures, including:
 - coring or spiking
 - top dressing
 - scarifying or grooming
 - shaving or turf cutting or plugging
 - fertilising or adding amendments
- cleaned site and collected waste from renovation works and disposed of
- cleaned, maintained and stored turf renovation machinery and equipment
- assessed renovation activities against schedule of works and implemented remedial action where out-of-specification
- recorded and reported turf renovation activities, faults and issues.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of turf renovation, including:
 - turf renovation programs and their function in maintaining playable surfaces
 - developing a schedule of works for sports turf renovation
- calculations required to determine the quantities required for the renovation program, including:
 - amendments
 - fertiliser
 - seed
 - soil, sand and other growing media
- techniques for conducting field tests for soils, including:
 - pH
 - electrical conductivity
 - infiltration rate
 - organic matter
 - firmness and compaction of the surface
 - traction
 - surface smoothness
- planting, care and renovation scheduling requirements of grass species and cultivars, including:
 - specialist turf renovation practices to achieve high performance turf
 - national and international standards for turf surface appearance and quality
 - turf sward height
- structure of a sports turf soil profile, including:
 - soils and soil preparation for renovation
 - soil aeration and compaction, including, core, solid tyne and water injection
 - impact of soil compaction and thatch on irrigation and infiltration rate
 - levelling turf surfaces
- turf grass species and effect on mat, thatch and dethatching techniques, including:
 - turf grass improvements using top dressing, dusting, shaving, scarifying and grooming
 - effect of adverse weather conditions on renovation activities
- effective and safe use of tools, machinery and equipment commonly used for sports turf renovation programs, including:
 - scarifier
 - sod cutter
 - corer
 - slicer
 - shaver

- top-dresser
- drag-mat
- fertiliser spreader
- transporter
- loader, bobcat or similar
- hand tools, tynes, shovels, spades, level lawns and wheelbarrows
- factors for consideration in the selection of tools, machinery and safety equipment
- common pre-operational and post-operational checks of equipment
- adjustments and settings for renovation equipment
- assessment of safety hazards and risks when renovating turf areas, including:
 - public safety
 - barriers and exclusions zones
 - signage
 - personal protection and equipment
 - manual handling techniques for lifting or moving heavy loads and materials
- chemical amendments for renovations, including:
 - fertilisers
 - ameliorants
 - growth regulators
- turf repairs and regeneration procedures, including:
 - over sowing
 - plugging
 - sprigging
 - rolled turf and turf replacement
 - divot replacement
 - top dressing materials and procedures
- waste materials handling and disposal, including environmental considerations
- record keeping and reporting procedures and requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports turf facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - turf renovation machinery and equipment
 - turf renovation hand tools
 - fertiliser, ameliorants and top dressing material
 - turf propagation materials, including seed, sprigs and rolled turf
- specifications:

- turf renovation program
- workplace procedures and instructions related to turf renovation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF403 Develop a sports turf maintenance program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop a sports turf maintenance program, prepare implementation documents, communicate the program to work team and key stakeholders and review and update the program.

The unit applies to individuals who apply specialist skills in turf maintenance to provide solutions to technical and unpredictable problems. They work autonomously, and instruct and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine soil properties and plant health	1.1 Develop a soil and plant tissue testing program 1.2 Monitor testing activities against testing program and initiate remedial action where activity does not comply 1.3 Assess and interpret test results with due consideration of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>influencing factors, and record results</p> <p>1.4 Compare tests results with cultural requirements of turf grass species and determine nutritional status of the soil according to accepted industry standards</p>
2. Identify the requirements of a sports turf maintenance program	<p>2.1 Establish turf grass optimum presentation characteristics according to client requirements and industry best practice</p> <p>2.2 Identify financial constraints for the turf area</p> <p>2.3 Identify maintenance requirements for varying conditions of turf growing cycle</p> <p>2.4 Select turf maintenance practices to maintain turf health according to sports turf standards of presentation</p> <p>2.5 Identify and verify availability of resources, tools, equipment and machinery required for the sports turf maintenance program</p> <p>2.6 Assess requirements and constraints, and document a sports turf playing surface maintenance program</p>
3. Prepare and document the sports turf maintenance program	<p>3.1 Prepare detailed plan, specifications and budget according to requirements of program</p> <p>3.2 Develop and document on-site procedures and schedules for the sports turf maintenance program</p> <p>3.3 Develop contingencies to ensure deadlines are met according to client and play requirements</p>
4. Communicate sports turf maintenance program to key stakeholders	<p>4.1 Instruct work team and key stakeholders on turf maintenance program and procedures</p> <p>4.2 Monitor implementation of turf maintenance program, and provide feedback to work team and stakeholders</p>
5. Review the sports turf maintenance program	<p>5.1 Monitor performance of program against workplace standards, and record discrepancies</p> <p>5.2 Review the sports turf maintenance program to ensure it remains responsive to changing conditions</p> <p>5.3 Adjust and make changes to the program to overcome discrepancies in program outcomes</p> <p>5.4 Document and report remedial action and changes to maintenance program</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret complex technical documents related to sports turf maintenance programs
Writing	<ul style="list-style-type: none"> Use language appropriate for work team when creating workplace procedures
Oral communication	<ul style="list-style-type: none"> Consider target audience when presenting complex information to work team and key stakeholders
Numeracy	<ul style="list-style-type: none"> Perform calculations to analyse budget information, interpret tests and results and develop schedule for maintaining sports turf

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF403 Develop a sports turf maintenance program	AHCTRF401 Develop a sports turf maintenance program	Performance criteria clarified Foundation skill added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF403 Develop a sports turf maintenance program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared a sports turf maintenance program for play on at least one of the following:

- a single hole for a golf course with tees and surrounds, rough, fairway and green
- a bowling green
- a cricket ground with wicket surface and outfield
- a sports field for one of Australian Rules football, soccer, rugby, lacrosse or polo
- a horse race track
- a turf farm
- a lawn tennis court
- a croquet lawn
- other natural sports turf surface.

The sports turf maintenance program must:

- include a twelve month cycle for the sports turf playing surface
- specify all maintenance practices, including:
 - irrigation
 - mowing and rolling
 - fertiliser applications
 - pesticide applications to treat pests, diseases and weeds
 - plant growth regulator applications
 - renovation practices
 - surface set-up standards and player expectations
- be implemented for a period of no less than eight weeks to verify the performance outcomes documented in the program.

There must also be evidence that the individual has:

- prepared an annual sports turf maintenance program according to budget
- assessed and incorporated into maintenance program the following: test results, optimum performance characteristics, financial constraints and resource implications
- scheduled activities and informed key stakeholders and work team of their respective roles and responsibilities
- monitored and reviewed the program to ensure program outcomes are achieved
- implemented appropriate course of action to overcome program deficiencies
- documented and reported actions and changes to maintenance program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- biological principles and processes of a range of sports turf species for playing surfaces, including:
 - growth habits and cultural requirements of turf grass species and cultivars under varying soil and environmental conditions
 - maintenance requirements and practices for specific turf plant species and cultivars after initial establishment
 - nutrients required by specific turf plant species and cultivars, and the effects of nutrient deficiency and toxicity on individual plant species and cultivars, including symptoms
 - plant diseases, pests and disorders and weeds of specific turf plant species and cultivars
- site evaluation techniques, including analysis of the condition of soils, plants and the site for turf maintenance activities, including:
 - soil ameliorants required to treat common soil problems
 - the characteristics of soil and other growth media
 - types and functions of additives used to enhance the nutrition available for specific turf plant species and cultivars
 - the main simple and compound fertiliser products available
- design and development of maintenance programs within turf grass requirements, including:
 - requirements to build healthy turf to meet national or international standards
 - standards and player expectations of the playing surface
 - availability of equipment and materials
 - financial resources
- soil and plant testing programs and their development, including:
 - types of soil and plant tissue tests used in turf management
 - field testing activities
 - off-site and laboratory testing activities and the role of consultants
 - scheduling and timing of tests for optimum results

- sampling techniques for soils and plant tissue
- interpretation of soil and plant test results, including:
 - impact of the seasons on results
 - expected results for turf species and cultivars
 - importance of using and maintaining historical records
- turf grass species and their cultural requirements and the implication for a maintenance program, including:
 - irrigation methods and water budget
 - mowing and rolling methods, including frequency for turf play surface requirements
 - fertiliser and ameliorant application timing and impact on turf health and growth
 - pests and disease control, including pesticide application
 - impact and management of plant growth regulators and their application to turf grass
 - planned maintenance for renovation of worn and damaged surfaces
 - maintenance implications for setting up for sports play
- management of unexpected activities and outcomes, including:
 - developing contingencies to manage unpredictable situations
 - managing adverse climatic conditions
 - adverse or unplanned turf usage
- record keeping and reporting procedures and practices.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - access to a sports turf facility or an environment that accurately represents workplace conditions on which to implement and monitor a maintenance program, and at least one of the sports turf surfaces stipulated in the performance evidence
- resources, equipment and materials:
 - access to national and international sports turf industry standards
 - access to player and user expectations for playing surface
 - access to soil and plant tissue analysis reports for interpretation
- specifications:
 - workplace documents, including procedures and brief related to development of a sports turf maintenance program, including a maintenance budget and list of the equipment, machinery and human resources available
- relationships:
 - work team
- timeframe:
 - maintenance program must span 12 months
 - implementation of a minimum of 8 weeks to verify the program outcomes.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF404 Plan and implement sports turf renovation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to plan and implement sports turf renovation activities, which involves the preparation of procedures, scheduling and coordination of staff, and monitoring and reviewing financial and renovation performance.

The unit applies to greenkeepers and turf managers that use specialist skills to plan, coordinate and supervise the work of others within known parameters. They use discretion and judgment in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare the turf renovation program	1.1 Assess existing turf site plans and documentation to establish purpose of turf surface to be renovated 1.2 Determine the size of sports turf surface in need of renovation 1.3 Conduct field tests to establish renovation site conditions according to workplace and industry standards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Assess size of area and test results against purpose, and identify scope of renovations required</p> <p>1.5 Identify and select materials and resources required for the identified renovation requirements</p> <p>1.6 Identify workplace health, safety and environmental hazards, assess risks and identify controls</p> <p>1.7 Develop a renovation program containing site assessment report, results of field measurements and tests, risk controls, and material and resource requirements</p> <p>1.8 Develop and document a schedule of works and specifications for renovation program</p>
2. Prepare renovation equipment	<p>2.1 Review machinery maintenance logs to verify operational status for renovation activities</p> <p>2.2 Conduct pre-operational and safety checks of tools, equipment and machinery</p>
3. Implement the renovation program	<p>3.1 Select work team and contractors, and coordinate work in a sequential, timely and effective manner</p> <p>3.2 Organise and direct work according to the renovation schedule of works</p> <p>3.3 Monitor renovation tasks against performance targets, and undertake remedial action where non-compliant</p> <p>3.4 Monitor renovation work activities to maintain a clean and safe work environment</p>
4. Complete renovation activities	<p>4.1 Reconcile completed works against renovation plan objectives</p> <p>4.2 Inspect equipment and machinery for operational status, and implement repairs</p> <p>4.3 Record expenses and review against budget according to workplace financial procedures</p> <p>4.4 Record and report turf renovation outcomes against planned objectives according to workplace requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Develop plans, procedures and schedules for work team and key stakeholders using clear language in order to convey explicit information
Oral communication	<ul style="list-style-type: none"> Present complex information appropriate to the audience using clear and convincing language, tone and pace
Numeracy	<ul style="list-style-type: none"> Perform calculations when implementing and interpreting tests and results

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF404 Plan and implement sports turf renovation	AHCTRF402 Plan and implement sports turf renovation	Performance criteria clarified Foundation skill added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF404 Plan and implement sports turf renovation

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, prepared and implemented a sports turf renovation plan, including:

- assessed site plans and documentation to establish sports turf purpose
- determined size of sports turf area in need of renovation
- conducted field tests to establish the degree of degradation of sports turf surface
- assessed results and established the scope of renovation works
- identified site health, safety and environmental hazards, assessed risks and established controls for the renovation works
- developed and documented a plan for a sports turf renovation program and prepared a schedule of works and specifications for implementation
- reviewed status of machinery and equipment and conducted pre-operational checks in preparation for renovation works
- selected and coordinated work team and contractors to implement the schedule of works for renovation of sports turf surfaces
- monitored restoration activity, safety and environmental impacts of restoration work against performance targets, and implemented remedial actions where non-compliant
- reconciled completed works against renovation plan
- checked equipment for serviceability, and initiated repairs
- recorded costs of restoration and reviewed against budget
- maintained records and produced reports on renovation outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- enterprise, national and international industry standards for turf surface appearance, performance and quality

- environmental implications of renovation activities, turf and soil treatments, and waste disposal procedures
- safe work practices and procedures applicable to renovation activities, including:
 - safe materials handling
 - equipment and operation
 - public and turf area users
- basic surveying skills to measure the size of renovation site
- methods and purpose of field tests, including:
 - infiltration rate
 - organic fines
 - hardness
 - traction
 - surface smoothness
 - turf sward height
- identification and cultural requirements of turf grass species and cultivars, including:
 - planting and propagating
 - care and maintenance
 - renovation scheduling requirements
- specialist turf renovation practices to achieve high performance turf, including:
 - dethatching
 - top dressing
 - aerating
 - over sowing
 - fertilising and soil conditioning
 - drainage and water holding
- determining resource and material requirements for turf grass renovation program, including:
 - financial and budgetary constraints
 - consumables, including fertilisers, ameliorants and other chemicals
 - labour and contractor requirements and scheduling
 - equipment and machinery
 - turf grass propagation material
 - growing soils and media
 - expectations and specification of work quality outcomes
- tools, equipment and machinery commonly used for sports turf renovation programs, including:
 - effective and safe use of tools and machinery
 - influences on the selection of tools, machinery and safety equipment
 - common pre-operational and post-operational checks of equipment
 - adjustments and settings for renovation equipment

- assessment of safety hazards and risks when renovating turf areas, including:
 - public safety
 - barriers and exclusions zones
 - signage
 - personal protection and equipment
 - manual handling techniques for lifting or moving heavy loads and materials
- coordinating a work team and working with contractors, including:
 - communicating with team members
 - organising and directing labour
 - dealing with performance issues
- preparation of renovation plans, recording and reporting renovation activities.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports turf facility or an environment that accurately represents workplace conditions on which to prepare and implement a turf renovation plan
- resources, equipment and materials:
 - turf renovation tools, machinery and equipment
 - fertiliser, ameliorants, top dressing materials
 - turf planting and propagation materials
 - measuring and layout equipment, including levels, tape measures, boning rods, laser level, dumpy level
- specifications:
 - workplace procedures and work instructions for turf area maintenance
 - access to workplace, national and international turf grass industry standards
- relationships:
 - work team and contractors.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF505 Plan the establishment of sports turf playing surfaces

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to establish sports turf playing surfaces, develop a design for the site, its specifications and works procedures, planning processes involved in establishing turf in new constructions and major renovations of existing sports turf surfaces.

The unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Conduct site assessment and develop a performance brief for	1.1 Liaise with client to determine requirements for establishing sports turf playing surface 1.2 Assess site for hydrological, biophysical and chemical

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
sports turf playing surface	characteristics and effect on sports turf establishment 1.3 Assess and evaluate the current drainage and irrigation conditions and calculate drainage design rate 1.4 Establish a site survey to locate existing features, levels and services according to workplace and client requirements 1.5 Investigate and select turf grass species and cultivars suitable for turf establishment according to client requirements and sport play standards 1.6 Investigate and select turf area construction techniques suitable to client requirements and site characteristics 1.7 Investigate legislative and regulatory implications and solutions for proposed works 1.8 Determine environmental impact of proposed works, and recommend actions to minimise impact according to legislative and regulatory requirements 1.9 Compile results and recommendations, and develop performance brief for client approval
2. Evaluate and select sports turf profile and construction materials	2.1 Investigate and evaluate sports turf profile options consistent with client brief 2.2 Identify and select a reliable source of materials for sports turf profile options 2.3 Conduct tests to determine chemical and physical characteristics of profile materials according to industry standards 2.4 Compare test results against known performance benchmarks 2.5 Identify corrective measures to improve performance of profile materials 2.6 Assess materials against performance brief and select acceptable profile 2.7 Ensure selected sports turf profile structure is consistent with available materials and performance brief
3. Develop concept design for sports turf playing surface	3.1 Develop and design sports turf profile consistent with drainage and irrigation designs, and performance brief 3.2 Document turf establishment concept design and present to client for approval

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Determine requirements for turf establishment works	<p>4.1 Determine turf establishment procedures consistent with the concept design, site factors and available resources and equipment</p> <p>4.2 Review and confirm that concept designs for profile, drainage system and irrigation system meet performance brief and industry standards</p> <p>4.3 Determine resources and contractor requirements for construction of turf playing surface, planting of turf and turf establishment</p> <p>4.4 Prepare a list of materials and costs, and confirm availability with suppliers</p> <p>4.5 Determine achievable timelines and contingencies for preparation and construction phase</p>
5. Prepare and document turf establishment plan and specification	<p>5.1 Compile technical data for design, and reconcile against performance brief and concept plans</p> <p>5.2 Prepare and ensure final profile design meets client needs, performance brief and industry standards</p> <p>5.3 Produce scale drawings of designs according to client requirements and industry standards</p> <p>5.4 Prepare specifications for tenders based on the requirements of turf establishment work</p> <p>5.5 Develop and document procedures and schedules for establishment of sports turf playing surface according to workplace and industry standards</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Accurately interpret technical documentation from a range of sources to extract information related to turf grass profile plans and designs
Writing	<ul style="list-style-type: none"> Generate complex texts, demonstrating control over a range of writing styles and purposes to explain concepts, designs and

Skill	Description
	specifications
Oral communication	<ul style="list-style-type: none"> Determine client requirements through open-ended questioning, active listening, paraphrasing and summarising
Numeracy	<ul style="list-style-type: none"> Perform calculations for testing materials, sizing drainage pipes and flow rates, developing root zone profile designs and estimating and costing materials for a turf grass profile project
Get the work done	<ul style="list-style-type: none"> Use digital technologies for investigative, design and documentation activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF505 Plan the establishment of sports turf playing surfaces	AHCTRF501 Plan the establishment of sports turf playing surfaces	Elements 2 and 3 added Elements and performance criteria clarified Foundation skill added Performance evidence, knowledge evidence and assessment conditions expanded	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF505 Plan the establishment of sports turf playing surfaces

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, planned the establishment of a sports turf playing surface taking into consideration the soil profile, including:

- liaised with client to establish the scope of the turf establishment project
- assessed the hydrological, biophysical and chemical characteristics and their impact on turf establishment site and playing surface design
- assessed and evaluated drainage and irrigation requirements for sports turf playing surface
- established a site survey depicting key features, benchmarks, levels and services
- investigated and selected each of the following for inclusion in performance brief:
 - turf area construction technique suitable for client requirements and site characteristics
 - turf grass species and cultivars suitable for the playing surface
- identified conflicts with legislative and regulatory requirements, and proposed solutions to these
- identified environmental impacts of turf establishment and recommended actions for proposed works
- investigated and selected sports turf profile options
- developed a performance brief for a sports turf surface and presented it to client for approval
- sourced, tested and evaluated materials suitable for sports turf profile, including conducting the following tests:
 - saturated infiltration
 - porosity
 - volumetric moisture retention
 - bulk density
 - moisture release curve
 - particle size and distribution

- pH
- selected suitable materials for turf grass profile construction consistent with performance brief and industry best practice
- developed and designed a profile consistent with irrigation and drainage design requirements and performance brief
- documented turf establishment concept design and presented it to client for approval
- determined turf establishment procedures
- confirmed profile, irrigation and drainage concept designs are consistent with performance brief
- produced plans for the design of turf establishment project, including:
 - elevations and views consistent with industry standards
 - section drawings of sports turf profile
- prepared documentation to accompany the turf establishment plan, including:
 - schedule of works
 - details of construction
 - specifications for construction
 - list of materials
 - identified sub-contracted works
- prepared work procedures for turf establishment activities and practices
- prepared maintenance procedures for the turf establishment phase.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- establishing and maintaining sports turf playing surfaces, including:
 - construction procedures, turf species selection and cultural practices for sports turf playing surfaces
 - growth habits and cultural requirements of specific turf plant species and cultivars under a range of soil and environmental conditions
 - crop factor
 - readily available water estimates
- best practices in turf grass profile design, including:
 - United States Golf Association method
 - California method
 - national best practice
 - local practices
- irrigation, drainage and the interrelationship between soil, air, water and the physical structure of existing and manufactured soils and sports turf mixes
- considerations for establishment of type and depth of soil profiles, including:
 - retaining existing soil profile and infrastructure
 - remedial action on existing profile

- full renovation and replacement of soil profile
- sources of irrigation water, including:
 - volume and quality of water supply
 - relative cost
 - irrigation demand and specifications, including flow rate, pressure, water quality testing
- hydrological characteristics of soil profile, materials and tests for root zone profiles, including:
 - saturated infiltration rate and testing procedures
 - sub-soil stability and moisture content
 - perched water table
 - climate and rainfall, including the impact on soil moisture and growth rate
 - factors for establishing 'drainage design rate' (drainage modulus)
 - volumetric moisture retention and moisture release
 - precipitation rate
 - infiltration rate and depth of soil profile
- computations for soil profile design and specifications, including:
 - calculating area and volume
 - hydrological calculations, including flow rates, infiltration rate, precipitation rates and Hooghoudt's equation
 - costing and documenting materials
- biophysical environment of the turf establishment site, including:
 - microbial activity (pests, diseases, beneficial organisms)
 - competition with weeds
 - shade trees
- physical and chemical characteristics of the soil for turf grass establishment, including:
 - compaction, porosity and bulk density of profile materials
 - pH, salinity and nutrition and their respective standards for measuring
 - soil profiles, texture, soil type and particle size distribution
 - soil sampling techniques
 - field testing techniques for soils
- legislation and regulations relating to sports turf sites and turf establishment works, including national and international standards for sports turf surfaces
- maintenance requirements and practices for specific turf plant species and cultivars prior to and after initial establishment
- site evaluation techniques, including analysis of the condition of soils, plants and the site for turf establishment activities, including:
 - surveying principles and techniques
 - surveying services
 - basic surveying techniques and equipment for establishing main features, services and levels

- basic geospatial and digital surveying techniques
- basic plan drawing skills
- role of project briefs and client consultation processes in planning turf establishment works, including:
 - client liaison and negotiation skills
 - working with consultants and professional services
- preparation of plans, specifications and list of materials, including:
 - type and functions of drawings, including views, scale, dimensions and documentation
 - calculation of area, volume and rates
 - costing materials
 - documenting a list of materials
 - plan development, including manual and digital drawing principles
 - industry standards for drawing plans
- identifying resource implications, including:
 - availability and use of tools, equipment and machinery used in preparing new turf surfaces
 - turf establishment treatments and costs
 - delivery and management of raw materials during construction
 - accessing specialist consultants and professional services.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
 - access to a site suitable for establishing a sports turf surface
- resources, equipment and materials:
 - manual drawing equipment and digital drawing equipment and programs
 - computers and software for searching information and preparing documentation
 - reports, results and testing equipment for soil, plant tissue and biophysical characteristics of the site used in the performance evidence
 - site plans with levels for the site used in the performance evidence
 - meteorological data for the site used in the performance evidence
- specifications:
 - workplace documents, including a client brief, work instructions and turf area construction plans
 - local, national and international standards for turf grass establishment
- relationships:
 - client.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF506 Manage sports turf renovation programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to assess a sports turf surface and develop programs and procedures to implement renovation activities appropriate to the sport and sporting regulations.

It applies to individuals who are responsible for the management of turf renovation programs, who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess the turf renovation site	1.1 Inspect and assess turf surface condition for renovation site 1.2 Assess soil physical and chemical test results to determine soil condition and determine corrective action 1.3 Assess water quality test results to determine effect on turf growth

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>and development according to industry standards</p> <p>1.4 Assess sward cover and identify over-sowing requirements and turf grass species/varieties required</p> <p>1.5 Identify workplace health, safety and environmental hazards, assess risks and specify controls for incorporation into plan</p>
2. Select renovation technique for sports turf site	<p>2.1 Investigate and evaluate renovation techniques and practices using historical and current data</p> <p>2.2 Review renovation records to inform planned works, practices and timing</p> <p>2.3 Determine turf renovation technique for current condition of turf and intended outcome of program</p> <p>2.4 Establish timing of renovation program according to turf species cultural requirements, renovation technique, weather conditions and sport turf usage</p> <p>2.5 Produce a financial budget for turf renovation activity</p> <p>2.6 Prepare a turf maintenance program for post-renovation recovery</p> <p>2.7 Document turf renovation program</p>
3. Organise staff and resources for turf renovation project	<p>3.1 Determine machinery and equipment for renovation program, and check for working condition and settings and adjustments for sports turf renovation</p> <p>3.2 Calculate and order consumables required</p> <p>3.3 Liaise with contractors and machinery hire firms and arrange contracts according to program requirements</p> <p>3.4 Determine and sequence work requirements for the renovation program, and schedule work team and contractors</p>
4. Review and report renovation outcomes	<p>4.1 Update records for soil condition and water quality</p> <p>4.2 Update financial records with direct and indirect costs, and review against budget</p> <p>4.3 Record and report renovation practices and outcomes</p> <p>4.4 Review actual against planned renovation activities and recommend improvements for future renovation work</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Accurately interpret sporting rules and regulations
Writing	<ul style="list-style-type: none"> Generate renovation programs using a range of writing styles
Numeracy	<ul style="list-style-type: none"> Analyse and synthesise mathematical information from a range of tasks and texts to develop schedules and specifications

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF506 Manage sports turf renovation programs	AHCTRF502 Manage sports turf renovation programs	Performance criteria clarified Foundation skills added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF506 Manage sports turf renovation programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared a renovation management program for at least three sports turf playing surfaces from the following list:

- a single hole for a golf course with tees and surrounds, rough, fairways and green
- a bowling green
- a cricket ground wicket surface and outfield
- a ball sport surface selected from one of Australian Rules football, soccer or rugby
- a horse race track
- a sport turf surface selected from one of lawn tennis, lacrosse, hockey, polo or croquet.

There must also be evidence that the individual has:

- inspected and assessed turf surface for condition
- assessed soil test results and determined corrective action
- assessed water quality tests and determined effect on turf growth
- assessed grass sward cover and identified species and over-sowing requirements
- reviewed historical records and practices and determined a turf renovation technique for current conditions and desired outcomes
- identified work health, safety and environmental hazards, assessed risks and identified control measures to include in plan
- documented a turf renovation plan and schedule of works
- produced and reviewed a cost budget for the project
- determined suitability and operational status of machinery and equipment and specified settings and adjustments
- identified and liaised with team and contractor for expected works
- prepared a schedule of works
- calculated materials and ordered goods, services and contractors required for the renovation
- prepared a post-renovation turf recovery maintenance program

- updated records and reported outcomes for renovation program
- reviewed program outcomes against plan, and recommended future adjustments.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- comparative health, safety and environmental implications of renovation activities, turf and soil treatments and waste disposal
- enterprise and industry standards for turf surface appearance and quality
- field measurement techniques, including infiltration rate, organic fines, hardness, traction, and surface smoothness
- impact of environment on turf recovery, including:
 - climatic conditions
 - soil temperature
 - moisture
- turf grass species and cultivars, including:
 - planting
 - care
 - renovation scheduling
- requirements of the turf's intended use, including intensity and scheduling
- soil physical and chemical properties for imported and existing soils
- specialist turf renovation principles and practices, including:
 - aeration
 - thatch removal
 - topdressing and dusting
 - over-sowing
 - application of soil ameliorants
 - removal of over-sown species
 - turf nutrition and plant growth regulators
- scheduling, program management and time management tools and Gantt charts
- developing and managing budgets, including:
 - direct costs
 - indirect costs
 - fixed or variable costs
- enterprise, national and international industry standards for sports turf surface appearance, performance and quality
- safe work practices and procedures applicable to renovation planned activities, including:
 - materials handling
 - equipment and operation
 - public and turf user safety

- purpose and methods of field measurement tests, including:
 - infiltration rate
 - organic fines
 - hardness
 - traction
 - surface smoothness
 - turf sward height
- identification and cultural requirements of turf grass species and cultivars, including:
 - planting
 - propagating
 - care and maintenance
 - renovation scheduling requirements
- specialist turf renovation practices to achieve high performance turf, including:
 - dethatching
 - topdressing
 - aerating
 - de-compaction
 - over-sowing
 - fertilising and soil conditioning
 - adjusting drainage and water holding
- establishing and estimating resource and material requirements for turf grass renovation programs, including:
 - financial and budgetary considerations
 - consumables
 - labour and contractor requirements and scheduling
- tools, machinery and equipment used in turf renovation, including:
 - log books and operation status
 - adjustments and settings of tynes and blades
 - types of equipment and their purpose
 - effective and safe use of tools and machinery
 - influences on the selection of tools, machinery and safety equipment
 - common pre-operational and post-operational checks of equipment
- managing techniques and working with a work team and contractors, including:
 - communicating with work team
 - organising and directing labour
 - dealing with performance issues
- preparation of renovation plans, recording and reporting renovation activities.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a sports turf facility or an environment that accurately represents workplace conditions with access to at least three sites suitable for sports turf surface renovation stipulated in the performance evidence
- resources, equipment and materials:
 - computer software for documenting plans and preparing schedules
 - reports, results and testing equipment for soil and plant tissue
- specifications:
 - workplace procedures and site plans for sports turf renovation
 - local, national and international standards for sports turf grass conditions
- relationships:
 - work team and contractor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF507 Develop sports turf management programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop short-term, annual and ongoing sports turf establishment, management and maintenance programs, for the extension, redesign, upgrade and renovation of sports turf surfaces using an organisation's available resources.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine scope and objectives of turf management program	1.1 Identify key stakeholders to determine program scope 1.2 Liaise with key stakeholders to determine the objectives of management program 1.3 Investigate technical requirements for managing sports turf

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>playing surfaces according to sport rules and regulations and legislative requirements</p> <p>1.4 Document the scope and objectives in a program brief</p>
2. Research turf management principles and practices	<p>2.1 Investigate trends in sports turf cultural and management practices relative to site conditions</p> <p>2.2 Investigate the impact of workplace health and safety regulations on sports turf facility management programs</p> <p>2.3 Investigate the impact of environmental regulations on sports turf facility management programs</p>
3. Develop turf management program	<p>3.1 Assess availability and quality of assets and resources used for sports turf maintenance</p> <p>3.2 Assess sports turf condition, characteristics and intended usage against quality and industry standards for sport</p> <p>3.3 Estimate the program duration and resource requirements for management program</p> <p>3.4 Develop program specifications and schedule for management program</p> <p>3.5 Develop a list of materials and financial budget for management programs</p> <p>3.6 Document sports turf management program</p>
4. Communicate turf management program	<p>4.1 Develop a communications strategy for sports turf site, and prepare presentation materials according to workplace and stakeholder requirements</p> <p>4.2 Present the management program to key stakeholders according to communications strategy</p>
5. Review and update turf management program	<p>5.1 Review historical maintenance activities against planned and recommend improvements</p> <p>5.2 Review and update turf management program against historical data</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret sporting rules, legislation and regulations to identify and synthesise information that is critical to the development of sports turf management programs
Writing	<ul style="list-style-type: none"> Generate complex management programs using a range of writing styles
Oral communication	<ul style="list-style-type: none"> Determine stakeholder requirements through open-ended questioning, active listening, paraphrasing and summarising
Numeracy	<ul style="list-style-type: none"> Analyse and synthesise mathematical information from a range of tasks and texts to develop schedules and specifications

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF507Develop sports turf management programs	AHCTRF503 Develop sports turf management programs	Performance criteria clarified Foundation skills added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF507 Develop sports turf management programs

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed a management program spanning a 12-month period for at least two sports turf surfaces from the following:

- a single hole for a golf course, including tee and surrounds, rough, fairways and green
- a bowling green
- a cricket surface, including the wicket surface and outfield
- a ball sport selected from one of Australian Rules football, soccer or rugby
- a horse race track
- a sport turf surface selected from one of lawn tennis, lacrosse, hockey, polo or croquet.

There must also be evidence that the individual has:

- liaised with key stakeholders and investigated technical requirements for managing a sports turf site
- determined the scope and objectives of management program and documented in a project brief
- researched turf culture, management principles and practices, health and safety and environmental implications of managing sports turf surface
- assessed availability and quality of resources to inform maintenance program design
- assessed the condition, characteristics and usage of existing turf surface to inform maintenance program design
- developed specifications and schedule of works using a Gantt chart
- developed a list of materials and financial budget for turf management program
- communicated turf management program to key stakeholders according to workplace procedures, including:
 - a digital written report
 - a presentation to a group of stakeholders
- reviewed and documented in an electronic format at least one turf management program against actual works

- communicated planned changes and works achieved by the management program with a verbal presentation of at least 15 minutes' duration
- recorded and reported activities and changes for maintenance program according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- management programs structure, design and development
- project management and scheduling, including:
 - project management tools and software
 - creating and using Gantt charts
- maintaining quality of sports turf, including:
 - impact of type of sport and frequency of usage on turf quality
 - turf varieties and characteristics
 - users' expectations
 - sport regulatory requirements
- cultural requirements of sports turf surfaces, including:
 - turf grass species, varieties and cultivars
 - soil type, characteristics, tests and interpreting results
 - nutritional requirements for different stages of turf development
 - impact of climate on turf grass species and varieties
 - sports turf maintenance requirements and techniques
 - turf establishment techniques and requirements
- sources of water supply and measures of quality, including:
 - testing and interpreting results
 - impact of water quality on soils and turf
 - advantages and disadvantages of sources of water
 - volume of water, irrigation performance and water budgets
- key stakeholders and their importance in developing a sports turf management plan, including:
 - clients and their needs
 - senior management and relevant authorisations
 - employees and their role in implementation
 - contractors and their role in implementation
- workplace health, safety and environmental constraints on management programs, including:
 - legislative requirements
 - storing and use of agricultural chemicals
 - accessing, storing and using hazardous materials

- safety procedures and practices
- strategies to communicate management programs to key stakeholders, including:
 - documentation
 - oral presentations
 - visual presentations
 - electronic presentations
- assets required for sports turf maintenance, including:
 - quality water supply
 - equipment and machinery
 - suitably trained human resources
 - materials and consumables
- record keeping and reporting procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a sports turf facility or an environment that accurately represents workplace conditions
 - access to two sporting venues specified in the performance evidence
- resources, equipment and materials:
 - internet access and computers for researching and documenting a sports turf management program
- specifications:
 - workplace procedures relevant to the development of sports turf management programs
 - sports turf industry standards
 - rules, regulations and standards for two of the sports specified in the performance evidence
- relationships:
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCTRF508 Manage sports turf facility assets

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to manage physical resources, infrastructure and assets for sports turf playing surfaces at sporting venues and clubs.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Turf (TRF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a sports turf facility asset database	1.1 Identify sports turf physical resources and infrastructure 1.2 Categorise sports turf physical resources and infrastructure according to type and maintenance requirement 1.3 Record resources and infrastructure into sports turf facility assets

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	register according to workplace data management procedures
2. Determine maintenance requirements for turf facility assets	<p>2.1 Establish program maintenance requirements and resources for turf facility assets according to workplace and manufacturer specifications</p> <p>2.2 Establish program maintenance schedules for equipment and machinery assets according to manufacturer specifications</p> <p>2.3 Purchase and store resources and consumables required for maintenance of turf facility assets</p>
3. Schedule and monitor program of maintenance works	<p>3.1 Establish the timing of maintenance activities for workplace facility assets according to workplace and manufacturer specifications</p> <p>3.2 Document a maintenance schedule for turf facility assets</p> <p>3.3 Develop, implement and monitor record keeping procedures for maintenance of turf facility assets</p> <p>3.4 Communicate maintenance activities, schedules and recording procedures to stakeholders</p> <p>3.5 Review safe work procedures associated with maintenance of turf facility assets</p> <p>3.6 Ensure unserviceable sports turf facility assets are recorded on replacement schedule</p>
4. Review maintenance works	<p>4.1 Review maintenance schedules and update maintenance programs according to workplace timeframes</p> <p>4.2 Assess and report status of turf facility assets and recommend upgrade, replacement or disposal</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and evaluate manufacturer instructions to identify and synthesise critical information into programs to manage sports turf asset

Skill	Description
Writing	<ul style="list-style-type: none"> Use industry and other specialised terminology when documenting maintenance programs
Numeracy	<ul style="list-style-type: none"> Analyse and synthesise mathematical information from a broad range of materials to develop maintenance schedules and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCTRF508 Manage sports turf facility assets	AHCTRF504 Manage sports turf facility assets	Performance criteria clarified Foundation skills added Performance evidence, knowledge evidence and assessment conditions expanded	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCTRF508 Manage sports turf facility assets

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, managed sports turf facility assets, including:

- identified sports turf facility assets, categorised them into type and maintenance requirements and recorded in workplace asset register or database
- determined maintenance requirements, resources and timing of maintenance and developed a schedule for sports turf facility, equipment and mechanical assets
- developed and implemented maintenance record keeping procedures for sports turf facility assets
- communicated sports turf facility assets maintenance schedule and procedures to stakeholders
- monitored maintenance work and safety procedures for sports turf facility assets
- reviewed and updated replacement programs and schedules
- assessed and reported status of sports turf facility assets, and recommended action when identified as unserviceable.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- management strategies for managing sports turf facility assets and effect on key stakeholders
- typical sports turf facility assets, including:
 - buildings and structures
 - tools, machinery and equipment
 - water supply, irrigation and drainage equipment
 - office equipment and resources

- gardens and surrounds
- fencing
- sporting hardware
- maintenance requirements of sports turf physical resources and infrastructure, including:
 - repairs
 - manufacturer specifications
 - regular service requirements and scheduling
 - standards and specifications
- recording asset management, including:
 - information to be recorded
 - proprietary software
 - paper or electronic databases
- scheduling and programming of sports turf maintenance works, including replacement plans and depreciation
- workplace health and safety procedures for overseeing asset maintenance programs, including:
 - safe operating procedures and practices
 - designating required personal safety equipment
- communication strategies and methods for informing stakeholders of maintenance programs
- procedures for reporting and recording maintenance activities.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - access to a sports turf facility or an environment that accurately represents workplace conditions with assets on which to develop a maintenance program
- specifications:
 - workplace procedures and instructions for managing sports turf facility
 - manufacturer maintenance instruction for assets
- relationships:
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWAT201 Set up, operate and maintain water delivery systems for compost

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to set up, operate and maintain water delivery systems for composting.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Water (WAT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to set up a water delivery system	1.1 Confirm details of location 1.2 Select and use hoses, tools and equipment and components 1.3 Identify appropriate water sources on site

Element	Performance criteria
	1.4 Identify workplace health and safety hazards associated with task 1.5 Select and use appropriate personal protective equipment 1.6 Measure and mark out water delivery lines 1.7 Set up water delivery system
2. Operate a water delivery system	2.1 Commence water delivery 2.2 Set water application rate 2.3 Check all pipes, hoses and all joints and confirm they are secure and leak free 2.4 Check and operate pumps
3. Check the efficiency of a water delivery system	3.1 Check the water application rate and distribution 3.2 Inspect water delivery system for operating faults and dry areas 3.3 Look for variations from required rate or settings, leaks, operating faults and dry areas at any stage in process 3.4 Carry out remedial action 3.5 Record the amount of water delivered to location

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWAT201A Set up, operate and maintain water delivery systems for compost.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWAT201 Set up, operate and maintain water delivery systems for compost

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and adopt safe work practices
- interpret site water management plan and site operating plan or map
- observe faults and variations from required settings
- operate pumps
- record water application data
- set out and operate watering systems

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices compost water delivery systems
- characteristics and operation of joints, hoses, valves and sprinkler components
- components of water delivery system
- methods and techniques of water delivery
- procedures for safe use of equipment, such as powered and hand tools, as used in water delivery system maintenance
- reporting and recording requirements
- standard industry risk-control measures to minimise risk associated with setting up and operating a water delivery system
- workplace health and safety and environmental legislation and enterprise requirements

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWAT301 Monitor and operate water treatment processes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor, operate, measure, adjust and report water (including waste water) treatment performance and process control.

It applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Water (WAT)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare for work	1.1 Identify work plans and clarify with supervisor 1.2 Select and carry out pre-operational and safety checks on tools, equipment and machinery 1.3 Identify work health and safety hazards, assess risks and

Element	Performance criteria
	implement suitable controls 1.4 Select, use and maintain suitable safety and personal protective equipment
2. Monitor water treatment plant performance	2.1 Conduct routine inspections of treatment equipment 2.2 Collect water samples and conduct standard tests or send samples for analysis where required by the biosecurity and food safety codes 2.3 Collect data on treatment process and record and report in appropriate manner
3. Control chemical use	3.1 Use, handle and store chemicals appropriately 3.2 Prepare chemical dosing 3.3 Maintain information related to chemical supply and usage
4. Operate and control water treatment processes	4.1 Monitor water and waste water treatment processes to maintain parameters of operation 4.2 Identify and report process faults and operational conditions of treatment equipment 4.3 Initiate basic equipment and process adjustments to enhance performance
5. Complete work	5.1 Compile reports from equipment and water treatment processes 5.2 Clean and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWAT301A Monitor and operate water treatment processes.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWAT301 Monitor and operate water treatment processes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- identify control system faults
- identify hazards and implement safe work procedures
- prepare and apply chemical dosing
- use water sampling and testing techniques

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for monitoring and operating water treatment processes
 - chemical dosing processes
 - environmental impacts of irrigation using water from any ground or underground source
 - environmental issues associated with water treatment
 - hazardous materials handling
 - water quality monitoring methods and techniques
 - water treatment and water filtration techniques
 - work health and safety procedures relating to the operation of machinery and the use of chemicals

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWAT302 Monitor and operate water treatment processes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to plan, monitor, control, operate, measure, adjust and report water and waste water treatment performance and process control.

The unit applies to individuals who monitor and operate water treatment processes under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, food safety codes, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Water (WAT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for work	1.1 Interpret work plans and identify potential hazards and risks and safe working practices to manage risks, and clarify with supervisor 1.2 Select and use required tools, equipment and machinery, and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>check for safe operations</p> <p>1.3 Select, fit, use and maintain safety and personal protective equipment applicable to the task</p>
2. Monitor water treatment plant performance	<p>2.1 Conduct routine inspections of treatment equipment</p> <p>2.2 Collect water samples and conduct standard tests or send samples for analysis according to food safety codes, biosecurity practices and workplace procedures</p> <p>2.3 Collect, record and report treatment process data according to workplace procedures</p>
3. Control chemical use	<p>3.1 Use, handle and store chemicals according to workplace health and safety procedures</p> <p>3.2 Prepare chemical dosing according to workplace health and safety procedures</p> <p>3.3 Maintain information related to chemical supply and usage according to workplace health and safety procedures</p>
4. Monitor and control water treatment processes	<p>4.1 Monitor water and waste water treatment processes to maintain parameters of operation</p> <p>4.2 Identify and report process faults and operational conditions of treatment equipment according to workplace procedures</p> <p>4.3 Initiate basic equipment and process adjustments to enhance performance</p> <p>4.4 Minimise environmental impacts of water treatment processes</p>
5. Complete work	<p>5.1 Clean and return tools, equipment and machinery to required location</p> <p>5.2 Identify and report unserviceable tools, equipment and machinery according to workplace procedures</p> <p>5.3 Record equipment and water treatment processes according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about water treatment plant operations
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to complete equipment and water treatment process records
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to confirm and report water treatment activities, and tool, equipment and machinery unserviceability
Numeracy	<ul style="list-style-type: none"> Calculate ratios for chemical dosing

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCWAT302 Monitor and operate water treatment processes	AHCWAT301 Monitor and operate water treatment processes	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWAT302 Monitor and operate water treatment processes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has monitored and operated water treatment processes on at least two occasions, and has:

- applied workplace health and safety requirements applicable to monitoring and operating water treatment processes
- applied food safety codes, environmental and biosecurity practices and workplace procedures applicable to monitoring and operating water treatment processes
- used water sampling and testing techniques
- recorded and reported equipment and water treatment processes according to workplace procedures
- prepared and applied chemicals
- identified and reported process faults
- minimised environmental impacts of water treatment processes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace health and safety requirements applicable to monitoring and operating water treatment processes
- food safety codes, environmental and biosecurity practices and workplace procedures applicable to monitoring and operating water treatment processes
- workplace recording and reporting procedures
- the principles and practices for monitoring and operating water treatment processes, including:
 - chemical dosing processes
 - environmental impacts of irrigation using water from any ground or underground source

- environmental issues associated with water treatment
- hazardous materials handling
- water quality monitoring methods and techniques
- water treatment and water filtration techniques.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - water treatment tools, equipment and machinery
 - water treatment testing equipment and chemicals
 - personal protective equipment applicable to monitoring and operating water treatment processes
 - principles and practices for monitoring and operating water treatment processes
- specifications:
 - workplace health and safety requirements applicable to monitoring and operating water treatment processes
 - food safety codes, environmental and biosecurity practices and workplace procedures applicable to monitoring and operating water treatment processes
 - workplace recording and reporting procedures
- relationships:
 - supervisor
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWAT503 Manage water systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to determine the feasibility of using or up-grading an irrigation system, install or maintain an irrigation or drainage system, monitor and assess water inputs, irrigation system and plant response and evaluate irrigation system performance.

The unit applies to individuals who apply specialised skills and knowledge to the management of water systems, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Water (WAT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess soil and water resources for crop and plant type	1.1 Identify suitability of soil and water resources for irrigation 1.2 Determine range of crops and plant types that could be grown in soil utilising available water resources

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Select crop and/or plant type based on assessment
2. Determine the feasibility of using or up-grading irrigation system	<p>2.1 Assess water resources and drainage implications to determine suitability for irrigation</p> <p>2.2 Determine water quality and treatment requirements</p> <p>2.3 Determine water requirements and most suitable application systems for each crop and plant type and area, and for each soil type</p> <p>2.4 Determine other water requirements, such as climate control</p> <p>2.5 Determine drainage requirements in relation to each soil and crop and plant type and type of irrigation system</p> <p>2.6 Assess performance data, audit reports, environmental and workplace health and safety data for existing systems</p> <p>2.7 Obtain information from irrigation specialists on all relevant aspects of irrigation design</p> <p>2.8 Assess and cost available irrigation system types and components and make a decision on the particular system to be used or upgrades to existing system</p>
3. Install or maintain an irrigation or drainage system	<p>3.1 Determine and acquire materials and equipment making up the system</p> <p>3.2 Install irrigation system using advice, as necessary, from irrigation specialists</p> <p>3.3 Check that irrigation and drainage systems are supervised to ensure there are no leaks or blockages</p> <p>3.4 Confirm that the water is being evenly distributed and that the drainage is effective and the system is in good working order</p>
4. Assess the need for water inputs	<p>4.1 Assess the need for water inputs at critical growth stages</p> <p>4.2 Consider crop value and induce appropriate water regimes including frost protection where appropriate</p> <p>4.3 Utilise soil moisture monitoring data</p> <p>4.4 Consider weather forecast, seasonal weather outlook, water allocations and water quality</p> <p>4.5 Consider energy costs in water application timing</p>
5. Monitor irrigation system and plant	<p>5.1 Identify volume and quality of water flow</p> <p>5.2 Plan scheduled irrigation system maintenance work to ensure</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
response	minimised disruption to watering activities 5.3 Monitor plant response to irrigation 5.4 Modify irrigation scheduling to minimise water wastage and maximise outcomes 5.5 Record irrigation system water usage according to workplace procedures
6. Evaluate irrigation system performance	6.1 Determine and value plant growth, crop quality and yield from irrigation 6.2 Calculate the cost of irrigation 6.3 Identify and minimise poor water usage practices 6.4 Determine the cost benefit of irrigation and compare with alternative systems and approaches

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding irrigation system design Identify and interpret workplace procedures regarding irrigation system use
Oral communication	<ul style="list-style-type: none"> Initiate discussions with suppliers, using clear language to communicate irrigation requirements
Numeracy	<ul style="list-style-type: none"> Access and analyse performance data, audit reports, environmental and workplace health and safety data for existing irrigation systems Calculate the cost of irrigation and determine the cost benefit of irrigation and alternative systems and approaches
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCWAT503 Manage water systems	AHCWAT502 Manage water systems	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWAT503 Manage water systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed water systems on at least one occasion and has:

- assessed soil and water resources
- analysed performance and audit data
- assessed environmental and workplace health and safety data
- monitored and assessed water inputs
- monitored and evaluated irrigation system performance
- strategically managed irrigated production systems, including:
 - considered energy costs
 - minimised water wastage
 - prevented poor water usage practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of water systems management, including:
 - cost or benefit analysis
 - workplace policies and procedures
 - environmental impacts of irrigation, using water from any ground or underground source
 - plant requirements
 - natural water system retention and storage
 - soil moisture storage
 - use of yeomans keyline or swales
 - assessing water inputs

- strategies for reducing water evaporation and transpiration
- water quality maintenance.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - performance data, audit reports, environmental and workplace health and safety data for existing systems
 - alternative system information
- specifications:
 - irrigation system design information
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWAT504 Design water treatment systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to identify design requirements, determine specifications, pumping and power system requirements, capital expense and operating expense budgets, and design water treatment systems.

The unit applies to individuals who apply specialised skills and knowledge to the design of water treatment systems, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Water (WAT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine design requirements	1.1 Determine the quality of water to be treated and level of treatment required to meet water treatment system quality requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Develop construction specifications that define the work required to treat water</p> <p>1.3 Identify and protect environmentally sensitive areas according to local, state and federal legislation and regulations</p> <p>1.4 Document design calculations and requirements</p>
2. Determine pumping and power system requirements	<p>2.1 Identify and select pumps that can treat water efficiently and at the flow and the pressure required to operate the distribution system</p> <p>2.2 Select pump and pump motor combinations that are efficient, reliable, functional, serviceable and flexible for the intended application</p> <p>2.3 Determine energy requirements and layout of electricity lines, and check with local authorities</p> <p>2.4 Optimise the relationship between capital and operational costs, and compare energy sources</p> <p>2.5 Select structures, valves and accessories and integrate into a functional system that can be monitored and maintained</p> <p>2.6 Document performance indicators, design calculations and decisions</p> <p>2.7 Design construction specifications that define the work required to make a suitable pumping and power system</p>
3. Design a water treatment system	<p>3.1 Evaluate treatment systems and design with respect to a range of key variables</p> <p>3.2 Size pipes, valves and fittings according to design system specifications so that capital cost is balanced against operation costs over the anticipated system life</p> <p>3.3 Calculate and document flows, water levels and pressures so that they are within the acceptable tolerances for optimum performance</p> <p>3.4 Confirm that flows, water levels and pressures are achievable by the pumps operating at optimum efficiency</p> <p>3.5 Include mechanisms for controlling and adjusting pressure in system design</p>
4. Determine capital expense budget	<p>4.1 Document design calculations and decisions, and communicate relevant information through plans, specifications and manuals</p> <p>4.2 Determine and document materials required from plans and</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	specifications 4.3 Estimate labour requirements based upon documented work schedule with reasonable allowance for variances in work schedules 4.4 Base costing attributed to each component on quoted information from suppliers, or sound analysis of individual elements 4.5 Document capital expense budget 4.6 Confirm design and capital expense budget output with an appropriately experienced and qualified person
5. Determine operating expense budget	5.1 Calculate an operating expense budget that includes all expenses applicable to the completed system 5.2 Document operating expense budget

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding design requirements for water treatment system, including environmentally sensitive areas
Writing	<ul style="list-style-type: none"> Develop and document construction specifications, performance indicators and design calculations
Oral communication	<ul style="list-style-type: none"> Initiate discussions with local authorities, using clear language to communicate energy requirements, check layout of electricity lines and confirm power supply design specifications Use clear communications with appropriately experienced and qualified person to discuss design output and capital expense budget outputs
Numeracy	<ul style="list-style-type: none"> Calculate water flows, levels and pressures Calculate and document capital and operating expense budgets

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCWAT504 Design water treatment systems	AHCWAT501 Design water treatment systems	Minor changes to application Major changes to performance criteria Foundation skills added Assessment requirements updated	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWAT504 Design water treatment systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has designed a water treatment system on at least one occasion, and has:

- identified system design requirements
- documented construction specifications, performance indicators and design calculations
- collected and analysed information for the design of a water treatment system
- identified adverse environmental impacts of water treatment activities, and documented appropriate remedial actions
- calculated and documented capital and operating expense budgets
- developed water treatment system specifications.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of water treatment system design, including:
 - automatic control and monitoring systems
 - budgeting, contractual development and obligations
 - design processes
 - developments in water treatment technology
 - environmental impacts of water treatment
 - environmental protection agency regulations
 - waste management and environmental issues
- workplace health and safety and environmental protection legislation and regulations, codes of practice and workplace policies and procedures relevant to water treatment system design
- water treatment systems, including pumping and power systems.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - water treatment system site
 - site information and data relevant to water treatment system design
- specifications:
 - local, state and federal workplace health and safety and environmental protection legislation, regulations, codes of practice and workplace requirements applicable to water treatment system design
- relationships:
 - local authorities, appropriately experienced and qualified person
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWHS502 Manage work health and safety processes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to develop health and safety policies and procedures that demonstrate enterprise commitment to health and safety in the workplace.

This unit applies to individuals who develop and implement systems to manage health and safety in the workplace. In this role, individuals analyse information and exercise judgement to complete a range of advanced, skilled activities.

All work must be conducted in accordance with relevant legislative requirements, Codes of Practice, workplace procedures and safe work practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Work health and safety (WHS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop health and safety policies and procedures	1.1 Develop a health and safety management plan and program for the enterprise in consultation with designated personnel and management 1.2 Clearly define and allocate health and safety responsibilities and duties and include them in job descriptions and duty statements for all

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	relevant positions 1.3 Identify, seek and allocate financial and human resources for implementing health and safety policies and procedures 1.4 Provide and explain information on the health and safety system, for the area of responsibility, in a form which is readily understood by employees
2. Establish and maintain processes to ensure the participation of all employees in the application of health and safety	2.1 Establish and maintain consultation processes with employees and their representatives 2.2 Deal with issues raised through participation and consultation and resolve them promptly and effectively 2.3 Provide information about the outcomes of participation and consultation in a manner readily accessible to employees 2.4 Provide information on injury management and return to work programs
3. Establish and maintain procedures for managing work health and safety risks	3.1 Identify existing and potential hazards and risks in accordance with trends identified in health and safety records 3.2 Integrate the risk management process for the ongoing identification of hazards, risk assessment, control and review of risks within systems of work and procedures 3.3 Monitor activities to ensure that the procedure is effectively adopted throughout areas of responsibility 3.4 Address work health and safety hazards and risks at the planning, design and evaluation stages of any change in the workplace to ensure that new hazards and risks are not created 3.5 Investigate, record and report incident and dangerous occurrences in accordance with legal requirements and enterprise procedures
4. Plan and manage enterprise procedures for dealing with potential emergency events	4.1 Identify, with accuracy, potential emergencies posing risks to the health and safety of workers and the public 4.2 Develop plans and procedures, which control the risks associated with potential emergency events, in consultation with relevant emergency services
5. Establish and maintain a health and safety induction and training program	5.1 Develop a health and safety induction program to meet the health and safety needs of new employees and visitors to the workplace 5.2 Develop a health and safety training program as part of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	supervisors' and employees' general training
6. Establish and maintain a system for health and safety records	6.1 Establish and monitor a system for keeping health and safety records to allow identification of patterns of occupational injury and disease in the enterprise 6.2 Regularly update records and use them to evaluate the effectiveness of the enterprise health and safety system
7. Evaluate the enterprise health and safety system	7.1 Assess the effectiveness of the health and safety system according to enterprise aims with respect to health and safety 7.2 Develop and implement improvements to the health and safety system to ensure more effective achievement of enterprise aims

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Develop policies and procedures that provide clear and succinct guidance for employees
Numeracy	<ul style="list-style-type: none"> Create graphs utilising health and safety data to summarise relevant activity

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCWHS502 Manage work health and safety processes	AHCWHS501 Manage work health and safety processes	Elements removed Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet at: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWHS502 Manage work health and safety processes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has managed work health and safety processes for at least one enterprise, including:

- developed health and safety policies and procedures that demonstrate enterprise commitment to health and safety
- established and maintained arrangements to ensure the involvement of all employees in the management of health and safety in the workplace
- established and maintained procedures for identifying hazards, assessing risks, controlling risks, and dealing with emergency events
- established and maintained a health and safety induction and training program
- established and maintained a system for health and safety records
- analysed and recorded health and safety data
- evaluated the enterprise health and safety system and related policies, procedures and programs.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- data and documentation for industry injury statistics
- legislated employer and employee health and safety responsibilities
- significant hazards and areas of risk in the workplace
- all relevant health and safety legislation and codes of practice consistent with the hierarchy of health and safety risk control and its implementation for hazards in land-based industries
- requirements of workplace discrimination, harassment and bullying legislation
- risk control measures
- the hierarchy of risk controls
- systems to manage health and safety data and procedures

- public safety issues
- local emergency response organisations.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to health and safety data for an enterprise
- specifications:
 - health and safety legislation and codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet at: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK203 Operate in isolated and remote situations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan, prepare for and work safely in isolated and remote situations.

The skills and knowledge described in this unit underpin a broad range of activities applicable to job roles throughout the horse industries at various levels.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan for operating in remote environments	1.1 Collate and record information relating to the operating environment and location

Element	Performance criteria
	1.2 Establish detailed operating and travel plans, including a disaster plan and fallback position requirements in consultation with supervising staff 1.3 Notify the appropriate authorities of the action plans and time schedules 1.4 Identify and source relevant maps 1.5 Assess factors that may impact on public and personal health and safety and the environment, for consideration in preparations
2. Prepare for operating in remote environments	2.1 Prepare personal needs for activities or travel in remote areas 2.2 Prepare transportation and equipment for use in prescribed work location or along prescribed routes 2.3 Obtain and study relevant maps prior to departure 2.4 Record planned activities and itinerary prior to departure 2.5 Identify weather patterns and indicators
3. Prepare for emergency situations	3.1 Confirm that provisioning meets expected operational and possible emergency needs 3.2 Use initial planning and regular monitoring to ensure structured usage of available provisions and resources 3.3 Structure an operating plan to include training in remote area survival techniques prior to operating in remote situations 3.4 Include emergency management procedures as an integral part of operating plans and enterprise policy
4. Operate in remote environment	4.1 Complete activities according to instructions and established time schedules 4.2 Use bushcraft skills to modify the living environment where necessary 4.3 Carry out all activities in remote situations in accordance with prescribed procedures 4.4 Handle emergency situations in accordance with prescribed procedures 4.5 Follow established reporting procedures on completion of planned activities and on return to base

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK203A Operate in isolated and remote situations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK203 Operate in isolated and remote situations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan and prepare for operating in remote environments
- prepare for emergency situations
- source and interpret maps of the area
- operate in remote environments
- implement workplace procedures to notify location, activities and travel
- prepare provisions to cover essential and emergency needs
- preparing communication equipment
- use bushcraft skills to modify the living environment and reduce the risk of mishap
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- map reading and navigation skills including direction finding (including GPS, use of compass, stars or watch)
- local topography, nearby inhabitants and locations within that area
- survival techniques and human needs relating to survival situations
- clothing requirements for sun or heat protection
- first aid procedures for common injuries
- bush craft including making a fire, cooking and wild food gathering
- water supplies, sources and generation methods
- emergency vehicle and mechanical equipment repair

- the operation of communication equipment (including field communications by two-way, satellite telephony or HF radio), and distress signalling including use of signalling mirrors
- weather patterns and indicators
- work health and safety in the context of work in isolated and remote situations
- environmental impacts of work in isolated and remote situations
- rope skills including useful knots including: reef, clove hitch, truckie's hitch, and bowline; simple lashings and tying down of loads.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK503 Prepare reports

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare comprehensive reports.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in a specific technical area and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Research material	1.1 Identify and describe the topic of the report 1.2 Determine the sources of information 1.3 Collect and organise information appropriate to the task
2. Evaluate information	2.1 Confirm that information collected is relevant and sufficient to

Element	Performance criteria
	provide a full report 2.2 Seek clarification where information is unclear or difficult to understand and seek assistance if required 2.3 Obtain additional information where available information is inadequate 2.4 Assess information for its validity and reliability and organise into a suitable form to aid decision making 2.5 Confirm that conclusions drawn from relevant information are based on reasoned argument and appropriate evidence
3. Produce a document	3.1 Use language that is applicable to the task and audience 3.2 Organise the document logically, and confirm it is structured and balanced according to purpose, audience and context 3.3 Format the document 3.4 Confirm that conclusions reached reflect the stated objectives of the report 3.5 Complete preparation within the specified timeframe 3.6 Follow enterprise and work health and safety requirements and procedures
4. Deliver a verbal presentation	4.1 Confirm language is applicable to the task and audience 4.2 Use concise and well presented support materials are used in oral presentations 4.3 Allocate sufficient time to allow clear presentation of the desired topic 4.4 Deliver verbal presentation is delivered within a specified time

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK503A Prepare reports.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK503 Prepare reports

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify the purpose of the report and verify it with the client
- conduct research and compile information
- draw conclusions from research supported by reasoned argument and supporting information
- make recommendations if required and reference to information and conclusions
- produce a correctly formatted report document that uses appropriate language and terminology, is arranged in a logical order, and provides details on information sources and consultation
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- information and research sources
- report structure and presentation
- public presentation techniques and approaches.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK505 Manage trial and research material

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage a trial and research material as part of a designated research project.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in a specific technical area and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify scope and extent of work	1.1 Identify trial and research hypothesis and parameters as required by researchers 1.2 Plan the trial or research to meet research objectives 1.3 Assess the data relevant to managing trial or research materials according to research parameters

Element	Performance criteria
	1.4 Assess data relevant to managing trial or research materials 1.5 Identify work health and safety, assess risks and develop controls and cost and document in the survey design 1.6 Identify and cost tools, equipment and machinery required for managing trial or research materials and confirm availability with suppliers, contractors and appropriate personnel 1.7 Determine research design according to the trial or research plan
2. Oversee management of trial/research materials	2.1 Prepare, maintain and monitor trial or research in line with project parameters 2.2 Conduct field work to verify and collect data as required by the trial or research design and research parameters 2.3 Monitor work activities for accuracy, validity and compliance to the parameters of the trial or research design 2.4 Undertake staged data collection as required by the trial or research design, scheduling and access requirements 2.5 Record monitoring and data
3. Prepare reports on work complete	3.1 Record collected data 3.2 Analyse data statistically to determine significance of research results 3.3 Accept or reject hypothesis based on data collected 3.4 Produce reports which conform to the structure and content required by the researcher

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK505A Manage trial and/or research material.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK505 Manage trial and research material

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- define the purpose of the trial
- identify scope and extent of work
- collate data
- oversee management of trial and research materials
- comply with legislative and enterprise requirements
- draw conclusions and apply findings of trials and research
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- scheduling and programming work within timelines
- ecological principles and terminology
- data collection and reporting
- research procedures and best practice techniques
- enterprise work team management guidelines
- data analysis techniques
- research planning and design
- research methodologies.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK512 Plan, implement and review a quality assurance program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to determine workplace quality assurance objectives and plan, implement and review a quality assurance program.

The unit applies to individuals who apply specialised skills and knowledge to the planning, implementing and reviewing of a quality assurance program, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Work (WRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine quality assurance objectives for the workplace	1.1 Assess future market requirements for quality assured products 1.2 Determine premiums for quality assurance products 1.3 Assess strategic benefits of a quality assurance program

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Plan the quality assurance program and develop implementation strategies	2.1 Define product quality standards 2.2 Audit current status of products and operations 2.3 Evaluate and cost industry quality assurance programs 2.4 Select quality assurance program based on a cost benefit analysis 2.5 Document required processes and practices in the quality assurance program manual and prepare an implementation plan
3. Implement the quality assurance program	3.1 Document instructions defining task and process requirements 3.2 Implement contractor and staff training 3.3 Confirm communication takes account of social, cultural and ethnic backgrounds 3.4 Introduce changes to processes and practices 3.5 Establish processes to monitor and verify product quality 3.6 Introduce recording systems 3.7 Validate operating instructions under conditions to verify their suitability 3.8 Analyse problems and issues and resolve appropriately, promptly and decisively 3.9 Conduct system analysis, hazard analysis and critical control points (HACCP) or related processes
4. Review the quality assurance program	4.1 Establish reporting formats 4.2 Implement mechanisms for gaining feedback information 4.3 Prepare for quality assurance audit

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding operating instructions

Skill	Description
Oral communication	<ul style="list-style-type: none"> Initiate discussions with contractors and work colleagues, using clear language to communicate quality assurance program requirements
Numeracy	<ul style="list-style-type: none"> Calculate and document costs of implemented strategy
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility Monitor self and others adherence to workplace requirements including safety requirements
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information within work team

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCWRK512 Plan, implement and review a quality assurance program	AHCWRK501 Plan, implement and review a quality assurance program	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK512 Plan, implement and review a quality assurance program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has planned, implemented and reviewed a quality assurance program on at least one occasion and has:

- determined quality assurance objectives for the workplace
- selected a quality assurance program using a cost benefit analysis
- planned the quality assurance program and developed implementation strategies
- implement the quality assurance program
- maintained required records to support quality assurance
- reviewed the quality assurance program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- market projections and customer requirements
- cost/benefit of quality assurance implementation
- leadership and administrative skills including change management
- human resources induction practices
- organisational objectives
- quality standards
- audit processes
- quality assurance recording procedures
- workplace culture and values
- human resources performance monitoring practices
- system analysis, hazard analysis and critical control points (HACCP) or related processes.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - operating instructions relevant to quality assurance program
- timeframes:
 - according to the job requirements
- relationships:
 - between managers and staff, contractors and those under the banner of the quality assurance program.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK513 Write and present reports

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to write and present reports, including researching and evaluating information, producing a document and delivering a verbal presentation.

The unit applies to individuals who apply specialised skills and knowledge to the preparation of a report, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Work (WRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research material	1.1 Identify and clarify report topic and objectives with client

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Determine sources of information 1.3 Collect and organise information appropriate to report topic
2. Evaluate information	2.1 Confirm information collected is relevant and sufficient to address report objectives 2.2 Seek clarification and assistance as required where information is unclear or difficult to understand 2.3 Obtain additional information where available information is inadequate 2.4 Assess information for its validity and reliability, and organise into a suitable form to aid decision making 2.5 Confirm that conclusions drawn from relevant information are based on reasoned argument and appropriate evidence
3. Produce a document	3.1 Use industry standard terminology and language that is applicable to the task and audience 3.2 Organise the report logically, and confirm it is structured and balanced according to purpose, audience and context 3.3 Present report in required format 3.4 Confirm that conclusions reached reflect the stated objectives of the report 3.5 Complete preparation within the specified timeframe
4. Deliver a verbal presentation	4.1 Confirm language is applicable to the task and audience 4.2 Use concise and well-presented support materials to support oral presentations 4.3 Allocate sufficient time to allow clear presentation of the desired topic 4.4 Deliver verbal presentation within specified time

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding the report topic
Numeracy	<ul style="list-style-type: none"> Access, analyse and organise data applicable to the report topic for input into report

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCWRK513 Write and present reports	AHCWRK503 Prepare reports	Title updated Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK513 Write and present reports

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has written and presented a separate report on at least two occasions, and has:

- identified and verified the purpose of the report with the client
- conducted research and compiled information
- drawn conclusions from research supported by reasoned argument and supporting information
- produced a correctly formatted report that uses appropriate language and industry standard terminology, is arranged in a logical order, and provides details on information sources and consultation
- made recommendations if required, and referenced to information and conclusions
- delivered a verbal presentation within a specified time using language applicable to the task and audience.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- information and research sources that may be used to develop reports
- report and presentation structure
- public presentation techniques and approaches.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - industry publications and internet sources of information relevant to the development of a report
- relationships:
 - appropriately experienced and qualified person, client and work colleagues
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK514 Manage trial and research material

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to identify the scope and extent of trial and research work, oversee management of trial and research material, and prepare reports.

The unit applies to individuals who apply specialised skills and knowledge to the management of trial and research material, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Work (WRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify scope and extent of work	1.1 Plan the trial or research to meet research objectives 1.2 Assess data relevant to managing trial or research materials

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>according to research parameters</p> <p>1.3 Identify and assess workplace health and safety hazards and risks relating to research</p> <p>1.4 Develop and cost workplace health and safety controls, and document in the trial or research design</p> <p>1.5 Identify and cost tools, equipment and machinery required for managing trial</p> <p>1.6 Identify and cost research materials, products and inputs, and confirm availability with suppliers, contractors and appropriate personnel</p> <p>1.7 Apply research design according to the trial or research plan</p>
2. Oversee management of trial or research materials	<p>2.1 Prepare, maintain and monitor trial or research in line with research parameters</p> <p>2.2 Conduct field work to verify and collect data as required by the trial or research design and research parameters</p> <p>2.3 Monitor work activities for accuracy, validity and compliance to the parameters of the trial or research design</p> <p>2.4 Undertake staged data collection as required by the trial or research design, scheduling and access requirements</p> <p>2.5 Maintain records of monitoring activities and data collecting</p>
3. Prepare reports on completed work	<p>3.1 Access collected data for reports</p> <p>3.2 Collate data to assist in determining significance of research results</p> <p>3.3 Produce a report following appropriate report writing techniques to accurately convey results</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding the research hypothesis and parameters Identify and interpret research objectives
Oral communication	<ul style="list-style-type: none"> Initiate discussions with suppliers, contractors and appropriate personnel, using clear language to confirm availability and cost of research tools, equipment, machinery and materials

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCWRK514 Manage trial and research material	AHCWRK505 Manage trial and research material	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK514 Manage trial and research material

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has managed trial and research material on at least one occasion, and has:

- complied with research and workplace health and safety requirements
- identified the purpose, scope and extent of work
- calculated and documented research costs
- overseen the management of trial and research materials
- collated data and produced report using industry standard terminology.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- research methodologies, planning and design
- workplace health and safety legislation, regulations and workplace procedures relevant to managing trial and research material
- research procedures and best practice techniques
- workplace team management guidelines relevant to managing trial and research material
- data collection and reporting techniques.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- research hypothesis, parameters and objectives
- specifications:
 - workplace health and safety legislation, regulations and workplace procedures applicable to managing trial and research material
- relationships:
 - suppliers, contractors and appropriate personnel
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

ACMEQU202 Handle horses safely

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to identify, safely catch, control and handle calm, consistent and obedient horses educated for the relevant activity. It covers knowledge of potential risks working with and around horses and following industry guidelines and procedures to ensure the welfare and safety of the individual, other workers and the horse.

The unit applies to individuals who have no experience, limited experience or no recent experience working in the relevant horse industry sector. They undertake defined routine activities under supervision and have limited responsibility for their own work. Working environments may include stables, paddocks, yards, tracks, exercise arenas and public areas.

No licensing or certification requirements apply to this unit at the time of publication, except for the racing industry, where requirements vary between states and territories. Users working in the racing industry are advised to contact the relevant Principal Racing Authority for advice on current requirements.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) generally have the same meaning in the workplace. In jurisdictions where the national model WHS legislation has not been implemented, RTOs must contextualise the unit of competency by referring to current OHS legislative requirements.

Pre-requisite Unit

Prerequisite unit of competency for this unit is:

- ACMEQU205 Apply knowledge of horse behaviour.

Unit Sector

Equine (EQU)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify features of horses	1.1 Distinguish horses by their features, and describe using industry terminology 1.2 Identify common horse behaviour and social traits
2. Safely approach, catch, control and lead horses	2.1 Check and clarify supervisor instructions for tasks requiring involving approaching, catching and leading horse 2.2 Select and correctly fit personal protective equipment (PPE) 2.3 Identify, select and prepare appropriate gear for handling horses safely 2.4 Identify and report to supervisor potential safety risks prior to approaching horse 2.5 Identify horse according to instructions and observe horse body language and behaviour before approaching 2.6 Prepare halter and lead in hand prior to approaching the horse 2.7 Approach calmly and catch horse using safe handling techniques under supervision 2.8 Apply safe control when leading and tying up horse and use safe handling practices around tied-up horses 2.9 Use safe handling procedures around other handlers and horses
3. Load and unload horses under supervision	3.1 Check and clarify supervisor instructions for tasks requiring the loading and unloading of horses 3.2 Identify potential safety risks to handler and horse when loading and unloading horses, and discuss with supervisor 3.3 Select and correctly fit PPE for safe loading and/or unloading of horses 3.4 Select gear and equipment for loading horse and check gear for safety 3.5 Fit gear to horse correctly prior to loading under supervision 3.6 Load horses safely according to instructions under supervision

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.7 Position horse according to transport configuration 3.8 Unload horse safely according to instructions under supervision
4. Control horses in exercise environments	4.1 Check and clarify supervisor instructions for tasks requiring the handling of horses in public areas 4.2 Identify potential safety risks to handler and horse when handling horses in public areas, and discuss with supervisor 4.3 Select and correctly fit PPE for safe handling of horses 4.4 Select gear and equipment, including safety check of gear 4.5 Observe and identify horse body language and behaviour prior to handling in exercise environments 4.6 Use safe control when leading and standing with a horse in a public area under supervision 4.7 Use safe control when leading and standing with a horse confined in a stable or yard

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use active listening and questioning techniques to clarify and confirm supervisor instructions Use industry terminology to describe horses, gear and equipment used for handling horses
Navigate the world of work	<ul style="list-style-type: none"> Follow workplace procedures, including work health and safety and animal welfare requirements, relating to own role and work area Demonstrate a duty of care to self and others when working with horses
Get the work done	<ul style="list-style-type: none"> Assemble resources and follow clear, sequenced instructions for handling horses under supervision

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMEQU202 Handle horses safely	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMEQU202 Handle horses safely

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual safely handled at least three different calm, consistent and obedient horses educated for the activity being performed including:

- carrying out a basic risk assessment prior to each activity, including observing and identifying horse body language
- communicating clearly with supervisor, including raising safety risks or concerns
- approaching, catching, controlling, leading, standing and tying up horses safely in at least one public space and one confined space, under supervision, including:
 - following work health and safety (WHS) procedures in the context of own work
 - applying safe horse handling techniques according to animal welfare requirements
 - fitting and correctly using horse handling gear and personal protective equipment (PPE)
- loading and unloading horses to a horse transport vehicle under supervision in a calm and humane manner.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- common features of a horse, including points, colour, markings, gender, and common breeds
- basic characteristics of common horse behaviour and social traits
- features of horse body language
- communication protocols with supervisor, and procedures within the work environment
- potential hazards and risks when dealing with horses in open and confined spaces
- common types of injuries sustained by horses, handlers and others during handling activities
- safe horse handling zones

- purpose and use of PPE and gear for handling horses
- features of defective equipment and the implications to safety
- quick release knots and methods of securing horses
- types of horse transport and common loading configurations
- difficult situations that may occur when loading and unloading horses and procedures for dealing with difficulties.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions, including open and confined spaces in suitable environments
- resources, equipment and materials:
 - various calm, consistent and obedient horses educated for the activity and assessed as suitable for the experience and skill of the individual
 - appropriate tack for individual, horse and activity
 - horse transport vehicle
 - PPE that is appropriate for activity and correctly fitted for individual
 - other people and horses in the vicinity of the assessment activity
- specifications:
 - work instructions
- relationships with others:
 - supervisor.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

ACMEQU205 Apply knowledge of horse behaviour

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to develop basic knowledge of horse behaviour, read horse body language and minimise risk to self and others when interacting with horses.

The unit applies to individuals who are new or inexperienced in handling, working with and/or riding horses. Individuals at this level work under supervision.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. As requirements vary between industry sectors and state/territory jurisdictions, users must check with the relevant authority for specific requirements.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) generally have the same meaning in the workplace. In jurisdictions where the national model WHS legislation has not been implemented, RTOs must contextualise the unit of competency by referring to current OHS legislative requirements.

Pre-requisite Unit

Nil

Unit Sector

Equine (EQU)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify basic horse behaviour	<p>1.1 Outline the natural instincts, sensory perceptions and social behaviour of horses</p> <p>1.2 Recognise how horse senses can influence their behaviour and reactions</p> <p>1.3 Identify environmental conditions that can unsettle horses</p> <p>1.4 Distinguish ways horses can respond to different people and different situations</p>
2. Observe and interpret basic body language of horses in different situations	<p>2.1 Distinguish a range of horse body language</p> <p>2.2 Recognise body language, including posture, facial features and vocalisation, indicating a horse is relaxed in its surroundings</p> <p>2.3 Recognise body language, including vocalisation, posture and facial features, indicating a horse is unsettled or in a state of agitation in its surroundings</p>
3. Examine how horses learn and respond to different handling cues	<p>3.1 Recognise how pressure-release training works, including how horses learn to 'go', 'slow', 'turn' and 'stop'</p> <p>3.2 Distinguish different ways to reward a horse</p> <p>3.3 Identify a range of common cues used when handling horses</p> <p>3.4 Observe how new cues are learned by the horse</p>
4. Identify areas of personal risk around horses	<p>4.1 Identify situations and behaviour that lead to common accidents and injuries when interacting with horses</p> <p>4.2 Recognise human body language and behaviour to avoid around horses</p> <p>4.3 Identify positive actions and behaviour that handlers or riders can take to minimise risks interacting with horses</p>
5. Minimise risk to self and others around horses	<p>5.1 Listen carefully to supervisor instructions and ask questions or raise concerns with the supervisor about the suitability of the horse selected for handling or riding</p> <p>5.2 Select personal protective equipment (PPE) appropriate for tasks, fit correctly and wear during activities with horses</p> <p>5.3 Assess hazards and potential risks to self, others and the horse, and take steps to minimise risks</p> <p>5.4 Interpret and respond appropriately to horse body language prior to approaching, and maintain awareness of</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	horses at all times 5.5 Use body language and behaviour to achieve safe and positive responses from horses

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use industry terminology to describe horse behaviour, body language and cues
Navigate the world of work	<ul style="list-style-type: none"> Know own responsibilities and obligations when working with horses Demonstrate a duty of care to self and others when working with horses

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMEQU205 Apply knowledge of horse behaviour	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMEQU205 Apply knowledge of horse behaviour

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has:

- observed and interpreted horse behaviour and body language of at least three different horses on separate occasions
- identified hazards and determined how to minimise risk to self and others when interacting with horses in at least three different workplace areas, environments or scenarios.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- features of horse instinct and behaviour, including:
 - social organisation, need for space and companions
 - attachment, separation anxiety
 - flight and fear responses, arousal
- features of horse senses, including vision, touch, smell, hearing and vocalisation
- how to read horse body language, including posture and body position, facial features, ears, legs and tail
- how to read horse body language to identify:
 - flight response
 - threatened or defensive behaviour
 - stress, agitation or unsettled behaviour
- situations where horse behaviour may cause harm to handlers or other horses, including:
 - approaching from a horse's blind spot
 - around other horses

- leading through gateways or restricted spaces
- safe handling zones when interacting with horses
- basic features of how horses learn:
 - cues
 - repetition and reward
 - exposure to new situations and activities
- basic handling and/or riding cues that assist in the control of horses
- types of rewards used for horses, including pressure release, food, scratch and rub, and rest
- potential hazards and risks associated with interacting with horses
- strategies to minimise and control common risks associated with interacting with horses.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a safe workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - opportunities to observe and interpret live horses displaying different behavioural states and body language in different environments.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

ACMEQU206 Perform horse riding skills at walk, trot and canter

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to control a horse under saddle that is suitably educated for a beginner rider. It focuses on walking, trotting and cantering calm, obedient and consistent horses that are suitable for the level of rider experience, during controlled, supervised horse riding activities.

It covers knowledge of potential risks when working with and around horses, and the application of industry guidelines and procedures to ensure the welfare and safety of the individual, other participants and horses.

The unit applies to individuals who have limited or no horse riding experience, and who are developing skills needed to ride horses for work tasks. They undertake defined routine activities under supervision with limited responsibility for their own work. Working environments may include exercise yards and fenced horse riding areas or arenas.

No licensing, legislative or certification requirements apply to this unit at the time of publication, except for the racing industry, where licensing or registration varies between states and territories. Users working in the racing industry are advised to contact the relevant Principal Racing Authority for advice on current requirements.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) generally have the same meaning in the workplace. In jurisdictions where the national model WHS legislation has not been implemented, RTOs must contextualise the unit of competency by referring to current OHS legislative requirements.

Pre-requisite Unit

The prerequisite units of competency for this unit is:

- ACMEQU202 Handle horses safely.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
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ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour
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Unit Sector

Equine (EQU)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for horse riding activity	<p>1.1 Discuss current skill level, riding skill development goals and horse suitability with riding instructor</p> <p>1.2 Identify potential hazards and risks associated with the specific location, environment and horse riding activity, and apply control measures as directed</p> <p>1.3 Select and correctly fit personal protective equipment (PPE) required for preparing and riding the horse according to WHS requirements</p> <p>1.4 Catch, groom and tack-up assigned horse as directed using tack appropriate for rider, horse and discipline</p> <p>1.5 Present horse to instructor appropriately tacked up for riding for gear check prior to mounting</p>
2. Demonstrate controlled riding skills	<p>2.1 Mount horse in a safe and balanced manner as instructed</p> <p>2.2 Ride horse through gaits in a balanced and controlled manner</p> <p>2.3 Use recognised aids including legs, weight, hands and voice to control movement, speed and direction of horse at halt, walk, trot and canter</p> <p>2.4 Cue horse through a range of movements and direction, maintaining control of horse</p> <p>2.5 Control horse under saddle among other horse and rider combinations, maintaining safe group riding practices while performing a variety of required movements</p> <p>2.6 Negotiate potential hazards appropriately to minimise risks</p> <p>2.7 Dismount safely and lead horse in a controlled manner</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
3. Complete and report post-riding activities	3.1 Perform post-riding cool down of horse as directed 3.2 Remove tack safely and check condition 3.3 Report to riding instructor on condition of gear and horse post-exercise 3.4 Discuss with riding instructor, using objective and positive language, personal performance and goals for future riding skill development

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Active listening and questioning to clarify and confirm supervisor instructions Use industry standard terminology to describe horse riding-related activities
Learning	<ul style="list-style-type: none"> Seek, reflect and respond to feedback from supervisor to improve own performance
Navigate the world of work	<ul style="list-style-type: none"> Follow workplace procedures, including WHS and animal welfare requirements, relating to own role and work area Demonstrate a duty of care to self and others when working with horses
Get the work done	<ul style="list-style-type: none"> Assemble resources and follow clear, sequenced instructions to ride horses at walk, trot and canter

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMEQU206 Perform horse riding	Not applicable	New unit	No equivalent

skills at walk, trot and canter			unit
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMEQU206 Perform horse riding skills at walk, trot and canter

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual performed horse riding skills at walk, trot and canter, on at least two different horses assessed as suitable for rider skills and experience. The individual must have ridden each horse on at least three different occasions, with and without other horses and riders in the immediate vicinity, during which the individual has:

- discussed with instructor current skill level and suitability of chosen horse prior to riding
- used and correctly fitted personal protective equipment (PPE)
- fitted gear and equipment for nominated horses, including:
 - saddle
 - saddle cloth
 - bridle
 - accessory gear
- mounted horse using a stirrup mount, mounting block, leg-up assisted mount
- controlled horse under saddle at all times in the following tasks:
 - demonstrating an effective riding position at walk, trot (or jog) and canter (or lope) according to chosen discipline
 - using hand, seat and leg aids according to discipline
 - using transitions or increasing and decreasing speed within a gait according to chosen discipline
 - following arena figures of circles, straight and diagonal lines and changes of direction
 - cantering for a continuous distance of a minimum of 200 metres
- dismounted using a stirrup dismount and a vault dismount
- dealt with risks associated with riding horses around others
- accepted and applied feedback from riding instructor
- reported progress and discussed future personal riding skills needs with riding instructor.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic process for assessing horse suitability and matching to own skills
- purpose and use of different items of gear, including accessory tack and equipment and personal protective equipment (PPE)
- purpose of appropriate aids to communicate with a horse
- safe group riding techniques
- safe horse handling techniques
- key animal welfare principles and practices for handling horses
- basic work health and safety (WHS) risk assessment and control principles relating to interacting with horses, riding in an arena and with others
- how to address common undesirable horse behaviours including:
 - travelling too fast
 - reefing and pulling
 - jogging sideways
 - running backwards
- risk factors that influence riding horse behaviour, including:
 - other horses
 - vehicles, fences and equipment
 - other people or animals
 - wind, noise and environmental hazards
 - riding with others
- factors that influence horse ability to respond to rider position and application of the natural and artificial aids.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - confined arena in a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - various calm, consistent and obedient horses assessed as suitable for the experience and skill of the individual
 - other riders
 - appropriate tack for walk, trot and canter riding activities suitable for horse, rider and discipline
 - correctly fitted PPE for the individual, including riding boots, safety vest and Australian standard or equivalent compliant helmet.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

The following specific assessor requirements apply to this unit. The assessor must:

- hold a current, recognised qualification for instructing or coaching horse riding and handling skills (refer to *User Guide* for details), and
- have three years of experience organising groups and responding to different types of riders and horses in order to prevent incidents that could lead to injury of rider or horse.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

ACMGAS305 Rescue animals and apply basic first aid

Modification History

Release	Comments
Release 2	This version released with ACM Animal Care and Management Training Package Version 2.0.
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to rescue and restrain animals, and to provide basic first aid.

The unit applies to individuals working as animal keepers and carers, where it may be necessary to identify where assistance is required in the rescue of animals and the management of animal stress and injuries. These individuals work under broad supervision and use discretion and judgement in the selection and use of available resources. Work routines must meet industry standards and compliance requirements for ethical handling and welfare of animals, work health and safety, and biosecurity appropriate to the work role.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) generally have the same meaning in the workplace. In jurisdictions where the national model WHS legislation has not been implemented, RTOs must contextualise the unit of competency by referring to current OHS legislative requirements.

Pre-requisite Unit

Nil

Unit Sector

General Animal Studies (GAS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess the situation and plan response	1.1 Assess risk posed to self, others and animals 1.2 Evaluate options for assisting animals, and implement procedures with reference to workplace protocols and regulations 1.3 Identify animals and select appropriate equipment for the rescue 1.4 Use personal protective equipment (PPE) at all times when handling animals, and use safe work practices according to WHS requirements
2. Capture and protect animal	2.1 Provide basic animal care to minimise stress to animals 2.2 Catch animal and handle safely and humanely to minimise pain and potential injuries 2.3 Reassure animal in a caring manner and make comfortable using available resources 2.4 Assess physical condition and vital signs of the animal
3. Provide first aid assistance	3.1 Provide basic first aid according to established animal first aid procedures 3.2 Seek first aid assistance from others as appropriate and required 3.3 Seek advice and assistance from supervisor or appropriate personnel in respect to future options for animal 3.4 Record treatment and any additional information on the animal according to legislative and organisational requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately record events of the situation requiring first aid
Oral communication	<ul style="list-style-type: none"> Speak clearly and calmly when seeking assistance from others Listen and respond to advice and assistance when requested from

Skill	Description
	supervisor or other personnel
Get the work done	<ul style="list-style-type: none"> Respond to the rescue situation promptly and problem solve the requirements of the animal in order to preserve its life

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMGAS305 Rescue animals and apply basic first aid Release 2	ACMGAS305 Rescue animals and apply basic first aid Release 1	Corrected sentence in Foundation Skills	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMGAS305 Rescue animals and apply basic first aid

Modification History

Release	Comments
Release 2	This version released with ACM Animal Care and Management Training Package Version 2.0.
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual, on two different animals, has:

- planned and rescued according to WHS requirements
- applied basic first aid and care
- gathered information and accurately recorded and maintained records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the animal emergency network, including animal welfare bodies and support facilities
- animal first aid techniques
- examination techniques for health status
- first aid casualty management principles
- methods used to capture, restrain and examine animals, including equipment commonly used
- methods used to identify animals
- personal protective clothing and equipment and when and how it should be used
- safe animal handling techniques and procedures
- organisation policies and procedures, including WHS and emergency procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live or simulated animals for capture
 - PPE for handling animals
 - first aid equipment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

ACMGAS308 Communicate effectively with clients and team members

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to communicate effectively with clients, a supervisor, team members and industry representatives.

The unit applies to individuals who work in organisations in operational roles with some supervision.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

General Animal Studies (GAS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Communicate effectively with clients and industry representatives	1.1 Use verbal and non-verbal communication to enhance understanding and demonstrate respect 1.2 Communicate information in a manner that is appropriate, clear

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>and easily understood</p> <p>1.3 Use electronic and digital communication tools effectively</p> <p>1.4 Listen to requests, clarify meaning and respond appropriately</p> <p>1.5 Exchange information clearly in a timely manner</p> <p>1.6 Empathise with those experiencing distress</p> <p>1.7 Follow privacy and confidentiality protocols</p>
2. Communicate with team	<p>2.1 Listen to and clarify instructions for carrying out workplace tasks</p> <p>2.2 Use industry terminology in verbal, written and digital communications</p> <p>2.3 Follow communication protocols that apply to interactions with team members</p> <p>2.4 Actively participate in team meetings and discussions</p>
3. Address constraints to communication	<p>3.1 Identify constraints to effective communication and resolve using appropriate communication strategies and techniques</p> <p>3.2 Use communication skills to avoid, defuse and resolve conflict situations</p>
4. Complete workplace documentation	<p>4.1 Complete paper-based and electronic documents in line with workplace standards</p> <p>4.2 Carry out routine numerical calculations relevant to work role and requirements</p> <p>4.3 Document agenda and minutes for meetings</p> <p>4.4 Store or save correspondence and documentation in line with workplace protocols</p> <p>4.5 Follow workplace communication policies and procedures for using digital media</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Get the work done	<ul style="list-style-type: none">• Use computer-based technology effectively

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMGAS308 Communicate effectively with clients and team members	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMGAS308 Communicate effectively with clients and team members

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- communicated effectively on a minimum of three different occasions, including each of the following:
 - interacting appropriately with clients in writing using digital media
 - interacting appropriately with a client or industry representative by telephone
 - actively participating in a team meeting.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- models of effective communication across a range of modes, including written, verbal, electronic and digital
- the role of non-verbal communication
- effective communication principles for working in a team
- conflict resolution techniques
- social media platforms used for business
- ways to show empathy and support those in distress
- appropriate industry language and terminology
- communication systems, procedures and technology commonly used in workplaces
- confidentiality and privacy legislation, regulations and protocols.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - communication equipment and resources appropriate to work undertaken
- specifications:
 - access to organisational policies and procedures
- relationships (internal and/or external):
 - interactions with team members.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

ACMGEN309 Provide basic animal first aid

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to provide essential first aid for animals. The first aider is not expected to deal with complex cases or incidents, but to provide an initial response where first aid is required.

The unit applies to individuals working in the animal care and management industry in a range of small to large facilities who may be required to apply animal first aid. They work under broad direction, typically in a team environment, and are required to take responsibility for their own work, including carrying out assigned tasks, organising processes, solving routine problems and working to schedules.

All work must be carried out to comply with workplace procedures according to Commonwealth and state/territory health and safety and animal welfare regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

General Animal Care (GEN)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess the situation	1.1 Recognise if the situation is an emergency and follow workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
and plan response	<p>procedures</p> <p>1.2 Identify the animal and hazards and take action to minimise immediate risks to self, other people, the injured animal and other animals</p> <p>1.3 Use personal protective equipment (PPE) and follow workplace health and safety procedures when handling animals</p> <p>1.4 Assess options for assisting animal according to workplace procedures</p>
2. Approach, secure and protect animal	<p>2.1 Select appropriate equipment for handling and securing the animal</p> <p>2.2 Approach and handle animal safely, using low stress techniques to minimise stress, pain and further injuries</p> <p>2.3 Reassure animal in a caring manner and make comfortable using available resources</p> <p>2.4 Assess physical condition and vital signs of the animal</p>
3. Provide first aid assistance	<p>3.1 Provide basic first aid according to established animal first aid procedures</p> <p>3.2 Seek first aid assistance or advice from others as appropriate and required</p> <p>3.3 Keep supervisor or appropriate personnel informed of animal condition</p> <p>3.4 Record relevant information for animal and/or incident according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Record animal or incident information accurately using industry terminology
Oral communication	<ul style="list-style-type: none"> Speak clearly and calmly when seeking assistance or conveying information to others

Skill	Description
	<ul style="list-style-type: none"> Listen actively when seeking advice from supervisor or other personnel

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMGEN309 Provide basic animal first aid	ACMGAS206 Provide basic animal first aid	Redesigned unit that includes content from ACMGAS206 Provide basic animal first aid and ACMGAS305 Rescue animals and apply basic first aid	Not equivalent
ACMGEN309 Provide basic animal first aid	ACMGAS305 Rescue animals and apply basic first aid	Redesigned unit that includes content from ACMGAS206 Provide basic animal first aid and ACMGAS305 Rescue animals and apply basic first aid	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMGEN309 Provide basic animal first aid

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- identified the animal and hazards, and assessed and minimised risks to self, other people, injured animal and other animals for two separate incidents
- provided basic first aid for at least two animals with different first aid needs, including:
 - approached, secured and handled each animal safely using low stress techniques and following workplace health and safety procedures
 - updated supervisor or relevant personnel of animal condition
 - accurately recorded and maintained records for each animal.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- risks of providing first aid to animals, including:
 - risks to self and other people, including bites, scratches, envenomation, zoonoses and manual handling
 - risks to other animals
 - risks to injured animal
- first aid management principles
- methods used to catch, restrain and secure animals, including commonly used equipment
- personal protective equipment (PPE), including when and how it should be used, and correct fitting
- safe and humane animal handling techniques and procedures
- basic examination techniques to determine health status
- basic animal first aid techniques, including how to:
 - check airway and clear if required

- control bleeding
- minimise impact of shock by keeping animal quiet, warm and away from activity or noise
- immobilise limb injuries, if safe to do so, where soft tissue damage or fractures are suspected
- apply water appropriately, if available, in cases of burns or overheating
- transport animal to veterinary assistance as soon as possible using methods appropriate to illness or injury
- organisation policies and procedures, including health safety, and emergency procedures
- animal emergency networks, where applicable, including:
 - veterinary services
 - animal welfare bodies and support facilities
 - state and local government emergency services relevant to animal incidents.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an animal care workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live animals or animal models/replicas specified in the performance evidence – live animals can only be used where first aid is undertaken as part of routine workplace activity and the animal's welfare is not compromised
 - PPE for handling animals
 - animal first aid equipment specified in the performance evidence
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

ACMGEN311 Maintain and monitor animal health and wellbeing

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to follow animal health management practices to monitor animal health via daily observations of behaviour and condition. The animals may include a range of species housed long-term or cared for short-term in a workplace.

This unit applies to individuals undertaking animal care activities in small to large scale animal facilities where it may be necessary to care for a range of animal species and to monitor the wellbeing of healthy, ill or injured animals. They work under broad direction, typically in a team environment, and are required to take responsibility for their own work, including carrying out assigned tasks, organising processes, solving routine problems and working to schedules.

All work must be carried out to comply with workplace procedures according to Commonwealth and state/territory health and safety and animal welfare regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

General Animal Care (GEN)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Follow animal health management practices	1.1 Maintain personal health and hygiene standards according to workplace requirements 1.2 Select, fit and correctly use personal protective equipment 1.3 Categorise broad types of common animal disease and their impact on animals and humans 1.4 Identify and describe broad categories of parasitic infestations in animals 1.5 Prepare and maintain isolation and/or quarantine areas in accordance with workplace procedures 1.6 Identify and isolate and/or quarantine relevant animals, and maintain records
2. Monitor and maintain the physical wellbeing of animals	2.1 Identify key features and changes in physical appearance and body structure of animal species housed or cared for in the workplace 2.2 Monitor and test indicators of animal health regularly, and follow isolation and/or quarantine requirements involving movement of animals within or between facilities 2.3 Assess the physical environment of animals for evidence of problems that may affect the physical wellbeing and welfare of animals 2.4 Maintain records of animal observations, activity monitoring, and health information
3. Identify and report signs of ill health or injury in animals	3.1 Recognise signs of illness or injury and report to supervisor 3.2 Recognise abnormal animal behaviour and conditions, and report according to workplace procedures 3.3 Collect samples and record as required 3.4 Separate sick or injured animals from other animals and care for as advised by supervisor or veterinarian 3.5 Handle animals that are ill or injured safely and appropriately using low stress methods
4. Administer and record animal treatments	4.1 Administer prescribed animal treatments under supervision, and record dosages 4.2 Monitor, administer and record routine preventative health treatments as required 4.3 Store treatments and medications appropriately according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures 4.4 Complete records relating to the nature of treatment, and animal health status before and after treatment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret animal treatment plans accurately
Writing	<ul style="list-style-type: none"> Use industry terminology when completing records
Numeracy	<ul style="list-style-type: none"> Calculate volume, weight, area, ratio, time and application rates Interpret numerical information provided with animal treatment products and equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMGEN311 Maintain and monitor animal health and wellbeing	ACMGAS301 Maintain and monitor animal health and wellbeing	Minor changes to performance criteria for clarity Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMGEN311 Maintain and monitor animal health and wellbeing

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has maintained and monitored the health and wellbeing of a minimum of three different animals and, on each occasion, the individual must have:

- applied work practices for personal safety and personal hygiene standards
- monitored and tested indicators of animal health
- assessed the physical environment of animals for evidence of conditions that may have affected the physical wellbeing and welfare of animals
- maintained records of observations, monitoring activities and samples, including isolation and/or quarantine records where required
- selected, fitted and correctly used personal protective equipment
- administered treatments under supervision.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- anatomical and physiological structures and functions related to animal health and wellbeing
- overview of anatomical and physiological terminology
- broad categories of parasitic infestations and preventative treatments
- common infectious diseases and their causes and transmission, including:
 - bacteria
 - fungi
 - virus
 - zoonoses
- common non-infectious diseases, including:

- allergies
- chemical toxicities
- genetic
- metabolic
- neoplastic
- nutritional
- observing and reporting normal species-specific behaviour and indicators of ill health, injury or distress
- indicators of poor response to treatment or management of young, ill, injured or compromised animals
- indicators of recovery from illness or injury
- isolation and/or quarantine protocols
- safe work practices related to animal handling, including infection control
- methods used to measure, interpret and record animals' weight and other objective measures of animal health
- key principles of animal welfare and ethics.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an animal care facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live animals specified in the performance evidence
 - videos/photos may be used for identification of diseases where live samples are not available
 - equipment and resources typically available in an animal care environment for animal health assessment and isolation and/or quarantine, including personal protective equipment
- specifications:
 - workplace policies and procedures, and current, relevant legislation and codes of practice related to animal health assessment and isolation and/or quarantine
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

ACMGEN312 Provide nutritional requirements for animals

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to prepare rations based on animal species needs and availability of food products.

The unit applies to individuals working in the animal care industry who feed and provide nutritional requirements for animals, in a range of small to large facilities. They work under broad direction, typically in a team environment and are required to take responsibility for their own work, including carrying out assigned tasks, organising processes, solving routine problems and working to schedules.

All work must be carried out to comply with workplace procedures according to Commonwealth and state/territory health and safety and animal welfare regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

General Animal Care (GEN)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify nutritional requirements of animals	1.1 Identify natural nutrient sources and types of digestive systems for animal species or groups within the workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Align normal feeding behaviours and nutritional requirements of a range of animals</p> <p>1.3 Evaluate feeding strategies and methods to maximise activity and behavioural enrichment</p> <p>1.4 Identify characteristics of under-supply or over-supply of nutrients, and evaluate methods used to monitor nutritional uptake</p>
2. Review food sources and calculate dietary requirements	<p>2.1 Classify food products according to nutrient content for animals cared for in the workplace</p> <p>2.2 Assess foodstuffs for shelf life, preparation requirements, availability and cost</p> <p>2.3 Identify hazards to animal and human health from food sources, and implement procedures to manage risks</p> <p>2.4 Estimate with reasonable accuracy or calculate feed and water requirements, based on provided diet plan</p> <p>2.5 Identify key food groups of animal food or diet</p> <p>2.6 Identify other dietary issues included in animal diets</p> <p>2.7 Document diet provided to animals according to workplace procedures or instructions</p>
3. Prepare diets and provide food and water	<p>3.1 Prepare food as required by diet plan</p> <p>3.2 Store food safely to avoid contamination and minimise degradation or nutrient loss</p> <p>3.3 Provide food and water according to animal's requirements</p>
4. Monitor feeding and watering practices	<p>4.1 Monitor and record food and water consumption according to the workplace procedures</p> <p>4.2 Identify and report abnormal feed intake or feeding behaviour according to the workplace procedures</p> <p>4.3 Monitor animals for condition, metabolic and behavioural changes</p> <p>4.4 Identify reasons for poor response to diet and seek specialist advice</p> <p>4.5 Determine required dietary changes in consultation with supervisor</p> <p>4.6 Document required dietary variations and update workplace records</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.7 Hand over individual dietary information to team member or client

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret species-specific dietary and nutritional terminology in workplace policies and procedures
Writing	<ul style="list-style-type: none"> Use biological and industry terminology when completing records
Oral communication	<ul style="list-style-type: none"> Use open-ended questioning, active listening, paraphrasing and summarising to identify animal dietary issues and possible resolutions with relevant personnel
Numeracy	<ul style="list-style-type: none"> Calculate volume, weight, area, ratio, time and application rates Measure, interpret and record animal weight, length and other relevant objective indicators of change in physiological status

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMGEN312 Provide nutritional requirements for animals	ACMGAS303 Plan for and provide nutritional requirements for animals	Title changed Changes to performance criteria for clarity Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMGEN312 Provide nutritional requirements for animals

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 4.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has provided a nutritionally appropriate diet for a minimum of three different animals. The three animals selected must include two species and include at least two different individual dietary needs.

In doing the above, the individual must have undertaken the following for each animal:

- prepared animal diet in consultation with relevant personnel
- prepared, stored and distributed food according to animal needs and workplace quality control procedures and hygiene practices
- monitored animal response to feeding program and reviewed diet in consultation with supervisor.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- animal classifications that influence dietary needs and styles of eating
- key food groups in animal food or diet, including protein, carbohydrate, vitamin and mineral supplement and fibre content
- behavioural features related to feeding styles and unsuitable responses to diets
- methods used to monitor nutritional uptake, including:
 - comparing food distributed and food not eaten
 - estimating condition scores
 - weighing animals
- principles of contamination and cross-contamination
- species-specific feed products available and approved in Australia, including availability, cost, shelf life, method of storage, preparation and presentation to animals

- feeding methods of different animals, including the use of safe, low stress animal handling/interaction techniques
- appropriate food storage and feeding containers for different animals
- common nutrition-related health problems and health problems that impact an animal's diet
- importance of compliance with veterinary or supervisor instructions for specific animals
- sources of nutrients for particular animal classes and groups
- potential causes of poor response to diets.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an animal care facility or an environment that represents workplace conditions
- resources, equipment and materials:
 - live animals specified in the performance evidence
 - animal care environment equipment and resources required for the nutrition tasks specified in the performance evidence
- specifications:
 - workplace procedures relevant to animal diets and nutritional requirements
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

AHCAIS302 Process and store semen

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to process and store semen collected from livestock for the purpose of artificial insemination.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Artificial Insemination (AIS)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare diluent	1.1 Clean containers to be used for preparation of diluent according to enterprise hygiene standards

Element	Performance criteria
	1.2 Calibrate equipment and tools used in processing semen 1.3 Heat distilled water for use in diluent to required temperature 1.4 Add distilled water to powdered diluent in correct proportions 1.5 Store diluent correctly before use
2 Determine number of semen doses	2.1 Determine concentration of the ejaculate using appropriate equipment 2.2 Calculate number of doses according to the concentration determined
3 Assess quality of semen batch	3.1 Examine semen batch and check for contamination 3.2 Assess motility of semen 3.3 Compare quality of semen batch against enterprise benchmarks 3.4 Discard poor quality semen appropriately
4 Check incubator	4.1 Check temperature and other operational parameters of incubator before use 4.2 Report and resolve problems with incubator before operation
5 Prepare semen doses	5.1 Add diluent to semen batch 5.2 Divide diluted semen into doses 5.3 Label each semen dose 5.4 Place doses in incubator 5.5 Assess quality of prepared doses 5.6 Record data in line with enterprise requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCAIS302A Process and store semen.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCAIS302 Process and store semen

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare diluent
- determine number of semen doses
- assess quality of semen batch
- check incubator temperature and other operational parameters before use
- prepare and label semen doses
- record semen details.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- methods and procedures for cleaning and sterilisation of containers, equipment and tools
- calibration of equipment and tools
- preparation and storage of diluent
- types, uses, maintenance and servicing of equipment used for determining semen concentration and quality
- calculation of semen doses
- criteria, characteristics and methods for assessing semen quality
- requirements and methods for the disposal of semen
- types, functions and maintenance of incubator
- requirements, methods and procedures for preparing semen doses
- effects and impacts of environmental conditions, equipment factors and human factors on viability of semen doses
- enterprise recording requirements.

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW301 Protect places of Aboriginal cultural significance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to protect places of cultural significance to Aboriginal people. It requires following Aboriginal cultural protocols and details the specific cultural, gender and kinship sensitivities of working in Aboriginal communities and on Country with diverse cultural requirements.

This unit applies to those whose work on Country and in cultural keeping places and includes protecting cultural places, sites and objects often in co-operation with a range of stakeholders and with reference to Aboriginal communities and/or line management. The unit involves and requires a high level of awareness and experience with Aboriginal culture and communities and the need to observe Aboriginal cultural protocols. This unit is also applicable to the work of repatriation workers and anthropologists.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge or materials required to achieve competency in this unit, due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify and communicate with key stakeholders	1.1 Identify appropriate persons within communities who hold cultural knowledge relevant to determining the cultural significance of Aboriginal places and heritage 1.2 Develop working relationships with key stakeholders that assist in the management of culturally significant places 1.3 Develop communication approaches that place Aboriginal cultural protocols and values at the forefront and accommodate stakeholder concerns and interests 1.4 Seek and obtain views on the way in which the cultural significance and resource can be conserved and used 1.5 Report feedback to management for operational planning processes
2. Define cultural significance	2.1 Ensure cultural knowledge holders inform the decision-making process to determine the cultural significance of places 2.2 Acknowledge and respect traditional Aboriginal knowledge, practices, rights and responsibilities in managing Country and environment 2.3 Determine the Aboriginal beliefs embedded in a place of cultural significance 2.4 Recognise the embodiment of cultural significance in the place itself, its fabric, natural resources, setting, use, associations, meanings, records, related places and related objects 2.5 Assess cultural significance 2.6 Document cultural significance in accordance with Community permissions
3. Identify threats to Aboriginal cultural places	3.1 Identify threats to culturally significant places, both external and internal to the area under consideration 3.2 Observe, describe and record details of evidence of land degradation using standard industry and Indigenous terminology and according to Community permissions 3.3 Participate in a risk assessment of all threats to determine potential impact on sites and associated cultural landscape 3.4 Identify appropriate protection or conservation measures to control potential and actual threats
4. Conserve significance	4.1 Use conservation policies and plans along with stakeholder views to participate in planning for ongoing conservation actions 4.2 Implement conservation activities in culturally sensitive ways,

Element	Performance criteria
	and in accordance with Burra Charter guidelines and enterprise, Community and legislative requirements 4.3 Apply safe and environmentally sustainable work practices 4.4 Obtain resources for conservation and restoration activities, along with any associated ceremonial or cultural activity

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW301A Protect places of Aboriginal cultural significance.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW301 Protect places of Aboriginal cultural significance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify appropriate cultural authorities for a Community, place or for a site
- develop working relationships with Aboriginal and non-Aboriginal stakeholders in cultural sites
- canvass views in determining the cultural significance and heritage value and preservation issues of an Aboriginal cultural site
- contribute to planning for the protection of an Aboriginal cultural site including identifying resources required and submissions to be completed
- observe Aboriginal cultural protocols when working with stakeholders and land managers
- identify threats to Aboriginal site and measures to mitigate and manage the risk of damaging incidents or loss of cultural integrity
- identify natural resources and how they relate to cultural protocol, spirituality, art, environment, values, beliefs and lore/law
- identify cultural rights and responsibilities when using Community knowledge, information and material
- identify groups to be consulted in relation to owners or custodians of cultural and Community knowledge, information and material
- use Aboriginal names and standard industry terminology appropriate to the task
- apply work health and safety practices in the context of own work
- apply appropriate sustainability practices in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- Community's history, cultural values and interpersonal and Community protocols related to the place
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- industry, organisational and enterprise policies and procedures for conservation of places of cultural significance
- key concepts of Burra Charter and Guidelines
- key concepts of Cultural and Heritage Legislation and National Parks and Wildlife Service (NPWS) legislation relevant to the protection of Aboriginal significant places.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW302 Relate Aboriginal culture to sites work

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to understand cultural landscapes from Aboriginal perspectives. The unit introduces overarching belief systems that operate where Aboriginal sites work takes place. It provides a conceptual foundation for understanding Aboriginal cultural protocols, cultural customs and cultural practices that the Aboriginal sites worker is likely to encounter in daily work routines.

This unit applies to Aboriginal worldviews and beliefs as they impact and affect Aboriginal sites work on Country. The unit applies to working either as an autonomous sites worker or under the supervision and cultural authority of Traditional owners or Elders for specific Country and is also applicable to the work of repatriation workers and anthropologists.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Apply understanding of traditional cultural frameworks when working with Aboriginal people	1.1 Integrate the relationship to the land into daily work routines 1.2 Determine relationships of Aboriginal objects, features and cultural landscapes to Aboriginal beliefs 1.3 Determine the interrelationship of discrete Aboriginal sites to cultural frameworks 1.4 Acknowledge and respect traditional knowledge, belief systems, customs and cultural practices in managing Country
2. Recognise traditional Aboriginal social frameworks	2.1 Recognise different language groups and general lore/laws and customs 2.2 Identify extended family structures and clans in physical and geographical locations 2.3 Relate totemic structures and associated stories about ancestral beings from the Creation Period to landscape features and sites 2.4 Identify social structures that define the social positions, behaviours and obligations in kinship names, sections and networks 2.5 Identify the kinship system for determining roles and responsibilities, marriage unions, ceremonial relationships, funeral roles and behaviour patterns with other kin 2.6 Determine marriage relationships resulting from the union of two moieties or skin names 2.7 Recognise and respect gender roles
3. Relate Aboriginal spirituality to the landscape	3.1 Acknowledge and record Aboriginal beliefs that determine Aboriginal cultural protocols 3.2 Define the connection between spirituality and the land in local and trans-local terms of identity, culture and food 3.3 Relate the historical and present living environments to Dreaming stories and cultural knowledge 3.4 Recount cultural language and customs embedded in the relationship to the land and Aboriginal sites 3.5 Define the relationships of Creation stories, oral histories, kinship and totems to the cultural landscape 3.6 Recount the sense of belonging to the land and culture embedded in landscape in culturally appropriate ways 3.7 Express elements of spirituality in ceremony, rituals, stories, dance, song, art and language
4. Relate the interactions	4.1 Record the effects of cultural disconnection with the land,

Element	Performance criteria
between Dreaming, traditional beliefs and ceremonies to Aboriginal sites work	spirituality and ceremonial expressions of culture 4.2 Record impacts of disintegration and disconnection on Aboriginal sites 4.3 Acknowledge and respect the evolving nature of Dreaming 4.4 Identify and document current trends in mainstream culture and heritage and opportunities and threats to the Aboriginal sites work sector

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW302A Relate Aboriginal culture to sites work.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW302 Relate Aboriginal culture to sites work

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- explain traditional Aboriginal belief systems of the Community
- identify examples and impacts of disintegration and disconnection with Aboriginal culture
- describe the relationship between the land and environment and Aboriginal peoples in culturally relevant ways
- explain the relationship between Dreaming, traditional beliefs, Ceremony and sites
- use Aboriginal names and standard industry terminology appropriate to the task.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- how to source appropriate cultural and lore/law authority for specific Country and/or sites
- protocols and customs relating to disclosure of knowledge about Country
- Aboriginal cultural and social frameworks
- Community's ancestral beliefs
- kinship names, sections and networks
- totems, moieties, skin names
- relationship of Community's Dreaming to the site and how it is evolving
- rules and limitations to access to cultural knowledge
- different social structures of various Indigenous Communities
- Indigenous cultural customs and heritage of the Community
- recording and documentation procedures used by organisation.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW303 Identify and record Aboriginal sites, objects and cultural landscapes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to record information and knowledge on Country from both an Aboriginal and non-Aboriginal perspective.

This unit applies to the identification and recording of Aboriginal sites, objects and cultural landscapes on Country. The unit applies to working with lore/law men and women either as an autonomous sites worker or under the supervision and cultural authority of Traditional Owners or Elders for specific Country and is also applicable to the work of repatriation workers and anthropologists.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify Aboriginal sites, objects and materials and cultural landscapes on Country	1.1 Identify and consult appropriate cultural authorities 1.2 Obtain approval to be on Country and perform identification and recording work 1.3 Determine boundaries and extent of Country according to Community guidelines and Aboriginal cultural protocols 1.4 Determine details of land management and maintenance practices 1.5 Identify Aboriginal materials and objects accurately 1.6 Identify Aboriginal cultural landscapes and Aboriginal sites accurately 1.7 Determine the interrelationship of discrete Aboriginal sites to cultural landscapes and Indigenous land management 1.8 Carry out work on and off Country in accordance with work health and safety policies and procedures
2. Use the relevant Information Management System (IMS)	2.1 Determine the relevant government jurisdiction 2.2 Research and determine the relevant information management system (IMS) in operation and the organisation responsible for maintaining the system 2.3 Apply access restrictions to the IMS and confidentiality measures for recording secret, sacred materials 2.4 Access the IMS and select relevant options 2.5 Initiate and maintain, transfer of site, features and/or cultural landscape information
3. Record information on Aboriginal sites, objects and cultural landscapes	3.1 Use information and data collected about the Aboriginal site, objects, features or landscape according to Community guidelines and Aboriginal cultural protocols 3.2 Acknowledge and avoid practices which could damage the level of trust and respect between stakeholders, negotiating parties and the Community 3.3 Categorise and record site context, location and information data 3.4 Categorise and record feature data 3.5 Record Aboriginal Community interpretations, related history and culture and recommendations 3.6 Use standard industry terminology and Aboriginal names for recording and documenting information, where appropriate

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW303A Identify and record Aboriginal-sites, objects and cultural landscapes.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW303 Identify and record Aboriginal sites, objects and cultural landscapes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can record information and knowledge on Country from both an Aboriginal and non-Aboriginal perspective.

The candidate must provide evidence that they can:

- record details of Aboriginal sites, objects and cultural landscapes consistent with the requirements of the relevant Information Management System
- record and collate information on Aboriginal culture and history for Country whilst following Aboriginal cultural protocols
- follow Community guidelines and Aboriginal cultural protocols regarding the use of information on sites, objects and cultural landscapes
- identify appropriate cultural authorities for a Community, site, story or Ceremony
- apply Community protocols and permissions to determine cultural information, material and cultural expression that is appropriate to be shared
- identify groups to be consulted in relation to owners and custodians of cultural and Community knowledge, information or material
- use Aboriginal names and standard industry terminology appropriate to the task
- apply work health and safety practices in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- Community Aboriginal history, cultural values and interpersonal and Community protocols related to the site
- cultural rights and responsibilities when using Community knowledge, information and material

- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- designated cultural areas and features, boundaries and extent of Country
- protocols and customs relating to disclosure of knowledge about Country.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW304 Identify Indigenous culturally significant plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to observe, record and report on the presence of plants of Indigenous cultural significance against criteria provided by a supervisor or as required under legislation, regulations, and or community protocols.

This unit involves the recognition of plants of Indigenous significance that are commonly encountered in land management situations and covers knowledge of Indigenous plant identification techniques, Indigenous plant names, community and organisational procedures for obtaining and supplying advice and information about Indigenous plants, and community or organisational expectations about the range and number of Indigenous plants to be recognised.

This unit has a particular focus on culturally significant Indigenous plants, management and conservation.

This unit applies to the identification and recording of Indigenous plants, local bushland and bush foods on Country. The unit applies to working with lore/law men and women either as an autonomous worker or under the supervision and cultural authority of Traditional Owners or Elders for specific Country.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge or materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for plant recognition	1.1 Identify range of Indigenous plants and plant species according to pre-determined criteria, and job or client needs 1.2 Identify and locate resources required for use in recognition activity 1.3 Identify, select and prepare processes for Indigenous plant recognition including consultation and seeking approval from relevant cultural authorities to be on specific Country 1.4 Identify safety hazards and apply work health and safety procedures
2. Identify specified Indigenous plants	2.1 Name specified Indigenous plants according to their identifiable characteristics and by their Indigenous name 2.2 Determine plant habits, characteristics and significant features according to enterprise requirements 2.3 Seek advice from cultural authorities or supervisors when necessary and where appropriate in the recognition activity
3. Survey and record identification of Indigenous plants in a specified area	3.1 Identify survey site and record location of plants using maps and grid references 3.2 Determine and record cultural uses and significance of specified Indigenous plants 3.3 Document information about Indigenous plants and add to reference collection according to organisational requirements 3.4 Update reference collection if new Indigenous plants are recognised 3.5 Identify rare or endangered plant species in location 3.6 Determine disposal techniques for plant debris if specimen collection is necessary 3.7 Apply environmentally sustainable practices for carrying out observation activities to minimise degradation and disturbance 3.8 Follow work health and safety policies and procedures for

Element	Performance criteria
	carrying out survey activities
4. Identify local bushland and/or bush foods and their uses	4.1 Determine the relationship between local foods, general health and the land in Aboriginal culture 4.2 Locate and gather information from a range of sources about access to bush foods 4.3 Identify local Indigenous plants using their common, scientific and cultural names 4.4 Identify Indigenous cultural uses of available bush resources for food and medicine 4.5 Identify land management practices and conservation of Indigenous species

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW304A Identify Indigenous culturally significant plants.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW304 Identify Indigenous culturally significant plants

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify Indigenous culturally significant plants
- observe and accurately identify species of Indigenous plants
- document observations in required format, according to Community and organisational needs
- apply environmentally sustainable practices to carry out survey activities in a natural area in order to minimise disruption to the environment
- explain and/or demonstrate uses of plants for food and medicine
- utilise available resources and equipment to identify Indigenous plants accurately
- read map and grid references to identify locations of plants
- use standard industry terminology and local Community names for Indigenous plants
- apply work health and safety practices in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- criteria used to categorise plant species
- common and scientific names of Indigenous plants
- biological species occurring in the study area
- the importance, value or potential impact of the species in a designated area
- rare and endangered species
- plant identification techniques and plant names used by enterprise
- organisational expectations relating to the range and number of Indigenous plants to be recognised in the survey

- cultural protocols for obtaining and utilising information about Indigenous plants
- nutritional and medicinal purposes of bushland and/or bush foods
- land management and conservation techniques applicable to Aboriginal sites work.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW305 Work with Aboriginal ceremonial secret sacred materials

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop an awareness of the protocols involved in Aboriginal culture as they relate to individuals and communities, specifically in relation to materials with restrictions on access for cultural reasons.

The unit covers Community cultural processes including the need to identify the appropriate persons when approaching a Community and the cultural and social rules associated with that task.

This unit applies to following Aboriginal cultural protocols when coming into contact and working with cultural materials defined as Aboriginal ceremonial secret sacred objects. The unit applies to working with this material on Country and off Country where rules apply to limited access to the material for cultural and ceremonial reasons. This unit is also applicable to the work of repatriation workers and anthropologists.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge or materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
<p>1. Conduct background research and consultation with Traditional Owners, Community, Cultural Managers/Knowledge holders</p>	<p>1.1 Confirm traditional ownership of cultural material and objects and consult appropriate Owners or Cultural Managers and Communities</p> <p>1.2 Identify gender requirements for consultations, handling of and access to materials according to Aboriginal cultural protocols</p> <p>1.3 Consult with Traditional Owner/s, Community groups and experts to determine suitable holding for materials not authorised for general exhibition</p> <p>1.4 Obtain permissions from cultural authorities for access and use of Aboriginal secret, sacred and ceremonial materials</p> <p>1.5 Consult with Community to determine culturally appropriate handling of material and any limitations on access to materials</p> <p>1.6 Demonstrate confidentiality and neutrality in consultations and dealings with Traditional Owners and Cultural Managers</p>
<p>2. Handle Aboriginal secret sacred cultural material</p>	<p>2.1 Allow for and carry out any required Ceremony and procedure associated with seeing, handling or moving the material</p> <p>2.2 Identify, move, store, maintain and return cultural material according to Aboriginal cultural requirements and enter into agreements</p> <p>2.3 Note aspects of cultural material requiring repair or attention and pass onto supervisor or person with relevant expertise</p> <p>2.4 Communicate specific Aboriginal cultural requirements to colleagues</p> <p>2.5 Select and use appropriate handling and moving equipment according to safe work practices and to protect sacred and ceremonial material</p> <p>2.6 Adhere to cultural restrictions and limitations on secret, sacred and ceremonial material</p> <p>2.7 Demonstrate handling cultural material in a manner that protects individual items, assists efficient loading and unloading processes if moving, and in accordance with safe work practices</p> <p>2.8 Handle, move, store and manage secret sacred cultural material in accordance with Burra Charter guidelines and legislative</p>

Element	Performance criteria
	requirements
3. Contribute to documenting a generational succession plan for passing on ownership of secret sacred material	3.1 Discuss options for inheritance of ownership with Traditional Owners and/or Elders 3.2 Participate in documenting the process, guidelines and timeframes agreeable to Traditional Owners and Cultural Managers for handover of ownership, control and access to secret sacred materials

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW305A Work with Aboriginal ceremonial secret sacred materials.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW305 Work with Aboriginal ceremonial secret sacred materials

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify cultural authority for ceremony in a particular area or site
- consult effectively with Traditional Owners and relevant Community representatives about the handling, access to and display of cultural material
- observe Aboriginal cultural protocols and follow collection management practices and industry cultural requirements when moving, storing, displaying and maintaining cultural material
- select and use handling, storage and transport systems in accordance with Aboriginal cultural protocols
- create, maintain and store records of the process, guidelines and timeframes for handover of ownership, control and access to secret sacred materials
- use standard industry terminology and Aboriginal names for sites and materials, as appropriate
- apply work health and safety practices in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- issues that frame the development of cultural protocols
- Community Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- ownership relationships for secret, sacred material

- content of contracts and confidentiality agreements applicable to working with ceremonial secret sacred materials
- organisational procedures and guidelines for working with ceremonial secret sacred materials
- Burra Charter guidelines appropriate to working with Aboriginal secret sacred materials
- key concepts of Cultural and Heritage Legislation or National Parks and Wildlife Service (NPWS) legislation relevant to working with ceremonial secret sacred materials.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW306 Use technology in Aboriginal sites work

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to use technology and tools necessary to conduct Aboriginal sites work.

This unit applies to Aboriginal sites workers utilising technology on Country and in an office environment to assist them in their work. The unit applies to working either as an autonomous sites worker or under the supervision and cultural authority of Traditional owners or Elders for specific Country and is also applicable to the work of repatriation workers and anthropologists.

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country to identify and record site locations, read maps, and photograph and record sites, landscapes and objects.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Apply information literacy skills to meet job needs	1.1 Determine exact nature and extent of information technology needs for Aboriginal sites work undertaken in accordance with Aboriginal cultural protocols 1.2 Identify the relevant information management systems (IMS) and their applications for Aboriginal sites 1.3 Develop effective search strategies and use appropriate search tools to locate and record information in applications or programs used by enterprise 1.4 Follow Aboriginal cultural requirements for accessing and handling Aboriginal cultural material and cultural information 1.5 Recognise and apply copyright and licensing requirements related to access and use Aboriginal cultural material and cultural information
2. Set up and use handheld technology	2.1 Identify and set up the basic operating and menu settings 2.2 Navigate and manipulate the screen environment according to needs 2.3 Customise screen icons and access to applications where applicable 2.4 Use technology to locate and record location and details of the site or cultural landscape and save and edit the output, where applicable 2.5 Assess the usefulness and relevance of information resources to the site's work context and client needs 2.6 Evaluate search results and adjust search strategies to meet information needs 2.7 Use more advanced features as required
3. Access and use basic connectivity devices	3.1 Set the basic operating and menu settings 3.2 Connect external digital devices, such as computer devices or storage devices to retrieve, copy, move and save information 3.3 Check physical connectivity of computer devices or storage devices to ensure operation and performance 3.4 Connect printer either through a computer device or directly, set printer settings and print data 3.5 Access audio-visual devices to view and play a multimedia file 3.6 Use manuals, training booklets and/or online help or help-desks to overcome basic difficulties with applications
4. Maintain and operate UHF/VHF radio and compass onsite in the	4.1 Make sure suitable radio equipment for communication needs is available on site 4.2 Use radio devices and terminology effectively and correctly to

Element	Performance criteria
context of site work	meet communication needs of self and team on site 4.3 Apply storage and transport requirements for compass equipment 4.4 Identify a suitable directional compass for orientation needs on-site 4.5 Use directional compass in conjunction with a geographical and topographical map to accurately move around onsite and map coordinates
5. Maintain knowledge of IMS trends and emerging technologies	5.1 Source information about current industry trends and emerging technologies in relation to IMS and data collection methods 5.2 Replace used technology consumables in accordance with manufacturer's instructions and organisational requirements 5.3 Carry out, or arrange for routine maintenance to ensure equipment is maintained in accordance with manufacturer's instructions and organisational requirements 5.4 Accurately identify equipment faults, perform maintenance in accordance with manufacturer's instructions or report fault to designated person

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW306A Use technology in Aboriginal-sites work.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW306 Use technology in Aboriginal sites work

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- use digital devices, including computers, smart phones, tablets, radios, GPS (Global Positioning System) or PDAs (Personal Data Assistants)
- use menu features and navigate around the device and IMS functions
- use device features, software and applications to perform tasks to enterprise requirements
- save work in a format and location according to enterprise requirements
- transfer saved files to a computer for long term storage and printing
- use compass and maps to move around site and map site coordinates
- use audio visual devices to enterprise requirements.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- basic security functions
- basic software operation and associated applications
- map reading (including topographical maps) and longitudinal and latitudinal coordinates
- digital device functions used in own role
- how to use internal and external computer storage devices.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy the current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW307 Support the documentation of Aboriginal cultural landscapes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to identify and assist with the documentation of an Aboriginal cultural landscape on Country from an Aboriginal perspective.

This unit applies to Aboriginal sites workers who are working with experts to identify and record Aboriginal cultural landscapes on and off Country.

The unit applies to working with lore/law men and women either as an autonomous Sites worker or under the supervision and cultural authority of Traditional Owners and Elders for specific Country and is also applicable to the work of repatriation workers and anthropologists.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge or materials required to achieve competency in this unit due to restrictions applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify the characteristics of Aboriginal cultural landscapes on Country	1.1 Identify Aboriginal cultural landscapes and associated sites and features of cultural significance 1.2 Determine boundaries and extent of Country 1.3 Apply the concept of lore/law in the land 1.4 Describe Aboriginal cultural landscapes in ecological and archaeological terms, Aboriginal cultural language and spiritual terms, and traditional Aboriginal economic terms 1.5 Identify archaeological evidence of landforms
2. Participate in investigations of cultural and historical records of an Aboriginal cultural landscape	2.1 Identify from relevant databases or websites whether any historical records or previous research is available for the site 2.2 Participate in research activities to determine traditional understanding of the cycle of the seasons and meteorological phenomena, and of landform and vegetation community types in a cultural landscape 2.3 Determine environmental cultural knowledge, cultural connections and relationships with the landscape that are passed down generationally 2.4 Carry out investigations on Country in accordance with safe work policies and procedures, enterprise requirements and Burra Charter guidelines
3. Identify Aboriginal cultural value links to cultural landscapes	3.1 Identify cultural landscapes and determine links with Aboriginal cultural and Community knowledge 3.2 Describe relationships between Creation stories, oral histories, kinship and totemic to the cultural landscape 3.3 Identify gender access, roles and usage as this relates to the cultural landscape 3.4 Identify Aboriginal cultural values in cultural landscapes 3.5 Identify links between archaeological evidence and cultural landscapes 3.6 Identify indicators in the landscape that reveal traditional Aboriginal land management practices

Element	Performance criteria
4. Describe Aboriginal cultural practices and beliefs which maintain cultural connections to cultural landscapes	4.1 Identify appropriate persons within Communities who hold cultural knowledge 4.2 Identify appropriate Cultural Knowledge holders and/or Cultural Manager for an Aboriginal cultural landscape 4.3 Recount the range and interrelationship of Aboriginal beliefs and Aboriginal cultural and ceremonial practices that maintain connection with the cultural landscape 4.4 Document the associations of connection to Country through language, stories, song, dance and art if appropriate according to Community protocols and customs relating to disclosure of knowledge, using archaeological and Aboriginal terminology

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW307A Map Aboriginal cultural landscapes.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW307 Support the documentation of Aboriginal cultural landscapes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- discuss Aboriginal cultural landscapes in ecological and archaeological terms, Aboriginal cultural, language and spiritual terms and traditional Aboriginal economic terms
- relate Creation stories, oral histories, kinship and totemic relationships to the cultural landscape
- follow Community guidelines and Aboriginal cultural protocols when using information on sites, objects and cultural landscapes
- identify appropriate cultural authorities for a Community, site, story or Ceremony
- describe the range and interrelationship of Aboriginal cultural and ceremonial practices undertaken to maintain connection with the culture
- use Aboriginal names and archaeological terminology to describe landscapes and cultural connections.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the Community's Aboriginal history and cultural values
- Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- designated cultural areas and features of Country, boundaries and extent of Country
- Aboriginal cultural values of landform types
- archaeological evidence of landform types
- types of land features that have high possibility of cultural heritage being present
- creation stories, oral histories, kinship and totemic relationships to the cultural landscape

- key principles, values and practices of Aboriginal cultural knowledge
- lore/laws, customs and speaking rights
- connection to Country through stories, song, dance and art
- protocols and customs relating to disclosure of knowledge about Country
- key concepts of Cultural and Heritage Legislation or National Parks and Wildlife Service (NPWS) legislation relevant to own role
- key concepts of the Burra Charter.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy the current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW308 Apply cultural significance to Aboriginal sites and landscapes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to determine theoretical and practical concepts of cultural significance in relation to Aboriginal cultural sites and landscapes. It uses the Burra Charter as the industry benchmark in assessing significance for culture and heritage work.

This unit applies to those who are working on Country finding Aboriginal sites and working to assess significance in landscapes on Country. The unit applies to working with lore/law men and women either as an autonomous Sites worker or under the supervision and cultural authority of Traditional Owners and Elders for specific Country. This unit is also applicable to the work of repatriation workers and anthropologists.

This unit applies to all Aboriginal-sites workers. However, cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge or materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCASW302 Relate Aboriginal culture to sites work*

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine cultural significance	1.1 Ensure cultural knowledge holders inform the decision-making process to determine the cultural significance of Aboriginal sites and places 1.2 Acknowledge the determination of Aboriginal people as the primary source, and owners of information about the cultural significance of an Aboriginal site and landscape 1.3 Seek permission from cultural Authority to collect and share cultural knowledge 1.4 Acknowledge and respect traditional knowledge and practices in managing Country and environment 1.5 Determine Aboriginal history and beliefs embedded in a place of cultural significance 1.6 Recognise the embodiment of cultural significance in the place itself, the geographical and geological features, its fabric, artefacts and stone objects, setting, use, associations, meanings, records, related places and related objects
2. Conduct a significance assessment on an Aboriginal site	2.1 Determine the difference between an assessment of cultural significance and a statement of cultural significance 2.2 Consult with colleagues and experts to identify factors that may impact on the assessment and incorporate them into planning work 2.3 Collect information relevant to the assessment of cultural significance in collaboration with relevant experts 2.4 Assess the cultural significance of the site in accordance with the Burra Charter guidelines and legislative requirements 2.5 Prepare a statement of cultural significance consistent with the assessment of cultural significance findings, in collaboration with relevant experts to Community and legislative requirements 2.6 Seek feedback from colleagues on statement of significance

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW308A Apply cultural significance to Aboriginal-sites and landscapes.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW308 Apply cultural significance to Aboriginal sites and landscapes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must demonstrate that they can:

- determine theoretical and practical concepts of cultural significance in relation to Aboriginal cultural sites and landscapes
- identify appropriate cultural authorities for a Community, place or for a site
- collaborate with relevant experts to complete an assessment of cultural significance
- adhere to Burra Charter process and guidelines
- identify cultural information, material and expression appropriate to be shared
- identify groups and individuals to be consulted in relation to owners or custodians of cultural and Community knowledge, information and material
- recognise factors that may impact on the assessment, including artefacts and stone objects on site and geological and geographical features of the landscape.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- the role and prominence of the Burra Charter in the culture and heritage sector in Australia
- the Burra Charter definition of significance
- geographic and geological identification features of the cultural landscape
- artefacts and stone objects identification
- key concepts of Cultural and Heritage Legislation or National Parks and Wildlife Service (NPWS) legislation relevant to own role.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy the current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW309 Interpret Aboriginal cultural landscape

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to interpret cultural landscapes from an Aboriginal cultural and spiritual perspective. The unit also covers if and how this knowledge may be collected and provided to others.

This unit applies to individuals who are required to interpret cultural landscapes on Country. The unit applies to working with lore/law men and women either as an autonomous sites worker or under the supervision and cultural authority of Traditional Owners and Elders for specific Country. This unit is also applicable to the work of repatriation workers and anthropologists.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCASW302 Relate Aboriginal culture to sites work

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Investigate cultural knowledge	1.1 Acknowledge the determination of Aboriginal people as the primary source of information about cultural knowledge 1.2 Work with cultural authorities to identify appropriate persons within communities who hold cultural knowledge 1.3 Access cultural knowledge through reference to the appropriate Knowledge Holders or Cultural Manager 1.4 Consult appropriate cultural authorities to obtain approval to be on Country 1.5 Determine boundaries and extent of Country 1.6 Establish ownership rights and intellectual property rights to Aboriginal cultural knowledge 1.7 Establish parameters for access and access restrictions in transferring cultural knowledge and information 1.8 Determine and record key principles, values and practices of Aboriginal cultural knowledge 1.9 Define relationships between cultural knowledge and Country according to Aboriginal cultural protocols 1.10 Determine and record the history of dispossession from Community sources and available resources 1.11 Recount lost connections to Country due to colonisation
2. Acquire information	2.1 Manage movement through Country/park/reserve to minimise disturbance and degradation to the park/reserve and surrounding environments 2.2 Determine the relationships between Aboriginal beliefs, Aboriginal sites, land features, seasons, artefacts, objects and spirituality 2.3 Identify landscape features and sites on Country in accordance with their place and role in Dreaming, Aboriginal spirituality and local cultural practices and ceremony 2.4 Make the association of connection to Country through language, stories, song, dance and art 2.5 Determine the role of lore and customs in matters of land, family, marriage, kinship, totem, clan and obligation 2.6 Use Aboriginal and common names to identify fauna and flora used for food and medicine 2.7 Investigate knowledge of relationships between plants and animals from Aboriginal beliefs, land management and cultural

Element	Performance criteria
	<p>perspectives</p> <p>2.8 Define simple bush tucker food chains relevant to Country and determine relationships to the cultural landscape</p> <p>2.9 Carry out investigations in accordance with work health and safety and environmental sustainability policies and procedures</p> <p>2.10 Document investigation in accordance with Community protocols and permissions, to enterprise standards</p>
3. Relate information on cultural knowledge to others	<p>3.1 Seek permissions from cultural authorities, relevant individuals and organisations for access, use and documentation of Aboriginal cultural information and material</p> <p>3.2 Provide information on Aboriginal cultural knowledge to those who are authorised to possess that knowledge according to Community guidelines and Aboriginal cultural protocols</p> <p>3.3 Relate information on cultural knowledge in an appropriate format and medium according to Community guidelines and cultural protocols</p> <p>3.4 Refer requests for disclosure of information on Aboriginal cultural sites, landscapes and cultural material that infringes intellectual property rights of a group or Community to appropriate persons</p> <p>3.5 Decline requests for disclosure of information on aspects of cultural knowledge by unauthorised individuals</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW309A Interpret Aboriginal cultural landscape.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW309 Interpret Aboriginal cultural landscape

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- interpret cultural landscapes from an Aboriginal cultural and spiritual perspective
- identify details of plant and animal species on Country, their Aboriginal names and their roles and place in the cultural landscape
- collate information on Aboriginal culture and history for Country in culturally appropriate ways
- collect and use information according to Community guidelines and cultural protocols
- follow community lore/laws, customs on accessing and sharing cultural knowledge
- identify landscape features and sites on Country in accordance with their place and role in Dreaming, Aboriginal spirituality and local cultural practices and ceremony
- use Aboriginal names and standard industry terminology appropriate to the task
- apply work health and safety practices in the context of own work
- apply appropriate sustainability practices to minimise disturbance and degradation to park or reserve and surrounding environments.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols associated with area
- Aboriginal cultural customs and heritage related to area
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- designated cultural areas and features of Country, boundaries and extent of Country
- key principles, values and practices of Aboriginal cultural knowledge

- connection to Country through stories, song, dance and art
- role of Community lore and customs in matters of land, family, marriage, kinship, totem, clan and obligation
- protocols and customs relating to disclosure of knowledge about Country
- when and how to relate and document information and when it is not appropriate according to cultural protocols
- Aboriginal names for plants, animals and landscape features
- cultural knowledge about plant and animals relating to a particular Community, group or region
- role and rights of Indigenous people in maintaining and controlling cultural knowledge
- individuals who are authorised to possess cultural knowledge.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW310 Move and store Aboriginal cultural material

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to handle, pack and unpack Aboriginal cultural material for movement and storage.

This unit applies particularly to working around and with Aboriginal cultural materials and objects and focuses on the specific cultural and consultative requirements for sourcing, handling, and possibly interpreting Aboriginal cultural material. This unit is also applicable to the work of repatriation workers and anthropologists.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge or materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Source Aboriginal cultural material	1.1 Confirm traditional ownership of cultural material 1.2 Consult with the appropriate traditional custodians and Community to determine suitable keeping places for cultural materials 1.3 Work with cultural authorities to identify appropriate persons within Community who hold cultural knowledge relevant to establishing any restrictions on access to materials 1.4 Seek permission and advice for being on site and using cultural material according to Aboriginal cultural protocols 1.5 Locate and identify cultural material and objects and assess material's suitability for moving 1.6 Complete records according to cultural protocols 1.7 Identify issues and follow protocols in relation to the return of cultural material to local Aboriginal Community
2. Determine movement and storage requirements	2.1 Implement legislative and work health and safety requirements 2.2 Assess and document the scope of work required for movement and storage of cultural material 2.3 Identify and confirm organisational procedures and guidelines and specific requirements for moving and storing cultural material with relevant personnel 2.4 Determine future storage requirements with relevant personnel 2.5 Assess and arrange the need for specialist expertise
3. Handle and transfer Aboriginal cultural material	3.1 Identify, move, store, maintain and return cultural material according to Aboriginal cultural requirements 3.2 Record details of material requiring repair or attention and take action within scope of own job role or refer to relevant personnel as required 3.3 Communicate specific Aboriginal cultural requirements to colleagues 3.4 Select and use appropriate handling and moving equipment 3.5 Handle cultural material in a manner that protects individual items and assists efficient loading and unloading processes 3.6 Prepare transportation documentation 3.7 Transfer Aboriginal cultural material to approved location 3.8 Use techniques for moving material that minimise environmental disturbance and degradation, where appropriate

Element	Performance criteria
4. Store cultural material according to Aboriginal cultural requirements	4.1 Install, position or store cultural material as required 4.2 Ensure specific storage needs of cultural material are based on knowledge of requirements for different types of materials 4.3 Clear and clean work areas according to organisational procedures 4.4 Maintain storage records according to organisational policies and procedures

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW310A Move and store Aboriginal cultural material.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW310 Move and store Aboriginal cultural material

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify appropriate cultural authorities for a Community, place or site
- consult effectively with Traditional Owners, Cultural Managers and relevant Community representatives about the handling, access to and display of cultural material
- handle, move and store cultural materials according to cultural protocols
- seek permissions from cultural authorities for being on site and handling, moving, storing and recording cultural material, according to Community protocols
- observe Aboriginal cultural protocols, follow collection management practices and industry requirements when moving, storing, displaying and maintaining cultural material
- record details of transporting and storing of cultural material
- report damage or faults with cultural material to appropriate persons
- select and use handling, storage and transport equipment
- apply work health and safety practices in the context of own work
- apply appropriate sustainability practices to minimise environmental disturbance and degradation when moving cultural objects from Aboriginal sites.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- cultural authority for ceremony on the site
- ownership relationships for secret, sacred material
- record-keeping techniques
- organisational procedures and guidelines.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy the current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW312 Maintain an Aboriginal cultural site

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain Aboriginal cultural sites.

This unit applies to those working in Aboriginal communities and on Country in cultural landscapes and with cultural sites and objects. The unit applies to working with lore/law men and women, either as an autonomous Sites worker or under the supervision and cultural authority of Traditional Owners or Elders for specific Country. This unit is also applicable to the work of repatriation workers and anthropologists.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge or materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess maintenance work requirements and relevant cultural protocols	1.1 Identify and consult appropriate cultural authorities according to Aboriginal cultural protocols 1.2 Obtain approval and permits from relevant Traditional Owners and Cultural Managers for work to be carried out and for access to cultural site and materials for the specific persons who will conduct work 1.3 Access records of assessment of significance incorporated into strategies and plans for area and site, to determine required and appropriate actions 1.4 Identify any prior works that are not in keeping with cultural practices or causing damage to culturally significant sites or assets and determine appropriate maintenance actions 1.5 Collect information on environmental systems and procedures and provide to the work group where appropriate 1.6 Identify machinery, tools, equipment and materials to carry out maintenance works with appropriate techniques 1.7 Estimate level of work and document materials required for maintenance work 1.8 Identify where traditional Aboriginal repair or maintenance techniques and relevant archaeological practices and procedures are to be used and where modern techniques should be applied
2. Prepare for maintenance	2.1 Organise machinery, equipment and materials to carry out maintenance works and undertake pre-maintenance checks 2.2 Prepare and assemble safety equipment and materials 2.3 Identify safety hazards and apply safe work policies and procedures for all maintenance work
3. Maintain condition of place	3.1 Undertake maintenance work according to archaeological practices and Aboriginal cultural protocols and approvals and requirements of work programs and in a manner that ensures significance of place is maintained, and that work meets environmental sustainability requirements and does not cause damage to surrounds, fabric or building, or materials 3.2 Apply continuous improvement strategies to own area of responsibility, including communicating ideas and possible solutions to the work group and management 3.3 Support team members to identify possible areas for improved practices in work area on Country 3.4 Report evidence of deterioration and wear to Traditional Owners,

Element	Performance criteria
	Cultural Managers and supervisor 3.5 Record maintenance work according to Aboriginal cultural protocols and approvals and requirements of work programs 3.6 Clean up site on completion of maintenance works according to Aboriginal cultural protocols and supervisor's instructions
4 Protect cultural place	4.1 Report any breach of legislation or enterprise regulations to Traditional Owners, Cultural Managers and supervisor 4.2 Maintain protective barriers and signs according to enterprise procedures and Aboriginal cultural practices 4.3 Provide information to workers and contractors to ensure significance of place is maintained, and that work meets environmental sustainability requirements, does not cause damage to surrounds, fabric or building, and materials, equipment and tools are removed at the completion of work

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW312A Maintain an Aboriginal cultural site.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW312 Maintain an Aboriginal cultural site

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify appropriate cultural authorities for a Community, place or for a cultural site
- consult with appropriate cultural authorities and obtain informed approval for works and access of specific persons
- assess the level of work required to maintain the cultural place
- carry out maintenance activities in accordance with organisational, environmental sustainability and Aboriginal cultural requirements
- report deterioration or damage to place according to Community protocols and requirements
- report incidents of breaches of legislation including vandalism
- determine the cultural rights and responsibilities when using Community knowledge, information and material
- apply work health and safety practices in the context of own work
- ensure sustainability practices are applied by all workers and contractors on site to minimise environmental degradation and deterioration of site.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- workplace health and safety requirements and responsibilities of own role
- sustainable environmental practices applicable to maintaining site
- traditional and Western modern techniques of site protection appropriate to the site
- range of maintenance works undertaken on cultural sites
- enterprise procedures for reporting deterioration or damage to place or reporting incidents
- site recording systems used by the enterprise or Community

- relevant archaeological practices and procedures
- Cultural and Heritage Legislation or National Parks and Wildlife Service (NPWS) legislation relevant to maintenance of an Aboriginal site.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy the current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW313 Apply knowledge of relevant legislation to Aboriginal sites work

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to work within the constructs of relevant legislation when working with Aboriginal-sites, cultural materials and cultural landscapes.

This unit applies to Aboriginal sites workers working on Country or in other cultural and heritage contexts where legislative requirements are in place. The unit applies to working either as an autonomous sites worker or under the supervision and cultural authority of Traditional owners or Elders for specific Country.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge or materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Research the relevant legislation	1.1 Identify the legislative requirements that relate to Aboriginal sites work 1.2 Identify the purpose of legislation and environmental and sustainability requirements which apply to own work context
2. Identify relevant legislative provisions	2.1 Identify the laws that protect Aboriginal sites 2.2 Clarify compliance requirements with supervisor to confirm understanding and to ensure consistency of application across the organisation 2.3 Consult with experts to address any competing interests arising from different pieces of legislation with jurisdiction over the one Aboriginal cultural site, landscape or material 2.4 Carry out Aboriginal sites work within the constructs of relevant legislation
3. Identify stakeholder requirements	3.1 Communicate with clients and stakeholders to identify their needs in relation to relevant legislation 3.2 Provide referrals for stakeholders to expert advisors or advisory organisations 3.3 Recognise own limitations and professional boundaries 3.4 Conduct own Aboriginal sites work in accordance with legislative requirements and following Aboriginal cultural protocols and values

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCASW311A Apply relevant legislation in Aboriginal-sites work.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW313 Apply knowledge of relevant legislation to Aboriginal sites work

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- work within the constructs of relevant legislation in their work with Aboriginal sites, cultural materials and cultural landscapes
- identify and apply relevant legislation to the circumstances appropriately and accurately
- identify relevant compliance requirements affecting Aboriginal sites work in a specified jurisdiction
- use referral options and other expertise to assist in interpreting and applying legislative requirements
- communicate basic legal concepts and legislative language to Aboriginal clients and stakeholders in culturally appropriate way.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- how Cultural and Heritage Legislation or relevant National Parks and Wildlife Service (NPWS) legislation applies to Aboriginal sites work
- other legislation that may impact on Aboriginal sites work
- organisations to which appropriate referrals can be made.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

The assessor must satisfy the current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCASW501 Survey and report on Aboriginal cultural sites

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to survey and report on Aboriginal cultural sites.

This unit applies to those working in Aboriginal communities and on Country in cultural landscapes and with cultural sites and objects. The unit applies to working with lore/law men and women either as an autonomous sites worker or under the supervision and cultural authority of Traditional Owners or Elders for specific Country and is also applicable to the work of repatriation workers and anthropologists.

This unit applies to all Aboriginal sites workers. However, cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge or materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Aboriginal Sites Work (ASW)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify, communicate and consult with key stakeholders	<p>1.1 Work with cultural authorities to identify appropriate persons within Communities who hold cultural knowledge relevant to determining the cultural significance of Aboriginal places and heritage</p> <p>1.2 Develop and implement communication and consultation systems that place Aboriginal cultural protocols and values at the forefront and accommodate stakeholder concerns and interests</p> <p>1.3 Confirm traditional ownership of Aboriginal sites, cultural material, and objects</p> <p>1.4 Ensure approval and permissions are obtained from relevant Traditional Owners and Cultural managers for work to be carried out and for access to the Aboriginal site for the specific persons who will conduct work</p> <p>1.5 Complete any necessary submissions for conducting Aboriginal cultural sites surveys</p> <p>1.6 Develop working relationships with key stakeholders that assist in the management of culturally significant places</p> <p>1.7 Scope and document client needs for deliverables required in a formal sites survey report</p> <p>1.8 Manage planning and assessment processes, ensuring they are in accordance with the Burra Charter process and other existing industry guidelines and legislation</p>
2. Manage collection of initial site data	<p>2.1 Source and verify site plans and maps including topographical maps</p> <p>2.2 Identify and acquire required resources</p> <p>2.3 Prepare a base plan of the site</p> <p>2.4 Undertake site orientation and define and verify location, geographic and operational boundaries</p> <p>2.5 Identify and record current land use and environmental problems and threats</p> <p>2.6 Identify and record covenants that could affect the site or report</p> <p>2.7 Ascertain climate and weather conditions from historical data</p>
3. Compile a site inventory	<p>3.1 Categorise and record site context, location and site information data</p> <p>3.2 Categorise and record features data</p> <p>3.3 Identify and record cultural material, objects, properties and relevant physical characteristics on site inventory according to</p>

Element	Performance criteria
	<p>archaeological or scientific protocols</p> <p>3.4 Undertake relevant field research in accordance with safe work policies and procedures</p> <p>3.5 Implement appropriate techniques and tools and relevant archaeological practices and procedures</p> <p>3.6 Locate structural elements and confirm existing services and facilities</p> <p>3.7 Record the presence, location and/or extent of other relevant site constraints</p> <p>3.8 Develop limits of acceptable change in the forms of deterioration and damage to the places of cultural significance to legislative and enterprise requirements</p>
4. Review, assess and record the site data	<p>4.1 Engage relevant expertise and consultant services when required</p> <p>4.2 Conduct an assessment of cultural significance</p> <p>4.3 Document a statement of cultural significance</p>
5. Determine the impact of threats to the site	<p>5.1 Identify threats to culturally significant places, both external and internal to the area under consideration</p> <p>5.2 Undertake a risk assessment of all threats to determine potential impact on sites and associated cultural landscape</p> <p>5.3 Develop and implement risk management strategies and protection/conservation measures to control risks</p> <p>5.4 Develop and document a risk management report that incorporates an impact analysis</p> <p>5.5 Document policy changes required to address the threats</p>
6. Document a site survey report	<p>6.1 Document site information into a site assessment report or site survey report</p> <p>6.2 Incorporate all relevant data from the site assessment into assessment report in line with client needs and the requirements of relevant legislation and regulations</p> <p>6.3 Provide and record specific recommendations for remedial action of site conservation and mitigation of site problems</p> <p>6.4 Formulate and document recommendations for appropriate risk controls of site hazards</p> <p>6.5 Store and maintain survey and assessment data as part of professional practice</p> <p>6.6 Inform and advise client-stakeholder of the content and implications of the report and present a copy</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCASW501A Survey and report on Aboriginal cultural sites.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCASW501 Survey and report on Aboriginal cultural sites

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify appropriate Aboriginal cultural authorities for a Community, place or site
- identify key stakeholders to be consulted in relation to owners and custodians of cultural and Community knowledge, information or material and cultural significance
- develop and implement consultation processes
- survey and assess Aboriginal cultural sites using appropriate techniques, tools and relevant archaeological practices
- incorporate the cultural significance, heritage values and conservation issues of an Aboriginal cultural site into report documentation
- identify threats and develop controls to mitigate and manage the risk of deterioration, damaging incidents or loss of cultural integrity
- prepare a site survey report to meet Community and enterprise needs
- complete submissions required to carry out a site survey
- observe Aboriginal cultural protocols in dealing with stakeholders and land managers.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- site survey techniques, procedures and processes
- archaeological and scientific research techniques relevant to survey Aboriginal cultural site
- monitoring of site including fabric deterioration, damage and likely causes of deterioration and damage

- cultural rights and responsibilities when using Community knowledge, information and material
- general understanding of impacts of natural resources, such as geological settings, ecological processes, and interaction between natural and cultural processes
- provisions in the Australian Natural Heritage Charter and the Burra Charter and Guidelines and how they relate to surveying and reporting on Aboriginal sites
- design and methodology of consultation processes
- policy analysis and development of impact statements
- the range of conservation strategies for cultural areas
- data submission systems and reporting requirements
- components of Cultural and Heritage Legislation or National Parks and Wildlife Service (NPWS) legislation relevant to surveying Aboriginal cultural sites.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy the current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK203 Open and reassemble a beehive

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to open and reassemble a beehive to carry out routine bee husbandry and related tasks.

The unit applies to individuals that undertake routine beekeeping tasks. This includes identifying and providing solutions to a limited range of predictable problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to open a beehive	1.1 Confirm the activity to be undertaken according to job requirements. 1.2 Identify health and safety hazards and take action according to workplace procedures 1.3 Select, ensure serviceability, fit and use personal protective

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>equipment</p> <p>1.4 Identify and select tools and equipment required according to workplace procedures</p> <p>1.5 Check tools for serviceability and ensure faults are rectified or reported to supervisor</p> <p>1.6 Assess weather conditions and nectar flow and adjust planned activities to minimise risk of robbing and stress to bees</p> <p>1.7 Comply with site quarantine and biosecurity requirements according to workplace procedures</p> <p>1.8 Use safe manual or mechanical handling techniques to minimise to prevent injuries and damage to hives</p>
2. Open the beehive	<p>2.1 Apply smoke to control bees throughout the process</p> <p>2.2 Carry out work from a safe position in relation to beehive</p> <p>2.3 Open beehive using hive tool and remove components according to workplace procedures</p> <p>2.4 Place the components safely to ensure they remain clean and free from contaminants according to biosecurity and workplace procedures</p>
3. Reassemble the beehive	<p>3.1 Replace components according to workplace procedures and brood manipulation requirements</p> <p>3.2 Reassemble the hive according to workplace procedures</p> <p>3.3 Close the hive and secure according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and workplace procedures
Navigate the world of work	<ul style="list-style-type: none"> Comply with and implement explicit instructions and workplace procedures

Skill	Description
Get the work done	<ul style="list-style-type: none"> Plan and implement beehive tasks making limited decisions on sequencing and timing

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK203 Open and reassemble a beehive Release 2	AHCBEK203 Open and reassemble a beehive Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK203 Open and reassemble a beehive

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least two occasions the individual has demonstrated that they have safely opened and reassembled a hive, including:

- identified health and safety hazards and risks and applied appropriate controls
- selected, checked serviceability, fitted and used appropriate personal protective equipment (PPE)
- selected appropriate tools and equipment, and checked serviceability
- complied with hive quarantine and biosecurity requirements
- assessed the weather and other factors to minimise the risk of robbing and stress to bees
- worked from a safe position and used smoker, tools and equipment to move, open and dismantle a hive according to workplace procedures
- ensured hive components were kept clean and free from dirt
- replaced hive components and brood, reassembled the hive according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of opening and reassembling beehives
- bee behaviour when manipulating and dismantling a beehive
- the use of smoke to control bee behaviour
- hive components, location and purpose
- beekeeping tools and their application for dismantling a hive
- basic principles of hive hygiene, biosecurity and quarantine
- safety hazards, risks and controls when working bees including:

- PPE
- manual and mechanical handling techniques
- effect of weather and nectar flow on bee behaviour.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an active apiary with live bees
- resources, equipment and materials:
 - live bees
 - hive tools
 - hive components
 - PPE
 - mechanical handling equipment
- specifications:
 - workplace procedures related to opening and reassembling beehives
 - access to specific bee related quarantine regulations and biosecurity codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK205 Prepare and use a bee smoker

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to use a bee smoker when undertaking bee husbandry tasks.

The unit applies to individuals who operate a bee smoker. This includes identifying and providing solutions to a limited range of predictable problems.

State and territory regulations and local government by-laws apply in some jurisdictions to beehive ownership, biosecurity and the lighting of fires in the open.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare bee smoker for use	1.1 Identify the activity to be undertaken according to job requirements 1.2 Assess the climatic and other conditions that permit the use of smoker and adjust planned activities according to workplace procedures 1.3 Check bee smoker for serviceability and ensure any faults are rectified

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify hazards and risks associated with the use of a bee smoker and apply control measures according to health and safety in the workplace procedures</p> <p>1.5 Select, ensure serviceability, fit and use personal protective equipment</p> <p>1.6 Ensure an adequate water supply and tools available for fire control according to regulations and workplace fire prevention procedures</p> <p>1.7 Assess defensive behaviour of bees by considering weather conditions, nectar flow and strain of bee</p> <p>1.8 Prepare the bee smoker with suitable fuel and ignite according to workplace procedures and manufacturer instructions</p> <p>1.9 Operate bee smoker bellows to produce and maintain smoke according to workplace procedures</p>
2. Use bee smoker to manage bees	<p>2.1 Direct smoke into hive using the bellows and allow sufficient time for its effect according to workplace procedures</p> <p>2.2 Use the smoker on hive and monitor its effect to maintain control of bees according to their behaviour</p> <p>2.3 Ensure the smoker remains alight and within easy reach when in use</p> <p>2.4 Ensure the smoker is used and extinguished safely according to operating instructions and workplace fire prevention procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information from health and safety in the workplace procedures and fire permit
Navigate the world of work	<ul style="list-style-type: none"> Comply with explicit policies and procedures, seeking clarification or assistance when required

Skill	Description
Interact with others	<ul style="list-style-type: none"> Communicate with supervisor using appropriate terminology when confirming activities and conditions
Get the work done	<ul style="list-style-type: none"> Follow clearly defined instructions and sequencing, and monitors own progress when operating a bee smoker

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK205 Prepare and use a bee smoker	AHCBEK202 Use a bee smoker	Minor change to title Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK205 Prepare and use a bee smoker

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have operated a bee smoker including:

- confirmed work activity with supervisor
- identified and confirmed that the conditions are appropriate for using a bee smoker
- checked bee smoker equipment is available and serviceable
- identified hazards and risks and used personal protective equipment (PPE) and safe work practices to minimise risk
- ensured fire prevention procedures were carried out
- anticipated defensive behaviour of bees and monitored and applied smoke to control bee behaviour
- selected and ignited suitable fuel for smoker keeping it alight and functioning while carrying out bee husbandry tasks
- used and shut down bee smoker safely after completing operations according to regulations and workplace fire prevention procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of using smoke on bees to pacify behaviour
- types of bee smokers and their use and advantages/disadvantages, including:
 - bellows (traditional)
 - electric fan operated
 - electric ignition
- types of smoke and the effect on bees and hive products
- suitable bee safe fuel and ignition procedures

- operation of bee smokers and the effect of weather and environmental conditions on the safe use of smoker including fire prevention activities
- fire restrictions and regulations that impact on use of bee smokers, including:
 - permits and exemptions
 - applications for exemptions
- health and safety hazards and risks and their controls when using smokers.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a functioning apiary with live bees or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - bee smoker and apiary tools for manipulating hives
 - access to live bees
 - PPE
- specifications:
 - access to specific regulations and permits relevant to the lighting and operating bee smokers within work area.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK206 Assemble and maintain beekeeping components

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to safely assemble and disassemble beehives, identify and repair damaged components, and treat hive components according to biosecurity and legislative requirements.

The unit applies to beekeepers who work under routine supervision. This includes identifying and providing solutions to a limited range of predictable problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to assemble or repair hive components	1.1 Confirm construction plans, hive components, other materials and equipment required for hive assembly, repair and treatment with supervisor 1.2 Check and inspect stored hive components for availability and suitability for use 1.3 Remove faulty components from store and replace, repair or

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	discard according to workplace procedures 1.4 Identify health and safety hazards and take action according to workplace procedures 1.5 Select, ensure serviceability, fit and use personal protective equipment
2. Assemble or repair hive components	2.1 Inspect hives to identify necessary repairs, scope of job, materials and tools required 2.2 Treat hive components where inspection or testing indicated presence of pests or diseases according to supervisor instructions, biosecurity procedures and product label 2.3 Assemble or repair hive components according to workplace procedures 2.4 Apply treatments to preserve hive components appropriate for materials used and according to workplace procedures, product label and safety data sheets 2.5 Mark hive components with beekeeper identifier according to state or territory legislation 2.6 Report problems or difficulties in completing work to required standards or timelines to supervisor 2.7 Maintain a clean and safe work site while working
3. Clean up on completion of work	3.1 Return, store or dispose of materials according to workplace waste management and biosecurity procedures 3.2 Clean, maintain and store equipment 3.3 Report work outcomes according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret basic hive plans and specifications Interpret safety data sheets for treatments and preservatives used

Skill	Description
	on hive components
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format
Numeracy	<ul style="list-style-type: none"> Identify and interpret numerical information and symbols, including quantity, date, time, temperature, area and volume found on plans and product specifications Perform basic mathematical calculations required to interpret hive plans, including quantity, distance, area and volume
Navigate the world of work	<ul style="list-style-type: none"> Recognise workplace expectations and follows explicit procedures, and seeks clarification when required
Get the work done	<ul style="list-style-type: none"> Follow clearly defined instructions and sequencing, and monitors own progress for the task, seeks assistance when necessary

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK206 Assemble and maintain beekeeping components	AHCBEK204 Construct and repair beehives	<p>Minor change to Title and Elements to reflect current industry terminology</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Updated Performance Evidence and Knowledge Evidence</p>	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK206 Assemble and maintain beekeeping components

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have assembled and maintained beekeeping components including:

- identified hive components for assembly or repair
- identified materials, equipment and tools required for assembly work
- identified health and safety hazards and risks and applied relevant actions
- checked components for suitability and biosecurity risk to the environment or apiculture products
- removed, repaired or replaced unsuitable materials from the store
- constructed and repaired hive components according to workplace procedures, including correct selection and safe use of tools
- applied biosecurity and preservation treatments according to product labels, safety data sheets and workplace procedures
- marked hive components according to legislative requirements
- disposed of waste materials according to workplace biosecurity and waste management procedures
- cleaned and maintained and stored equipment and unused materials after completion of work
- maintained workplace records and reporting procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose, materials and properties of hive components
- principles and techniques for construction, repair and preservation of hive components
- tools and equipment used for assembly work, including:
 - safe use
 - appropriate personal protection equipment

- maintenance and storage
- biosecurity issues with used hive components and treatments including:
 - pests and diseases and treatment options
 - sanitising new and used components
- hive components preservation materials and techniques, including:
 - plastic components
 - timber components
 - paints
 - chemical dips
 - wax dips
- interpretation of chemical labels and safety data sheets for treatments and preservatives
- legislative requirements for identifying hive ownership
- mandatory and workplace record keeping systems.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - hand tools and equipment
 - new and used hive components
 - preservatives and treatments relevant to the type of materials used in the hive
 - use of appropriate personal protective equipment
- specifications:
 - workplace procedures relating to assembly and maintenance of beehives
 - manufacturer's operating instructions for tools and equipment used in beehive construction, assembly and preservation
 - product labels and safety data sheets for preservatives and treatments
 - access to specific legislation/codes of practice for hive identification and bee biosecurity
 - construction plans showing hive components.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK301 Manage honey bee swarms

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to collect and establish bee swarms, determine the health of bee swarm and manage swarming behaviour in hives according to quarantine and biosecurity procedures.

The unit applies to beekeepers who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and to solve problems.

State and territory regulations and local government by-laws apply in some jurisdictions to beehive ownership and biosecurity.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to catch a swarm of honey bees	1.1 Assess swarm location, size and condition and determine the options for dealing with the swarm 1.2 Determine equipment and resources required if catching the swarm

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>is a viable and safe option</p> <p>1.3 Select equipment and ensure serviceable for collecting swarms</p> <p>1.4 Identify health and safety in the workplace hazards and risks and apply appropriate controls associated with collecting a swarm</p> <p>1.5 Select, ensure serviceability, fit and use personal protective equipment</p> <p>1.6 Conduct work according to quarantine regulations and biosecurity codes of practice</p>
2. Collect a swarm of honey bees	<p>2.1 Place foundation frames in hive box to encourage collected swarm to remain according to biosecurity code of practice</p> <p>2.2 Catch swarm by shaking or placing into an empty box</p> <p>2.3 Move boxed swarm to new location after confirming that entire swarm has been collected</p> <p>2.4 Quarantine swarm from apiary to monitor hive health according to biosecurity procedures</p> <p>2.5 Monitor egg laying performance of queen to determine if re-queening is required according to workplace procedures</p>
3. Manage swarming behaviour in a honey bee colony	<p>3.1 Monitor honey bee colony for signs that swarming may occur</p> <p>3.2 Consider options for controlling swarming behaviour and select and implement the best option</p> <p>3.3 Monitor colony to ensure that swarming behaviour has been managed and assess further management options</p>
4. Update and maintain apiary records	<p>4.1 Update apiary records for increased hive numbers according to workplace procedures</p> <p>4.2 Notify authorities of amended hive numbers according to legislative and regulatory requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interprets biosecurity protocols and codes of practice
Writing	<ul style="list-style-type: none"> Completes workplace documentation using appropriate terminology and in required format
Get the work done	<ul style="list-style-type: none"> Plans and implements routine tasks and workload deciding on the sequencing and timing of honey bee swarm management and collection

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK301 Manage honey bee swarms Release 2	AHCBEK301 Manage honey bee swarms Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK301 Manage honey bee swarms

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have managed a honey bee swarm including:

- assessed swarm for condition and viable and safe options for collection, and determined resources and equipment required
- identified the hazards and risks and selected, fitted and used appropriate personal protective equipment
- identified and prepared equipment required for swarm collection
- interpreted behaviour and handling of bees and applied appropriate management strategies
- collected a swarm of honey bees using appropriate equipment and techniques while following quarantine and biosecurity requirements
- assessed captured swarm for health and need for re-queening
- selected and implemented control options to manage swarming behaviour in honey bees
- updated and maintained workplace and statutory records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of managing swarms, including:
 - causes and timing of honey bees swarm activity
 - why swarms are collected including environmental and social impacts
 - signs of colony swarming activity
 - management techniques that can be used to manage a colony showing signs of potential swarm activity
 - setting up swarm catch boxes to capture swarming bees

- biosecurity considerations, including:
 - pests and diseases that occur in honey bees
 - signs of pests and diseases in swarms
 - quarantine procedures to prevent cross contamination of apiaries
 - sampling procedures for pests and disease for confirmation
- signs and purpose for re-queening collected swarms
- swarm collecting and boxing techniques, including:
 - tools and equipment used for capturing swarms
 - hive components
- hazards and risks when collecting swarms and control strategies, including:
 - safety aspects of swarm collection and location
 - personal protective clothing
 - public safety
- workplace and statutory apiary records and notifications.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an active apiary
 - access to bee swarm
- resources, equipment and materials:
 - live bees or hive preparing to swarm
 - safety equipment for handling bees
 - tools and equipment appropriate for managing swarms.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK302 Manipulate honey bee brood

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to manipulate a honey bee brood to improve efficiencies in apiaries.

The unit applies to beekeepers who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and to solve problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to manipulate brood	1.1 Establish purpose for manipulating brood and plan appropriate actions and sequence 1.2 Select tools and equipment required to manipulate brood and ensure serviceability

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify health and safety in the workplace hazards and risks and apply appropriate controls associated with manipulating honey bee brood</p> <p>1.4 Select, ensure serviceability, fit and use personal protective equipment</p> <p>1.5 Observe site quarantine or biosecurity procedures according to workplace procedures and biosecurity code of practice</p> <p>1.6 Identify risks to bees, brood and queen and take actions to minimise risks</p>
2. Manipulate brood	<p>2.1 Open hive and remove frames according to planned sequence and set aside in suitable safe position</p> <p>2.2 Replace frames in hive in sequence and position according to planned manipulation</p> <p>2.3 Monitor hive following manipulation and take appropriate action to minimise disturbance to brood according to workplace procedures</p> <p>2.4 Clean work area and dispose of waste materials according to workplace waste management and biosecurity procedures</p>
3. Update and maintain apiary records	<p>3.1 Update apiary records for hive manipulations according to workplace procedures</p> <p>3.2 Maintain mandatory records for hive manipulations according to legislative and biosecurity reporting requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following explicit and implicit workplace procedures, regulations and biosecurity codes of practice

Skill	Description
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks required for bee brood manipulation

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK302 Manipulate honey bee brood Release 2	AHCBEK302 Manipulate honey bee brood Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK302 Manipulate honey bee brood

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have manipulated a honey bee brood including:

- established the purpose for manipulating brood and determined appropriate actions and sequencing of a honey bee brood to achieve a desired outcome
- identified hazards, assessed the risks and implemented safe work procedures for handling bees
- selected, checked serviceability, fitted and used appropriate personal protective equipment
- selected and used tools, materials and equipment for manipulating bee brood
- complied with apiary biosecurity and quarantine procedures during the activity
- opened hives, removed frames and set aside with minimal disturbance to brood and queen
- repositioned frames safely according to plan with minimal damage or unintended disturbance to brood
- monitored the hive after manipulation
- cleaned up work area and disposed of waste appropriately
- updated and maintained workplace and statutory records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of honeybee brood manipulation
- biosecurity and quarantine requirements when manipulating bees
- bee behaviour and handling techniques
- different types of manipulation that may be used to achieve desired results, including:
 - hive expansion

- splitting and nucleus development (nucs)
- pests and disease inspection and control
- increasing honey production
- swarm control
- re-queening and queen rearing
- seasonal preparations
- frame rotation
- tools and equipment and their safe use for opening hives and manipulating brood
- types of hive waste and processes for disposal
- workplace and statutory records and reporting.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an active apiary
- resources, equipment and materials:
 - hives with live bees with brood comb
 - specific hive tools
 - personal protective equipment
- specifications:
 - workplace procedures and instructions for manipulating brood
 - access to beekeeping legislation and biosecurity code of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK303 Re-queen a honey bee colony

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to locate and remove a queen from a hive and introduce a new queen into an existing honey bee colony.

The unit applies to beekeepers who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and to solve problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify requirements for re-queening a colony	1.1 Assess the current queen performance against workplace specifications 1.2 Monitor colony for signs that indicate queen replacement is necessary

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Determine the need and method for re-queening
2. Prepare to re-queen a colony	<p>2.1 Identify health and safety in the workplace hazards and risks and apply appropriate controls associated with manipulating honey bee brood</p> <p>2.2 Select, ensure serviceability, fit and use personal protective equipment</p> <p>2.3 Select tools and equipment required for re-queening operations and ensure serviceability</p> <p>2.4 Identify and obtain replacement queen to meet workplace specifications and biosecurity requirements</p> <p>2.5 Store replacement queen and escort worker bees in appropriate conditions and monitor until re-queening is undertaken</p> <p>2.6 Assess the condition and health of replacement queen</p> <p>2.7 Monitor hive condition and environment to ensure re-queening occurs under optimum conditions</p>
3. Introduce replacement queen bee	<p>3.1 Open hive and conduct manipulations re-queening operations according to method selected</p> <p>3.2 Locate queen bee to be replaced in the hive and remove</p> <p>3.3 Introduce queen to hive according to selected method and workplace procedures</p> <p>3.4 Allow time for queen and colony to adjust and stabilise according to workplace procedures</p>
4. Monitor progress of a replacement queen bee	<p>4.1 Monitor the hive for acceptance of replacement queen bee by colony according to workplace procedures</p> <p>4.2 Monitor replacement queen bee for evidence of egg laying and adequate levels of hatching</p>
5. Update and maintain apiary records	<p>5.1 Confirm legislative and workplace procedures for record keeping</p> <p>5.2 Update apiary records for re-queening activities according to workplace procedures, legislative and biosecurity reporting requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret biosecurity protocols and codes of practice
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for following explicit and implicit workplace procedures and industry practices
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks required in preparing for and conducting a honey bee queen replacement procedure

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK303 Re-queen a honey bee colony Release 2	AHCBEK303 Re-queen a honey bee colony Release 1	Minor changes to Elements and Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK303 Re-queen a honey bee colony

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has demonstrated that they have re-queened a honey bee colony for at least one hive including:

- monitored colony performance, assessed the queen against specifications and determined the need and method for re-queening
- identified hazards and risks and implement control measures for re-queening operations
- selected, fitted and used suitable personal protective equipment
- selected and ensured serviceability of tools and equipment required for re-queening operations
- obtained, assessed the condition and stored the new queen according to workplace and biosecurity requirements
- monitored conditions to ensure optimum time for re-queening operations
- assessed the health and condition of the parent colony
- conducted hive operations to locate old queen and replace with new queen according to selected method
- monitored hives for colony acceptance of new queen and queen brood development performance
- updated and maintained apiary records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of re-queening honey bee hives
- common manipulations, methods and techniques used to re-queen colonies

- tools and equipment required for hive operations and re-queening, including:
 - maintenance
 - safe operation
 - hygiene and biosecurity
- natural processes for queen replacement and their signs, including:
 - supersedure
 - swarming
 - emergency queen replacement
- hive monitoring techniques and assessing the performance of queen bee in the colony, including:
 - behaviour
 - colony traits
 - brood and egg laying
 - honey bee brood production
- selection criteria for queen bees
- assessing the health of queen bees
- handling queen bees, including:
 - transport and storage requirements
 - handling cages
 - handling live queen bee
 - identifying, removing and destroying old queen
 - introducing new queen
- sources of queen bees their advantages and disadvantages, including:
 - commercial suppliers
 - apiary breeding stock
 - supersedure
- health and safety hazards and risks when handling bees and personal protection equipment
- biosecurity considerations when selecting queen bees and suppliers
- workplace and statutory records and reporting procedures for re-queening operations.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an active apiary
- resources, equipment and materials:
 - live bees
 - live queen bee as supplied by commercial supplier or own apiary breeding program
 - tools for hive and queen bee manipulation
 - personal protective equipment

- specifications:
 - workplace procedures related to re-queening a bee colony
 - workplace queen bee specifications
 - access to biosecurity code of practice
- timeframes:
 - within a specific time period according to queen bee replacement method.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK304 Remove a honey crop from a hive

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to separate bees from ripe honey comb and remove the full comb from the hive for transport to the extracting facility.

The unit applies to beekeepers who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and to solve problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice.

Harvesting honey is subject to state and territory food safety legislation and regulations.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to remove	1.1 Select tools and equipment required for removing honey crop from

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
honey	hive and ensure serviceability 1.2 Identify health and safety in the workplace hazards, assess risks and implement control measures 1.3 Select, ensure serviceability, fit and use personal protective equipment 1.4 Identify and control food safety risks according to workplace procedures 1.5 Follow site quarantine and biosecurity procedures 1.6 Determine ripeness of honey to ensure it is ready to be harvested 1.7 Check treatment records to ensure withholding periods are met for medications and treatments made before harvest 1.8 Determine the factors affecting the quantity and quality of honey to be harvested from the hive 1.9 Plan the time and location of honey harvest according to workplace harvesting procedures
2. Remove honey from the hive	2.1 Identify, select and implement method for removing bees from ripe honey comb 2.2 Ensure honey comb removal prevents contamination and maintains desired quality and biosecurity standards 2.3 Load, secure, protect and transport ripe honey comb for processing according to workplace procedures for food safety, safe handling requirements and transport regulations 2.4 Store ripe honey comb in a pest and bee protected environment to prevent robbing, damage and contamination according to workplace procedures
3. Update and maintain apiary records	3.1 Update apiary records for honey harvest according to workplace procedures 3.2 Maintain mandatory records for honey harvest according to legislative and biosecurity requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret food safety and biosecurity codes of practice
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for following explicit and implicit policies, procedures and regulatory requirements for harvesting and maintaining food safety
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks for efficient honey harvest process Makes operational decisions when considering and implementing honey removal activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK304 Remove a honey crop from a hive Release 2	AHCBEK304 Remove a honey crop from a hive Release 1	<p>Minor changes to Elements and Performance Criteria for clarity</p> <p>Updated Performance Evidence and Knowledge Evidence</p>	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK304 Remove a honey crop from a hive

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that on at least one occasion the individual has demonstrated that they have removed a ripe honey crop from a hive including:

- selected and ensured serviceability of tools and equipment for harvesting a honey crop
- identified work safety hazards and risks and implemented control measures when working around bees
- selected and used appropriate personal protective equipment (PPE)
- performed honey harvest activities according to food safety, quarantine and biosecurity procedures
- determined the ripeness and volume of honey comb and its readiness for harvest
- checked treatment records and ensured honey is harvested according to treatment withholding periods
- determined the factors affecting quality and quantity of honey and planned the time and location to harvest
- handled comb filled with honey to prevent contamination and maintain quality
- selected and used appropriate method to remove ripe honey comb from hives and loaded and secured for transport
- used safe handling and loading techniques
- transported and stored ripe honey comb in a pest and bee secure environment protected from damage and contamination
- updated and maintained apiary records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of removing honey filled frames from hives
- impact on colony, type of honey and apiary site on the quality of honey, planning and timing of removal
- methods of removing bees from ripe honey comb and supers, including:
 - fume boards
 - brushing
 - blowers
 - escape boards
- food safety and handling requirements of honey comb
- indicators of ripe honey and adequately filled comb
- honey quality and factors that impact on quality
- calculations for estimating volume of harvest
- hive medications and treatments and their effect on honey harvesting and withholding periods
- tools and equipment required for honey harvest operations, including:
 - maintenance
 - safe operation
 - hygiene and biosecurity
- potential contaminants of ripe honey and the effect on honey quality
- loading, securing, protecting, transporting and storing ripe honey comb to minimise contamination, and comply with biosecurity requirements
- biosecurity standards and practices, barrier system and traceability of hive components when harvesting ripe honey
- hazards and risks when harvesting honey and control measures to apply including PPE
- planning a harvest and factors and conditions that impact on timing and location
- records and record keeping systems when harvesting honey crop.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an active apiary or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - bee hives with ripe honey
 - live bees
 - PPE
 - equipment, resources and tools used for removing bees from ripe honey comb
- specifications:

- workplace procedures for honey removal
- safety data sheets for fume boards used
- access to specific food safety regulations, biosecurity code of practice and transport regulations.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK307 Collect and store propolis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to collect propolis from bee hives and store propolis according to food safety standards.

The unit applies to beekeepers who work under broad direction and take responsibility for their own work in the specialist production of propolis according to food safety and quality assurance requirements. They use discretion and judgement in the selection, allocation and use of available resources to solve problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to collect propolis	1.1 Identify and prepare hives suitable for propolis collection 1.2 Clean and sanitise equipment to be used 1.3 Identify health and safety in the workplace hazards and take action to minimise risks 1.4 Select, check, fit and use personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Determine and implement propolis production strategy 1.6 Stimulate propolis production by manipulating hive conditions
2. Collect and store propolis	2.1 Remove propolis from hive with minimum colony disturbance and care according to production strategy 2.2 Comply with quality assurance and food safety requirements throughout propolis production process 2.3 Observe personal hygiene requirements according to food health and safety standards and workplace procedures 2.4 Extract propolis according to production strategy and workplace procedures 2.5 Store extracted propolis according to food safety standards, quality and workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret product labels, safety data sheets, instructions, procedures and specifications
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for following workplace procedures and food safety legislative requirements
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising propolis collection and workload

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK307 Collect	AHCBEK401 Collect	Code changed to reflect	Equivalent

and store propolis	and store propolis	AQF alignment Minor changes to Performance Criteria to increase clarity Updated Performance Evidence and Knowledge Evidence	unit
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Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK307 Collect and store propolis

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have collected and stored propolis including:

- assessed safety hazards, risks and applied appropriate controls
- selected, fitted and used personal protective equipment (PPE) while handling and working safely around bees
- identified and prepared hives suitable for producing propolis
- determined a propolis production strategy and manipulated hive to stimulate propolis production
- applied quality assurance and food safety and quality procedures
- cleaned and sanitised tools and removed propolis from the hive
- remove propolis ensuring minimal colony disturbance
- used appropriate propolis extraction and storage methods.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- honey bees and their behaviours for propolis and its production including types of flora
- recognition of propolis and distinguishing features from other substances collected by honey bees
- propolis production and collection strategies and hive manipulations to increase propolis production
- suitable extraction methods, conditions and constraints when collecting propolis
- methods, procedures and conditions for storing propolis
- food safety requirements when collecting propolis and working with hives
- honey industry quality assurance and biosecurity requirements specific to propolis production.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an active apiary or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live honey bees
 - tools for manipulating a hive and collecting propolis
 - cleaning products that comply with food safety standards
 - PPE
- specifications:
 - workplace procedures for propolis production
 - safety data sheets for cleaning products.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK308 Produce and harvest royal jelly

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to manipulate a honey bee hive to encourage the production, collection and storage of royal jelly.

The unit applies to beekeepers who work under broad direction to analyse information and complete a range of specialised beekeeping activities and who demonstrate a thorough understanding of the development of queens in hives and the production of royal jelly. They use discretion and judgement in the selection, allocation and use of available resources and to solve problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice.

State and Territory food safety legislation, regulations and standards apply to royal jelly that is used in food for human consumption.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to produce and harvest royal jelly	1.1 Assess health and safety in the workplace hazards and risks associated with working with bees and apply appropriate control measures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Select, ensure serviceability, fit and use personal protective equipment 1.3 Assess hive for suitability for production of royal jelly 1.4 Prepare hive and introduce artificial queen bee cells 1.5 Graft bee larvae according to workplace procedures 1.6 Stimulate the colony into producing royal jelly 1.7 Ensure production equipment is clean and sanitised according to hygiene procedures
2. Collect and store royal jelly	2.1 Adhere to hygiene requirements according to food safety and workplace procedures 2.2 Ensure royal jelly collection and storage equipment is clean and sanitised according to hygiene procedures 2.3 Remove and discard larvae from queen cells ensuring no contamination of jelly 2.4 Harvest royal jelly from each cell according to workplace procedures 2.5 Prepare the royal jelly for storage according to workplace procedures 2.6 Place royal jelly into hygienic containers ensuring minimum exposure to contamination and refrigerate according to food safety procedures
3. Finalise tasks	3.1 Check, clean and store equipment according to workplace procedures and hygiene procedures 3.2 Update and maintain records according to workplace procedures and quality assurance procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format
Navigate the world of work	<ul style="list-style-type: none"> Takes full responsibility for following policies, procedures and legislative requirements for safety, hygiene and storage requirements
Get the work done	<ul style="list-style-type: none"> Accepts responsibility for planning and sequencing royal jelly production and harvesting, scheduling tasks and workload

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK308 Produce and harvest royal jelly	AHCBEK403 Produce and harvest royal jelly	Code changed to reflect AQF alignment Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK308 Produce and harvest royal jelly

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that on at least one occasion the individual has demonstrated that they have manipulated a hive to produce and harvest royal jelly including:

- assessed safety hazards, risks and applied appropriate controls
- selected, fitted and used appropriate personal protective equipment (PPE)
- assessed the suitability of hives for the production of royal jelly
- introduced queen cells, grafted larvae and stimulated the colony for royal jelly production
- handled bees and hive components while preparing the hive
- prepared and sanitised equipment ready for royal jelly harvest
- maintained a hygienic environment according to food safety requirements
- removed and discarded larvae according to workplace procedures
- collected and stored royal jelly according to workplace and food safety procedures
- checked, cleaned and stored production equipment used in royal jelly harvesting
- maintained records of royal jelly production for food safety and quality assurance requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of royal jelly production in honey bee hives including biological processes and role of nurse bees
- queen bee cells and their development, larvae grafting techniques and methods of stimulating royal jelly production
- safety and safe practices when handling bees
- cleaning and sanitation methods and procedures for royal jelly production tools and equipment

- food safety requirements for collecting and storage of royal jelly
- quality assurance and record keeping requirements
- procedures and practices for removing and discarding larvae
- identification, use, maintenance and storage of tools and equipment required for production, harvesting, preparation and storage of royal jelly.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in hives suitable for royal jelly production or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live bees
 - tools and equipment required to prepare hives and harvest royal jelly
 - PPE
 - consumables and equipment required to store and preserve royal jelly
- specifications:
 - workplace procedures and specifications for royal jelly production
 - access to food safety and beekeeping legislation and codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK309 Trap and store pollen

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to obtain and install a suitable pollen trapping mechanism to collect and store pollen according to its intended use.

The unit applies to beekeepers who work under broad direction and take responsibility for their own work in the collection of pollen according to food safety and quality assurance requirements. They use discretion and judgement in the selection, allocation and use of available resources and to solve problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice.

State and territory food safety legislation, regulations and standards apply to pollen that is used in food for human consumption.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to trap and store pollen	1.1 Identify and select suitable floral resources 1.2 Assess colony for suitability for pollen collection according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>workplace procedures</p> <p>1.3 Identify health and safety in the workplace hazards and risks and apply appropriate controls</p> <p>1.4 Select, ensure serviceability, fit and use personal protective equipment</p> <p>1.5 Ensure equipment to be used in the process of collecting pollen is clean and sanitised according to food safety requirements</p>
2. Collect pollen	<p>2.1 Select and obtain suitable pollen trap equipment and use according to manufacturer instructions</p> <p>2.2 Adhere to personal hygiene requirements according to food safety and handling procedures</p> <p>2.3 Collect pollen at frequency according to workplace hive management procedures and quality standards</p> <p>2.4 Assess risk for pest attack or contamination of pollen and implement corrective action</p> <p>2.5 Assess risk of colony decline and implement corrective action according to hive management procedures</p> <p>2.6 Store pollen to be transported according to food safety and quality standards and workplace procedures</p>
3. Process pollen	<p>3.1 Clean pollen according to workplace procedures</p> <p>3.2 Treat pollen to prevent fermentation and deterioration and store according to workplace procedures and food safety and quality standards</p> <p>3.3 Maintain appropriate records according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format

Skill	Description
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for following policies, procedures, legislative requirements and industry codes relevant to pollen collection and food health and safety
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks for pollen collection and workload

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK309 Trap and store pollen	AHCBEK406 Trap and store pollen	<p>Code changed to reflect AQF alignment</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Updated Performance Evidence and Knowledge Evidence</p>	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK309 Trap and store pollen

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have trapped and stored pollen including:

- identified flora and assessed suitability of colonies for pollen collection
- selected a pollen trap and used according to manufacturer instructions
- assessed health and safety and food handling hazards and risks, and applied controls
- fitted and used appropriate personal protective equipment (PPE)
- collected, stored and processed pollen according to food safety and handling and workplace procedures
- assessed colony health, pests and contamination and rectified according to hive management procedures
- maintained records according to workplace procedures
- handled bees safely
- cleaned and sanitised equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of trapping and storing pollen
- pollen traps, their construction and operation
- colony pollen requirements and impact of harvesting on colony development including signs and symptoms of colony decline
- bee and hive handling techniques for collecting pollen
- flora resources and impact on pollen productivity
- quality assurance requirements for pollen collection including food safety and handling
- health and safety in the workplace and equipment requirements when working with hives
- commercial processing practices for pollen including, cleaning and treatments to prevent deterioration
- storage techniques for pollen for pre and post processing

- pests and contamination of pollen and corrective actions
- record keeping requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an active apiary
- resources, equipment and materials:
 - live bees
 - tools and equipment to trap and store pollen, including pollen traps
 - PPE
 - cleaning and sanitising products
- specifications:
 - workplace procedures and specifications for pollen capture and storage
 - manufacturer's instructions for construction/operation of pollen traps
 - safety data sheets for cleaning and sanitising products
 - access to food safety and beekeeping legislation and codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK310 Process raw wax into moulds

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to process raw wax using wax processing equipment into wax moulds.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and to solve problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Receive and prepare raw wax	1.1 Receive and store raw wax from beekeeping operations 1.2 Ensure wax is quarantined to prevent possible cross contamination with operational hives and hive components according to biosecurity procedures 1.3 Prepare the raw wax for processing according to workplace procedures and processing equipment requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Prepare wax processing equipment	<p>2.1 Identify health and safety hazards and risks and take action according to workplace procedures</p> <p>2.2 Select, ensure serviceability, fit and use personal protective equipment</p> <p>2.3 Select tools and equipment for processing wax according to work requirements</p> <p>2.4 Obtain and prepare moulds for processed wax according to workplace procedures</p> <p>2.5 Clean wax processing equipment according to workplace requirements</p> <p>2.6 Conduct pre start checks of processing equipment according to operating instructions</p> <p>2.7 Rectify or report equipment faults according to workplace procedures</p>
3. Process raw wax ready for separation	<p>3.1 Safely load raw wax in to processing equipment according to workplace procedures</p> <p>3.2 Start-up wax processing equipment and raise the wax temperature to predetermined specification according to workplace operating and safety procedures</p> <p>3.3 Maintain processing temperature for desired period of time according to workplace procedures</p> <p>3.4 Monitor equipment operation and rectify or report equipment faults according to workplace procedures</p>
4. Separate residues from wax and produce moulds	<p>4.1 Separate residual honey from wax and store or dispose of according to required purpose, workplace procedures and food safety and handling procedures</p> <p>4.2 Separate slum gum from wax and process according to workplace and biosecurity procedures</p> <p>4.3 Transfer processed wax into moulds according to workplace procedures</p> <p>4.4 Remove wax from moulds after cooling and store according to workplace and safe handling procedures</p>
5. Shut down and clean processing equipment	<p>5.1 Shut down wax processing equipment according to operating instructions</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.2 Reserve slum gum according to reprocessing procedures 5.3 Clean wax processing equipment according to operating instructions 5.4 Clean wax processing work area according to workplace procedures 5.5 Dispose of waste according to workplace, environmental and biosecurity procedures
6. Update and maintain records	6.1 Label wax moulds with batch information according to workplace procedures 6.2 Update records for wax production according to workplace procedures 6.3 Maintain mandatory records for wax production according to legislative and biosecurity reporting requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret equipment operator instructions
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate language and in required format
Numeracy	<ul style="list-style-type: none"> Interprets numerical information to monitor and adjust controls for temperature and timing of wax processing Perform basic calculation to determine weights and volumes of wax used in processing equipment
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following explicit and implicit workplace procedures, biosecurity code of practice and legislative requirements
Get the work done	<ul style="list-style-type: none"> Make routine decisions and implements standard procedures for routine tasks, using formal decision making processes for more complex situations Address problems and initiates standard procedures in response to

Skill	Description
	equipment operation and faults, and applies problem solving techniques to determine a solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK310 Process raw wax into moulds	Not Applicable	New Unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK310 Process raw wax into moulds

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has processed raw wax into moulds, on at least one occasion including:

- received and stored wax, ensuring no cross contamination with operational hive components
- prepared the raw wax for loading into processing equipment
- identified hazards and risks and implemented controls, including fitting and use of personal protective equipment (PPE) and safe work practices
- selected tools, equipment and moulds required for the wax processing
- ensured wax processing equipment is clean and ready for service, conducted pre start checks and identified, rectified or reported faults
- loaded raw wax into processing equipment, started equipment and monitored temperature, time and equipment operation during processing
- separated residual honey and slum gum from wax and transferred molten wax to moulds
- stored or disposed of residual honey and slum gum according to workplace, biosecurity and food safety and handling procedures
- removed wax from moulds, labelled and placed into storage according to workplace procedures
- shut down and cleaned processing equipment according to operating instructions
- cleaned work area and disposed of all waste material according to workplace waste management procedures and environmental procedures
- updated records and reports according to workplace, biosecurity and legislative requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of processing honey bee wax
- sources of raw wax used for processing and its preparation, including:
 - cappings from honey extraction
 - bur comb
 - damaged or rotated brood and honey comb
 - slum gum
- bees wax properties and impact on processing
- types and uses of residual materials in unprocessed and processed bees wax, including:
 - burned or cooked honey
 - slum gum
- wax processing equipment, their maintenance and operation, including:
 - types of wax processing equipment and their operation, solar, hot water, steam, direct heat
 - signs of faults in equipment operation and reporting procedures
 - repairs and maintenance requirements
 - cleaning procedures
- wax processing temperatures and timing
- types of moulds
- hygiene and biosecurity requirements and procedures for processing wax
- cleaning procedures and disposal of waste
- storage requirements for unprocessed and processed bees wax
- health and safety, hazards and risks and their controls when using wax processing equipment, including:
 - working with hot materials and equipment
 - PPE
 - manual handling
 - processing equipment safety
 - safe use of tools and equipment
- stock control records, labelling and mandatory records and reporting requirements for processing wax.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a wax processing plant or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - raw bees wax
 - tools for processing wax
 - PPE

- specifications:
 - workplace procedures and specifications for processing raw wax
 - manufacturer's operating instructions for wax processing equipment
 - access to specific biosecurity codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK311 Transport bee hives by road to new apiary site

Modification History

Release	Comments
Release 1	This version released with Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to prepare, load and transport live bee colonies (hives) by road transport between apiary sites.

The unit applies to beekeepers who operate apiaries under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and to solve problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership.

The transport, siting and cross border movement of livestock including bee hives and must comply with state and territory transport, quarantine and biosecurity legislation, regulations and codes of practice.

No vehicle licensing is required for individuals undertaking the work described in this unit. Where an individual is the nominated transport vehicle owner or driver, state and territory legislation, regulations, licencing and registration apply.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan road transport	1.1 Identify destination and determine best route according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
of hives to new apiary site	<p>vehicle capability, job specifications, welfare of bees and health and safety in the workplace procedures</p> <p>1.2 Calculate travel time and estimate time of arrival</p> <p>1.3 Identify environmental hazards and assess environmental risks that impact on hive health during transport</p> <p>1.4 Identify and assess health and safety risks for other road users</p> <p>1.5 Prepare a hive transport plan and management strategy to address identified environmental risks to bee health and safety of people that may contact bees on route</p> <p>1.6 Complete documentation for permits according to workplace procedures and regulations</p>
2. Prepare bee colonies for transport.	<p>2.1 Assess each hive for health and suitability for transport according to biosecurity procedures</p> <p>2.2 Check hive structural stability in preparation for transport</p> <p>2.3 Secure hive components according to workplace procedures</p> <p>2.4 Secure the bees according to transport plan and hive management strategy</p> <p>2.5 Clean hives of soil and weed contaminants according to biosecurity procedures</p>
3. Prepare vehicle for transport	<p>3.1 Conduct vehicle operational checks according to workplace procedures</p> <p>3.2 Prepare vehicle for transport conditions according to terrain, route and workplace procedures</p> <p>3.3 Select and stow equipment and resources required for hive transport activities according to workplace procedures</p> <p>3.4 Conduct biosecurity activities on vehicle, tools and equipment according to workplace procedures</p>
4. Load and secure bee colonies	<p>4.1 Load the hives onto transport vehicle according to health and safety in the workplace requirements and hive handling procedures</p> <p>4.2 Orient the hive on vehicle according to transport plan and hive management strategy</p> <p>4.3 Secure the load according to workplace procedures and transport regulations</p>
5. Transport and	5.1 Transport bee hives to new apiary site according to workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
monitor bee colonies	<p>procedures and traffic regulations</p> <p>5.2 Implement safety procedures to protect other road users according to hive transport plan</p> <p>5.3 Monitor bee activity during scheduled transport breaks and take appropriate action according to management strategy</p> <p>5.4 Check load stability and rectify according to road conditions and workplace procedures</p>
6. Unload and reinstate hives	<p>6.1 Release the load safely according to hive transport procedures</p> <p>6.2 Remove hives from transport vehicle according to health and safety in the workplace requirements, hive handling procedures and hive transport plan</p> <p>6.3 Place hives according to apiary requirements and workplace procedures</p> <p>6.4 Reinstate hives according to hive management strategy</p>
7. Record and report on transport activity	<p>7.1 Assess and review the performance of the transport plan and hive management strategy</p> <p>7.2 Report on performance elements according to workplace procedures</p> <p>7.3 Update records for transport activity according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret livestock transport regulations to identify specific compliance requirements applicable to bee hive transport
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format
Numeracy	<ul style="list-style-type: none"> Interpret numerical information including distance, time, travel speed, weight, temperature, and humidity to create transport plan and monitor

Skill	Description
	bee transport activities
Navigate the world of work	<ul style="list-style-type: none"> • Takes personal responsibility for following explicit and implicit policies, procedures, legislative requirements and industry codes of practice • Identifies and acts on issues that contravene relevant policies, procedures and legal requirements
Get the work done	<ul style="list-style-type: none"> • Plans and implements routine tasks and workload deciding the sequencing and timing of bee hive loading, transporting and unloading activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK311 Transport bee hives by road to new apiary site	Not applicable	New unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK311 Transport bee hives by road to new apiary site

Modification History

Release	Comments
Release 1	This version released with Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that on at least one occasion the individual has demonstrated that they have transported hives by road to an apiary site, including:

- prepared a hive transport plan, determined hazards to bees and people and prepared a hive management strategy for transporting bees to a new apiary site
- assessed suitability and condition of hives for road transport and secured hives and components ready for transport
- selected equipment and resources required for transit of bee hives and prepared vehicle according to workplace procedures and biosecurity requirements
- loaded and secured hives according to workplace procedures and transport regulations
- transported hives according to public safety and traffic regulations
- monitored load security and bee health during transport
- removed bee hives safely according to workplace procedures and positioned and reinstated hives according to apiary site plan
- completed documentation and permits and complied with biosecurity and regulatory requirements
- updated records, assessed, reviewed and reported on the transport plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic map reading and navigation skills to determine route parameters and transport plan, including:
 - road conditions
 - route efficiencies
 - journey duration and estimated time of arrival

- access to transport vehicle services e.g. fuel, water, air
- critical factors that affect hive health during transit, including:
 - weather and other environmental factors
 - travel time
 - road conditions
 - vibration
 - distance from previous apiary
- vehicle preparation for bee safety and vehicle operation, including:
 - tyre pressure for bee health, terrain and road conditions
 - exhaust fumes
 - pre-start checks
- transport methods for hives, including:
 - open hives
 - closed hives
 - covers and netting
 - barrier system
- transporting bee colonies and effect on health and biosecurity, including:
 - ventilation
 - water
 - loose frames
 - recognising bee disorders and distress during transport and remedial actions required
- techniques and equipment for securing hives for transport, including:
 - moving and handling hives for transport vehicle and safety
 - hive orientation on transport vehicle and impact on hive management
 - securing load techniques, load restraint procedures and transport regulations
 - vehicle load limits
 - unloading procedures
- managing live bee loads during stops, including:
 - fuel stops
 - mandatory rest periods
 - checking load movement and stability
- other road users safety when transporting live bees, including:
 - night road workers and work lights
 - police and road transport authority checks
 - weigh bridges
 - accidents and emergencies
 - emergency services
 - quarantine checkpoints
 - ferry crossings
 - urban areas

- general public approaching the transporting vehicle
- strategies to mitigate safety concerns for other road users, including:
 - signage and placarding
 - accident emergency procedures
 - communication and notification procedures
- hive manipulations to prepare for transport and restore hives to operational conditions after arrival
- assessing and reviewing transport plan and hive management strategies
- permits and regulations for transporting live bees, including:
 - biosecurity requirements
 - health certification
- record keeping and reporting procedures for bee transport
- health and safety procedures and requirements for transporting and handling hives.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an active apiary with hives to be transported or an environment that accurately represents workplace conditions
 - an apiary site prepared and ready to receive hives
- resources, equipment and materials:
 - health and safety equipment for transporting and handling bees
 - hives with live bees
 - hive tools and equipment used for transporting hives
 - vehicle for loading and transporting bee hives
 - loading and unloading tools and equipment
 - resources to secure bee hive loads to vehicles
- specifications:
 - work procedures for transporting bee hives, including safe work practices, bee handling and management, environmental requirements
 - information on equipment and vehicle carrying capacity and operating parameters
 - specifications, control points and parameters for handling and assessing bee health
 - documentation and recording requirements and procedures
 - access to biosecurity codes of practice, quarantine and transport regulations.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK312 Extract honey

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to prepare comb and safely operate equipment used to extract honey fit for human consumption. The work may be carried out on hive, in a mobile processing facility or a purpose built fixed facility.

The unit applies to beekeepers who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and to solve problems.

Honey extraction for human consumption is subject to state and territory food safety legislation and regulations.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to extract honey	1.1 Identify and select appropriate extraction method and equipment for type of honey production used 1.2 Identify health and safety in the workplace hazards and take action to minimise risks to self and others 1.3 Select, ensure serviceability, fit and use personal protective

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>equipment</p> <p>1.4 Ensure extraction equipment and storage containers are clean, dry, sanitised and serviceable according to workplace procedures, sanitiser product labels and safety data sheets</p> <p>1.5 Undertake personal hygiene requirements according to workplace and food safety procedures</p>
2. Prepare unprocessed honey comb	<p>2.1 Identify, select and reserve frames or sections for unprocessed honey comb according to workplace product and customer requirements</p> <p>2.2 Separate and clean sections or divide comb according to workplace product requirements</p> <p>2.3 Package, label and store raw honeycomb according to workplace quality assurance, food safety, handling and packaging requirements</p>
3.Extract honey	<p>3.1 Identify and comply with quality assurance and food safety and handling requirements throughout the process of extracting honey</p> <p>3.2 Inspect comb visually for areas of brood and prepare comb to avoid damage to brood</p> <p>3.3 Prepare comb to assist the extraction process according to workplace procedures</p> <p>3.4 Expose the honey by decapping or breaking comb avoiding unnecessary damage to cells, frames and hive components according to extraction method selected</p> <p>3.5 Operate the extraction equipment to remove honey from comb according to equipment operation instructions and safety procedures</p>
4. Handle extracted frames and supers	<p>4.1 Remove frames from extractor and return to supers according to extraction method, workplace and biosecurity procedures</p> <p>4.2 Store extracted supers in suitable bee and pest proof facility awaiting return to apiary according to workplace pest management and biosecurity procedures</p> <p>4.3 Return frames to apiary according to workplace barrier system and biosecurity procedures</p> <p>4.4 Reserve frames due for rotation or damaged and store for</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	wax extraction or repair according to workplace, quarantine and biosecurity procedures
5.Handle extracted honey	5.1 Ensure extracted honey meets temperature specifications to assist removal of wax, air, pollen and detritus 5.2 Test moisture content of honey and take action to maintain appropriate moisture according to workplace procedures 5.3 Monitor conditions of honey fermentation and implement procedures to reduce risk
6.Store honey	6.1 Store cleaned honey in containers to meet quality assurance standards, food health regulations and customer requirements 6.2 Obtain a reference sample of honey, label and store according to workplace procedures 6.3 Clean, dry and sanitise all equipment and work area according to workplace procedures.
7. Collect and store cappings and raw comb for future wax processing	7.1 Identify comb suitable for future wax processing 7.2 Extract residual honey from cappings and raw comb according to workplace procedures 7.3 Consolidate wax cappings and raw comb and store according to workplace, quarantine and biosecurity procedures
8. Maintain records of honey production	8.1 Update records for honey production according to workplace procedures and legislative requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret product labels, safety data sheets, instructions, procedures and specifications to determine activities in honey extraction processes
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format

Skill	Description
Numeracy	<ul style="list-style-type: none"> Interprets numerical information related to testing of moisture levels in honey samples
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for following policies, procedures and regulatory requirements for extracting honey, maintaining food safety standards and quality assurance
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks for operation of extraction equipment and collection and storage of extracted honey

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK312 Extract honey	AHCBEK305 Extract honey	Addition of Elements and Performance Criteria to reflect industry standards Minor changes to Performance Criteria clarity Updated Performance Evidence and Knowledge Evidence	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK312 Extract honey

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have extracted honey from mature honey comb, including:

- identified and selected appropriate extraction method for honey production process
- identified hazards and risks and implemented control measures and used equipment safely
- selected, fitted and used appropriate personal protective equipment (PPE) and complied with workplace personal hygiene practices
- identified, selected and prepared tools and equipment required for extraction process and ensured appropriate food hygiene procedures were performed on them
- identified, selected, prepared and stored unprocessed comb according to workplace product requirements
- identified and complied with quality assurance and food safety and handling requirements while extracting honey
- safely extracted honey using extraction equipment in compliance with quality assurance and food safety requirements
- prepared the comb for extraction avoiding brood comb according to the extraction method and equipment being used
- organised frames from the extraction process stored, returned to apiary or retained for repair or future wax processing in compliance with pest management, biosecurity and barrier system requirements
- ensured extracted honey was maintained at specified temperature to assist removal of wax, air, pollen and detritus
- tested moisture content of honey and took action to maintain appropriate condition
- monitored conditions conducive to honey fermentation and implemented procedures to reduce risk
- stored honey in containers and obtained a reference sample following to meet quality assurance standards, food health regulations and customer requirements
- identified comb suitable for wax processing, collected, removed residual honey and stored wax cappings following workplace, quarantine and biosecurity procedures
- cleaned and sanitised honey extraction equipment
- maintained appropriate records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of honey extraction
- recognition of different types of bee comb and maturity, including:
 - brood worker and drones
 - queen cells
 - mature and immature honey comb
 - pollen cells
- biosecurity protocols for honey extraction and transport of supers and hive components to extraction site
- processing of raw honey comb, including:
 - sections
 - cutting/slicing comb from frames
- honey extraction processes, including:
 - pressing
 - centrifugal/spinning
 - gravity draining or drip method
- equipment commonly used to extract honey and the safe operation and maintenance requirements
- hygiene and sanitation procedures and materials used for tools, equipment and storage of extracted honey
- storage requirements of honey, honey comb, extracted frames and supers including bulk storage and pest management
- food safety systems and requirements relevant to honey extraction
- quality assurance tests and standards for extracted honey
- temperature and the effect of heat on the extraction processes and quality of honey
- health and safety in the workplace issues associated with extraction and extraction technologies
- record keeping systems and labelling for extracted honey
- preparation and storage procedures for comb at time of extraction for later wax processing.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - either a portable honey extraction unit or a permanent extraction facility
- resources, equipment and materials:
 - mature honey comb ready for extraction

- specific tools and equipment for the type of extraction method employed
- PPE
- sanitising chemicals and equipment
- specifications:
 - workplace procedures related to honey extraction
 - manufacturer's operating instructions for honey extraction equipment
 - safety data sheets for chemical sanitisers
 - access to specific legislation/codes of practice related to honey extraction and food safety.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK313 Manage pests and disease within a honey bee colony

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to inspect a honey bee colony for indicators of disease or evidence of pests, and take appropriate follow-up action.

The unit applies to beekeepers who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership, compliance with biosecurity codes of practice and notifiable pests and diseases.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to check honey bee colony	1.1 Identify health and safety in the workplace hazards associated with opening and inspecting a hive and take actions to minimise risk 1.2 Select, fit and use suitable personal protective equipment 1.3 Select and use tools and equipment for opening and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	inspecting a hive
2. Inspect hive and identify possible pests diseases and poor health	<p>2.1 Inspect flight paths around hive entrance for evidence of poor health of adult bees</p> <p>2.2 Inspect the outside of hive for signs of diseased brood</p> <p>2.3 Open the hive and inspect colony for signs and symptoms of poor health, pests and disease</p> <p>2.4 Identify and record possible poor health, disease or pests according to signs and symptoms</p>
3. Undertake field diagnosis procedures	<p>3.1 Collect samples for testing and gather evidence to help with diagnosis according to symptoms and industry standards</p> <p>3.2 Conduct field diagnosis procedures appropriate for the pest or disease to identify likely cause</p> <p>3.3 Collect, secure and label samples for transport to specialist for confirmation</p> <p>3.4 Communicate with specialist to ascertain pest or disease identity</p> <p>3.5 Report notifiable pests and diseases to authorities</p>
4. Implement biosecurity and treatment measures	<p>4.1 Identify biosecurity control measures and treatments for identified pest or disease</p> <p>4.2 Implement biosecurity measures or treatments to rectify pests or diseases according to treatment product label, workplace procedures and biosecurity code of practice</p> <p>4.3 Monitor the impact of control measures and treatments</p>
5. Monitor treatments and maintain records	<p>5.1 Review the effectiveness of control measures and treatments</p> <p>5.2 Record results of inspections and remedial actions taken</p> <p>5.3 Maintain records for future beekeeping operations</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format
Oral communication	<ul style="list-style-type: none"> Clearly explain detailed information using language, tone and pace appropriate to audience
Numeracy	<ul style="list-style-type: none"> Interpret numerical information from product labels Calculate weight, volume and area for pest treatments
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for following policies, procedures and industry codes of practice
Interact with others	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with specialists for pests and disease diagnosis
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks and workload

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK313 Manage pests and disease within a honey bee colony	AHCBEK306 Manage pests and disease within a honey bee colony	Changes and additions to Elements and Performance Criteria for clarity Biosecurity content increased	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK313 Manage pests and disease within a honey bee colony

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that on at least one occasion the individual has demonstrated an ability to manage pests and diseases that affect brood and adult bees including:

- selected and ensured serviceability of tools and equipment for opening and checking hives
- identified health and safety in the workplace hazards and risks and implemented control measures when working around bees
- selected, fitted and used appropriate personal protective equipment (PPE)
- conducted inspections to hive to assess general health and condition of brood and adult honey bees and identified signs and symptoms of disease and pests that affect brood or adult honey bees
- collected samples and conducted field diagnosis following workplace procedures and industry standards
- labelled and secured samples for dispatch to specialist and confirmed diagnosis and reported notifiable diseases
- identified and implemented appropriate treatments and biosecurity measures to control pests and diseases
- monitored, reviewed and recorded outcomes of treatments for future beekeeping operations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of disease management within a honey bee colony
- pests and diseases of bees including common and notifiable species, including:
 - mechanism for infection/infestation
 - level of risk to bees and beekeeping industry

- biological processes relevant to infection and control
- hive inspection procedures and recording pests and disease observations
- identification of pests diseases, including:
 - signs and symptoms
 - field diagnosis techniques
 - collecting, labelling and sending samples for specialist diagnosis
 - immune detection kits
- types of samples and procedures, including:
 - adults
 - brood
 - honey
 - comb
- legislative and biosecurity standards for pests and diseases control and notification for Australian apiaries including procedures for reporting
- tools, equipment, materials and safe handling procedures when manipulating hive components and taking samples
- hazards and risks when working with bees and collecting pests and disease samples
- hygiene and sanitation practices for tools and equipment
- biosecurity procedures for pests and diseases of honey bees, including:
 - barrier systems
 - isolation
 - quarantine
 - frame rotation
- treatment of contaminated hive components, including:
 - burning and burial
 - sterilisation and irradiation
 - dipping treatments (e.g. hot wax or caustic dips)
 - scorching
- hive health, pests and disease control
- treatments for specific pest and diseases, including:
 - chemicals, types and application methods
 - antibiotics and prescription treatments
 - environmental treatments
- procedures for monitoring and reviewing treatments
- record keeping for pests and diseases including mandatory and workplace documents.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an active aviary or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - live bees
 - hive management tools
 - treatments appropriate to pests or diseases
 - equipment and materials required for field diagnosis activities
 - PPE
 - inert samples or representations of bee pests and diseases
- specifications:
 - workplace procedures for managing pests and diseases within a honey bee colony
 - safety data sheets for pest and disease treatments
 - access to specific legislation and codes of practice relevant to biosecurity and mandatory reporting
- relationships:
 - specialists in honey bee pest and disease diagnosis.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK402 Perform queen bee artificial insemination

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to determine suitable method for artificial breeding objectives and develop a program to collect semen from drone honey bees and artificially inseminate a queen bee.

The unit applies to advanced beekeepers who analyse information and exercise judgement to complete specialised bee breeding activities. They work autonomously and have accountability for the work of others. They research, analyse, design and communicate solutions to a range of complex problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine breeding method	1.1 Review options for artificial breeding to determine the most suitable and affordable method in line with breeding objectives

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Select an artificial breeding option according to workplace breeding program and queen and drone management program</p> <p>1.3 Identify, source and arrange resource requirements for breeding program</p> <p>1.4 Prepare program schedules based on available resources</p> <p>1.5 Identify health and safety in the workplace hazards and hygiene practices, assess risks and implement control measures</p> <p>1.6 Select, ensure serviceability, fitted and used personal protective equipment during insemination process</p>
2. Implement breeding method	<p>2.1 Obtain genetic material ensuring its health, reliability and legitimacy according to required bee characteristics and breeding objectives</p> <p>2.2 Receive, check and store genetic material to ensure maximum viability for program outcomes</p> <p>2.3 Manage rearing times to ensure age and condition of breeding bees occurs according to schedule</p> <p>2.4 Collect semen from drones according to workplace hygiene and collection procedures</p> <p>2.5 Prepare queen and inseminate ensuring minimal risk of contamination according to workplace protocols</p> <p>2.6 Place queen in a colony of suitable strength and monitor colony development and health according to workplace procedures</p>
3. Monitor and maintain program	<p>3.1 Review genetic material transfer and management practices to inform future breeding programs</p> <p>3.2 Document performance data in progeny resulting from genetic material transfer programs</p> <p>3.3 Calculate and use success rates from breeding objectives to determine success of artificial insemination program</p> <p>3.4 Identify and record modifications to queen and drone management program to assist continuous improvement processes</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse scientific texts and extract technical information for bee breeding
Writing	<ul style="list-style-type: none"> Documents outcomes and changes to breeding programs using industry relevant terminology
Numeracy	<ul style="list-style-type: none"> Performs mathematical calculations to analyse queen and hive performance following breeding program
Navigate the world of work	<ul style="list-style-type: none"> Takes full responsibility for following policies, procedures and legislative requirements for safety and hygiene
Get the work done	<ul style="list-style-type: none"> Accepts responsibility for planning and sequencing bee breeding tasks and workload

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK402 Perform queen bee artificial insemination Release 2	AHCBEK402 Perform queen bee artificial insemination Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK402 Perform queen bee artificial insemination

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has demonstrated artificial insemination on at least one occasion including:

- reviewed options and developed artificial breeding objectives
- selected and scheduled an artificial breeding option for breeding program
- obtained resources and determined artificial insemination activities
- identified hazards and risks and implemented control measures
- selected, fitted and used appropriate personal protective equipment (PPE)
- obtained and ensured genetic material complied with breeding characteristics and objectives
- received, checked and stored genetic materials to ensure maximum viability
- ensured queen and drone maturity and breeding cycles aligned
- prepared queen and drone honey bees for artificial insemination
- used appropriate techniques to extract semen from drones and inseminate queens
- complied with required hygiene practices
- introduced inseminated queen bees to new hive and monitored progress and success
- reviewed and documented genetic material transfer and management practices
- determined the success of artificial insemination program by calculating success rates
- maintained records in relation to an artificial insemination program.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of artificial insemination of queen honey bees

- anatomy and physiology of reproductive organs and reproductive process in queen and drone honey bees
- genetics and inheritance for bee characteristics required in genetic material, including:
 - honey bee health
 - abnormalities
 - productivity
 - habit
- artificial breeding methods and the benefits and limitations
- identification systems for queen and drone honey bees and semen
- physical resource requirements for artificial insemination practices
- safe handling and transportation of bees and genetic material
- artificial insemination policies and recording and reporting requirements
- preparation requirements for artificial insemination
- semen collection and preparation processes
- reviewing and maintaining effective insemination procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a laboratory or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live queen bees and donor drones
 - tools and equipment for collecting sperm and inseminating queens
 - PPE for hygiene and safety
- specifications:
 - workplace procedures for laboratory operations
 - workplace specifications for bee breeding.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK405 Select and establish an apiary site

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to evaluate and analyse potential honey production sites and select, establish and evaluate an apiary site.

The unit applies to experienced beekeepers with thorough understanding in honey production who analyse nectar flow and likely honey production to complete a range of specialist apiary site selection and establishment activities. They work autonomously and have accountability for the work of others. They research, analyse, design and communicate solutions to a range of complex problems.

All work must be carried out to comply with workplace procedures, state/territory legislation, regulations and local government by-laws which may apply in some jurisdictions to beehive ownership and compliance with biosecurity codes of practice. The transport, siting and cross border movement of livestock including bee hives must comply with state/territory transport, quarantine and biosecurity legislation, regulations and codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan to select and establish an apiary site	1.1 Establish and prioritise criteria for selecting a site 1.2 Identify suitable locality in which to search for site 1.3 Identify appropriate certificates and permits required for moving and establishing an apiary site 1.4 Gather and analyse information for potential sites in selected locality
2. Select the apiary site	2.1 Analyse data collected and select suitable site according to criteria 2.2 Determine capacity of available flora to support desired number of hives 2.3 Prepare a plan to establish an apiary at the selected site 2.4 Select precise areas to establish an apiary within the site 2.5 Ensure appropriate permissions and certificates are obtained prior to locating apiary
3. Establish the apiary at the selected site	3.1 Identify health and safety, biosecurity and food safety hazards and risks and implement controls for establishing suitable apiary sites 3.2 Select, fit and use personal protective equipment 3.3 Select tools and equipment required and ensure serviceability 3.4 Transport hives to apiary site according to workplace procedures, legislative requirements and biosecurity procedures 3.5 Locate hives on site according to site establishment plan and safe handling procedures 3.6 Observe and record access of bees to floral sources and water and effect on colony strength and production 3.7 Monitor the suitability of the site and reposition hives according to honey production and bee activity 3.8 Record results of inspections and any remedial action according to biosecurity and production procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret symbols and other technical information on maps and other documentation that impact on apiary site selection
Writing	<ul style="list-style-type: none"> Document outcomes of site performance and activities using industry terminology
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to analyse potential honey production and costs for selected site
Navigate the world of work	<ul style="list-style-type: none"> Accept responsibility and ownership for selecting a site and make decisions on suitability and coordination of resources Follow explicit and implicit policies, procedures and legislative requirements
Interact with others	<ul style="list-style-type: none"> Select and use appropriate conventions and protocols when communicating with persons when seeking permission for site
Get the work done	<ul style="list-style-type: none"> Make routine decisions and implement standard procedures for site selection tasks and resources

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK405 Select and establish an apiary site Release 2	AHCBEK405 Select and establish an apiary site Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK405 Select and establish an apiary site

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has demonstrated site selection and establishment of an apiary site including:

- established and prioritised selection criteria for apiary site
- identified suitable localities and appropriate permits and certificates required
- analysed site options and selected site according to selection criteria
- determined apiary capacity, orientation and layout, and prepared an establishment plan
- selected actual site and ensured appropriate permissions and certificates were obtained
- identified health and safety, food safety and biosecurity hazards and risks and implemented control measures
- selected serviceable tools and equipment required for site establishment
- transported hives to site safely, and located hives according to establishment plan and legislative and biosecurity requirements
- observed, monitored and recorded apiary performance and implemented corrective action according to apiary plan
- maintained apiary records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of apiary site selection
- sources of information for selecting potential sites
- site selection criteria for strategic and regulatory purposes, including:
 - legislation, regulations and biosecurity codes of practice relevant to the establishment of apiary sites

- relevant planning and land use regulations and permissions
- proximity to flora, water, general public, animals, gates, stockyards and movement of the sun
- accessibility of the site for beekeeper and security
- nearby land use
- protection from extreme environmental conditions
- fire risk
- site selection criteria for different bee management purposes, including:
 - honey
 - pollen
 - propolis
 - royal jelly
 - queen rearing
 - pollination services
 - over wintering
- nutritional and other requirements of a bee colony
- hazards, risks and controls associated with establishing apiaries, including:
 - personal protective equipment
 - safe handling procedures
 - barriers and distances from sensitive areas and public space
 - hive densities
 - elevated hives
- tools and equipment and their safe use for handling bees and hives when establishing an apiary site
- types of flora for the production of pollen and nectar flow
- apiary records and recording systems
- bee keeping legislation and biosecurity codes of practice for apiary sites, including:
 - weeds
 - diseases
 - pests
 - genetically modified organisms
 - certified organic produce.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an active apiary or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live bees in hives

- tools and equipment for working with and re-locating hives
- personal protective equipment
- maps showing site access and available resources
- specifications:
 - workplace procedures related to selecting and establishing an apiary site
 - workplace specifications for apiary site layout and orientation
 - access to legislation, permit requirements and biosecurity codes of practice related to establishing an apiary site.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK408 Provide bee pollination services

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to negotiate with clients and to determine pollination requirements and costs for bee pollination services.

This unit applies to experienced beekeepers who analyse information and exercise judgement to complete specialised pollination services activities. They work autonomously, have accountability for the work of others. They analyse, design and communicate solutions to a range of complex problems.

The transport, siting and cross border movement of livestock including bee hives must comply with state/territory transport, quarantine and biosecurity legislation, regulations and codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess pollination service requirement	1.1 Discuss and confirm the pollination services required with client 1.2 Determine number, location and types of colonies required for crop 1.3 Confirm state, territory and local government legislative and regulatory and requirements, including biosecurity affecting

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>pollination services</p> <p>1.4 Assess strength, condition and health of bee colonies for their suitability for use as crop pollinators</p> <p>1.5 Assess risk of pollination problems with client and establish process to monitor risk</p> <p>1.6 Provide technical information to client to support bee performance and maintain health</p> <p>1.7 Obtain appropriate certificates and permits where bees are to be moved across state borders</p>
2. Price and formalise agreement for pollination services	<p>2.1 Identify resources and calculate costs in providing pollination services</p> <p>2.2 Confirm with client the price for pollination services</p> <p>2.3 Document, confirm and exercise an agreement with client to provide pollination service</p>
3. Prepare apiary sites and deliver hives to client	<p>3.1 Prepare sites for hives according to workplace procedures and client requirements</p> <p>3.2 Deliver hives to site and set up apiary according to client and workplace procedures, legislative requirements and biosecurity code of practice</p> <p>3.3 Demonstrate strength and condition of hives to client to confirm agreed service has been provided</p>
4. Monitor pollination performance of bee colonies	<p>4.1 Liaise with client on spraying programmes to minimise damage to bees</p> <p>4.2 Monitor crop within appropriate timeframe for evidence of bee foraging and pollination efficiency</p> <p>4.3 Carry out bee husbandry practices to ensure apiary performance</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> • Draft and finalise written pollination service agreements for clients • Accurately complete applications for permits and certificates according to legislatives and regulatory requirements
Numeracy	<ul style="list-style-type: none"> • Perform calculations to analyse bee and pollination data, including quantity of hives required, costs and the performance of pollination services
Oral Communication	<ul style="list-style-type: none"> • Determine and confirm client requirements using active listening and questioning and observation of verbal and non-verbal signals to convey and clarify information and to confirm pollination services required
Get the work done	<ul style="list-style-type: none"> • Plan and monitor progress of services and reviews and implements change to meet client and service requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK408 Provide bee pollination services	AHCBEK404 Provide bee pollination services	<p>Added Element to unit Minor changes to Performance Criteria for clarity</p> <p>Updated Performance Evidence and Knowledge Evidence</p>	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK408 Provide bee pollination services

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have provided bee pollination services, including:

- discussed and confirmed pollination service requirements with a client
- assessed number, types and hive condition required for pollination outcomes
- assessed the risks of pollination services and provided technical advice to client
- identified resources and calculated costs associated with providing the pollination service and confirmed with client
- prepared and implemented an agreement after confirmation with client
- identified suitable locations within crop or site for hive placement and established, delivered and managed an apiary for pollination services
- liaised with the client to protect apiary from chemical use
- monitored and managed hive activity according to industry practice and agreed service outcomes
- obtained requisite certificates and permits and complied with relevant legislation, regulations and biosecurity codes of practice.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of pollination services
- crop chemicals and alternatives when managing hives
- environmental and climatic factors affecting bee foraging behaviour and pollination
- health and performance of bee colonies, including:
 - pests and diseases
 - swarm management
- hive management strategies, including effects of:

- weather
- nutrition
- water requirements
- basic negotiation skills and essential elements of valid agreements and service contracts
- pollination requirements of major crops targeted, including:
 - hive numbers, strength and densities
 - locality conditions of operation
 - competing crops and plants
 - timing to maximise crop pollination
- measuring and assessing pollination performance and success and readiness to remove
- site selection and impact of location on colonies to maximise pollination
- calculations and pricing techniques for service industry
- legislation, regulations and biosecurity requirements affecting pollination services.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - an apiary or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live bees in hives
 - tools and equipment required to locate and manage hives
 - access to crop requiring pollination
- specifications:
 - client specifications for pollination service
 - access to legislation/codes of practice related to pollination services
- relationships:
 - client with pollination requirement.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBEK409 Rear queen bees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to rear queen bees and queen cells through the manipulation of hives.

The unit applies to experienced beekeepers who exercise judgement to complete a range of specialist activities requiring a thorough understanding in honey production. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

All work must be carried out to comply with workplace procedures, state and territory legislation, regulations and local government by laws that apply to the ownership and registration of bee hives and compliance with industry biosecurity codes of practice. The transport and cross border movement of livestock including queen bees must comply with state and territory transport, quarantine and biosecurity legislation, regulations and codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish breeding stock and obtain	1.1 Select and obtain queen bee breeding stock according to breeding program

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
requirements for queen bee rearing	1.2 Identify health and safety hazards, risks and implement controls according to workplace requirements 1.3 Select, fit and use personal protective equipment 1.4 Select and safely use tools and equipment required to rear queen bees 1.5 Confirm site quarantine and other biosecurity protocols and ensure that they are followed
2. Assess condition of colonies and nurse bees and prepare queen cups with larvae	2.1 Ensure hives and colonies used for queen bee and drone production are in a clean and healthy condition 2.2 Select larvae from the breeder queen bee cells for grafting according to specification 2.3 Select and prepare queen cups according to workplace procedures and production method 2.4 Transfer larvae from worker cells into queen cell cups according to workplace procedures 2.5 Ensure an adequate number of nurse bees are present in cell raising colonies
3. Establish and monitor the queen mating process	3.1 Transfer ripe queen cells into the nucleus after grafting according to workplace procedures 3.2 Provide drones during mating period according to workplace standards and specifications 3.3 Monitor and maintain hives in a healthy pest and disease free condition 3.4 Maintain records of grafting and queen rearing activities according to workplace procedures
4. Package queen bees for transport	4.1 Select type of queen cage suitable for transport according to workplace procedures and method of production 4.2 Capture mated queen bee and transfer to queen cage supported by young escort bees according to cage type and workplace procedures 4.3 Ensure queen cage is stocked with food and secured for transport 4.4 Prepare package with queen bee cage and contents according to transport method and according to workplace and transport company procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret queen bee breeding procedures and specifications to determine requirements
Writing	<ul style="list-style-type: none"> Accurately record and complete workplace documents and using clear language and correct spelling, grammar and terminology
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following policies, procedures, legislative requirements and industry codes of practice relevant to queen bee rearing
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks for queen bee production

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK409 Rear queen bees	AHCBEK407 Rear queen bees	Element 1 split into two elements for clarity New element on packaging queen bees Changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBEK409 Rear queen bees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have reared queen bees including:

- obtained queen bee breeding stock according to breeding program
- assessed safety hazards, risks and implemented controls
- obtained tools, equipment and personal protective equipment (PPE) required for breeding manipulations and ensured serviceable for use
- conducted all bee manipulations and activity according to biosecurity and quarantine protocols
- ensured hives used for queen rearing are clean and healthy
- prepared queen using desired method and assessed, selected and grafted larvae into queen cells according to workplace procedures
- assessed and maintained nurse bee population to support developing queens
- monitored and maintained hive nutrition and health
- transferred ripe queen cells into nucleus
- monitored the queen mating process and provided drones according to workplace procedures
- maintained records according to workplace and industry procedures
- selected queen bee cage type and packaging requirements and ensured adequate food and escort bees for transport
- prepared package for transport according to workplace procedures and transport company requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of rearing queen bees
- basic genetics, breeding and evaluation for selecting queen bee stock

- techniques and timing for queen cell production including queenright and queen less starter and finishers
- grafting techniques including the use of kits
- making, placement and use of nucleus hives (nucs) for queen rearing
- capturing and handling techniques for queen bees
- holding and securing queen bees, including:
 - queen cages
 - queen banks
- transport, postage and handling queen bees
- labelling and identifying queens including international colour codes
- monitoring and recognising brood and adult bee health, diseases, pests and other disorders and required action
- optimum conditions and timing for queen rearing activities
- required number of mature, healthy and genetically suitable drones
- standards and protocols for selecting and manipulating bees and larvae for queen bee production.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an active apiary
- resources, equipment and materials:
 - live bees and queen bee stock
 - hive manipulation and larvae grafting tools
 - PPE
- specifications:
 - workplace procedures and specifications for rearing queen bees
 - access to legislation and codes of practice for biosecurity and queen bee breeding.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCBUS301 Use hand held e-business tools

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to use hand held e-business tools including computers, personal data assistants, (PDAs), radio frequency (RF) scanners, microchip scanners, mobile phone enabled email and SMS, data recording devices, barcoding equipment.

All work must be carried out to comply with organisational requirements, work health and safety legislation and codes and in consultation with the management team.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They must use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Business (BUS)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare hand held e-business tools for use	1.1 Select e-business tools 1.2 Complete relevant start-up procedures 1.3 Configure tools with business data 1.4 Test connectivity
2. Use hand held e-business tools	2.1 Use e-business tools 2.2 Address equipment faults 2.3 Check data for accuracy and address errors
3. Process business data	3.1 Generate and compile business data 3.2 Process business data 3.3 Maintain the integrity of data and data security 3.4 Review performance of hand held e-business tools and make recommendations for improvements to hardware, software or their use in accordance with e-business strategy and budget

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCBUS301A Use hand held e-business tools.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBUS301 Use hand held e-business tools

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare hand held e-business technology
- use relevant technology such as computers, handheld scanners, and barcoding equipment
- enter and process data according to technical and business requirements
- generate data in the format required by the e-business supply chain.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- features and operating procedures of relevant business tools
- relevant protocols for electronic data interchange
- personal identification and password for online access between businesses for access to inventory data and purchasing, payment or supply processes.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF401 Prepare project acquittal

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to review project documentation and prepare an acquittal statement for approval and auditing.

It applies to community program managers who have to prepare project acquittal statements. This includes taking responsibility for own work and providing and communicating solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Establish acquittal records	1.1 Review program or project plans, guidelines or contracts and financial reporting requirements 1.2 Collect financial information for acquittal report 1.3 Establish records of materials, equipment and labour provided before start of project for acquittal report

Element	Performance criteria
2. Identify transactions and reports relating to project	2.1 Identify project-related accounting transactions and reports in group accounts for use in acquittal 2.2 Determine need for separate statements based on different funding sources 2.3 Estimate financial values of in-kind donations of materials, loan of equipment and labour
3. Prepare acquittal in required format	3.1 Prepare acquittal from accounting and other information to program and contract requirements 3.2 Report program funds and expenditure on operations separately from group contributions to project 3.3 Report group contributions to project to contract requirements 3.4 Consolidate report for approval and auditing
4. Arrange audit of acquittal and transaction	4.1 Arrange audit of report to program and contract requirements 4.2 Arrange approval of report to group, program and contract requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF401A Prepare project acquittal.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF401 Prepare project acquittal

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- collate budgeted resources and inputs to project from planning document
- access accounts and develop a list of transactions related to the project
- prepare the project acquittal for reporting and auditing to program or funding body requirements
- arrange for an audit of the acquittal, the final report and the full list of transactions.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- program objectives and guidelines
- agency procedures for preparing project acquittals
- basic financial reporting formats and procedures
- project acquittal reporting requirements.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF402 Report on project

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to review a project and prepare a report to meet organisational and funder requirements.

It applies to those who prepare reports for community projects such as Landcare or similar for future group and program reference. It includes taking responsibility for own work and providing and communicating solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify project processes and outcomes	1.1 Identify scope of report and target audience from contract, program guidelines, agency procedures and committee decisions 1.2 Research background to project from available records 1.3 Collate information from project records and information

Element	Performance criteria
	provided
2. Prepare report	2.1 Prepare framework and format of report to required scope, target audience and guidelines 2.2 Prepare project report from researched information 2.3 Prepare conclusions in consultation with personnel 2.4 Circulate draft report to stakeholders for comment
3. Revise report for distribution	3.1 Revise draft report to address comments from consultation 3.2 Submit any unresolved issues to committee for decisions 3.3 Obtain approval for revised report in accordance with contract, group and agency requirements 3.4 Complete project reporting requirements within approved timeframes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF402A Report on project.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF402 Report on project

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- collate the documentation for the background and aims, budget, timelines, and resources allocated for the project
- prepare a report format that complies with organisational and funding organisation's requirements
- apply drafting and editing techniques in report writing
- implement consultation processes to determine report conclusions
- respond to feedback on draft report and finalise the version to be published and distributed
- develop project reports to organisational and funding organisation's standards
- finalise report within approved timeframe.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- program objectives and guidelines
- project report formats
- contractual requirements for reporting
- project background, processes and outcomes
- agency procedures for drafting, consultation and finalising project reports.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF403 Obtain and manage sponsorship

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to obtain program sponsorship and manage sponsorship commitments.

It applies to those who plan and obtain sponsorship for a community program such as Landcare. It includes taking responsibility for own work and providing and communicating solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify sponsorship opportunities	1.1 Target appropriate partners to the program as potential sponsors 1.2 Develop a rationale for sponsoring the program or activities which achieves a balance between the sponsors' requirements and the program goals, and benefits to the sponsor and program 1.3 Confirm feasibility of sponsorship opportunities through research

Element	Performance criteria
	<p>and analysis</p> <p>1.4 Itemise mutual benefits and develop list of targets</p> <p>1.5 Consider community, cultural and equity requirements in the group operations in developing list of target sponsor companies</p>
2. Prepare and deliver sponsorship pitch	<p>2.1 Make contact with potential sponsor</p> <p>2.2 Maintain the best interests of the program, group and agency in sponsorship approach</p> <p>2.3 Prepare presentation support materials with appropriate accuracy, style and degree of information</p> <p>2.4 Ensure presentation and approach demonstrates an understanding of and respect for sponsors' business and shows how sponsorship will be mutually beneficial</p> <p>2.5 Include outcomes of any prior sponsorship arrangements in pitch and negotiations</p> <p>2.6 Follow up presentation in a manner that preserves the integrity of the negotiations</p>
3. Successfully negotiate sponsorship deal	<p>3.1 Agree on terms which satisfy both the sponsor and the program and the associated agency</p> <p>3.2 Express nature of sponsorship and the benefits to the sponsor in explicit terms, ensuring they are understood by both parties</p> <p>3.3 Identify commitments under the sponsorship arrangements to assist maintenance of relationship</p> <p>3.4 Prepare a sponsorship agreement, contract or memorandum of understanding in accordance with enterprise, sponsor and legal requirements</p>
4. Maintain sponsorship deal	<p>4.1 Meet legal, financial, cultural, ethical, equity and other requirements throughout the sponsorship period</p> <p>4.2 Meet commitments under the sponsorship arrangements promptly and deliver benefits to the sponsor as agreed</p> <p>4.3 Recognise the support of sponsor for program or project in literature, reports and on-site</p> <p>4.4 Identify timing for the start of discussions to extend or complete the sponsorship</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF403A Obtain and manage sponsorship.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF403 Obtain and manage sponsorship

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify sponsorship opportunities with companies that have common values to the program
- identify the mutual benefits the sponsorship arrangement could provide to both organisations
- develop and present a sponsorship pitch that creates a professional and honest image
- negotiate an appropriate sponsorship arrangement to support a project
- document a sponsorship arrangement, detailing all agreements and responsibilities
- meet legal, financial, cultural, ethical, equity and other requirements for the duration of the sponsorship arrangement
- review a sponsorship arrangement and plan its renegotiation.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- strategy, goals, ethics, program and activities of community group or agency
- effective marketing techniques
- acts, policies and guidelines governing programs and activities
- sources of legal and financial advice
- operation of contracts and agreements.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF404 Contribute to association governance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor association activities and contribute to association governance.

It applies to individuals who take responsibility for others and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor association activities	1.1 Monitor activities undertaken by group to ensure: <ul style="list-style-type: none"> • association objectives are being adhered to • resolutions of meetings are being followed • finances are properly managed • employees are managed and volunteers are appropriately supervised • legislative requirements are being met

Element	Performance criteria
	<ul style="list-style-type: none"> • ethical requirements are being met • group operations and approaches are sensitive to and inclusive of community and sections within the community 1.2 Note variations from expected standards and take immediate routine action
2. Identify opportunities, threats and risks	2.1 Identify and recommend opportunities for the group to commence new projects or activities to the committee 2.2 Identify and raise threats to the ongoing operation of the group at committee meetings 2.3 Identify risks associated with the group's activities and ongoing operation 2.4 Submit risks and proposed risk control measures to the committee
3. Participate in board/committee meeting	3.1 Review agendas before meetings 3.2 Submit agenda items and reports as required 3.3 Attend meetings and discuss issues on the agenda 3.4 Establish and maintain communications with other members to ensure competent management of group affairs 3.5 Raise personal observations and concerns at committee meetings including opportunities, threats and risks 3.6 Take actions and report on commitments made at meeting

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF404A Contribute to association governance.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF404 Contribute to association governance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- contribute to association governance
- monitor association governance by reviewing or monitoring meeting procedures, finances, staff management, legislative compliance, ethical conduct and community consultation
- conduct a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis for the association's operations
- participate in board or committee meetings.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- requirements of relevant legislation
- interpretation of basic financial statements
- aims and activities of programs
- committee meeting and members' meeting procedures
- objectives and rules of association
- basic management practice including practices
- community goals and plans
- corporate governance legislation and codes of practice.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF405 Develop community networks

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to liaise with stakeholders in a community and develop community networks.

It applies to those who develop relationships that support the establishment and development of a community group and provide support from within the community for the group.

This unit applies to individuals who take responsibility for others and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Make contacts within community	1.1 Make connections through business, social and personal contacts and programs to the community

Element	Performance criteria
	1.2 Identify connections for their potential in regard to a community group program or activity 1.3 Formulate plans for developing relationships together with relevant community members and leaders 1.4 Respect equity requirements and cultural backgrounds of people being contacted 1.5 Observe cultural protocols to establish positive contacts 1.6 Follow appropriate mechanisms to establish contacts with Indigenous communities 1.7 Address community requests for information on or participation in programs or activities to promote the community group and program
2. Form and create links	2.1 Develop contact through promotional activities, programs and activities of mutual interest to community members and other groups 2.2 Structure activities, programs and personal contact to allow trust and understanding to develop within the group and community 2.3 Develop working relationships in areas of common interest and goals to bring benefit to all parties 2.4 Seek feedback on programs and community group activities from participants and community and use to modify their application 2.5 Develop appropriate records to maintain ongoing contracts and relationships
3. Build networks	3.1 Use individual contacts and contacts with other groups to establish networks of common interest 3.2 Review programs and activities to incorporate networks and the network resources in areas of common interest and goals 3.3 Evaluate progress in establishing links and networks and identify opportunities for further action 3.4 Manage relationships and networks to ensure compliance with cultural protocols and agency procedures and guidelines
4. Report on community liaison	4.1 Evaluate community liaison activities in terms of their costs, benefits to the group program and contribution to the community 4.2 Prepare and submit reports on community liaison activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF405A Develop community networks

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF405 Develop community networks

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop community networks
- investigate equity requirements and cultural protocols for dealing with community groups
- establish networks of common interests through individual contacts and contacts with other groups
- promote program goals and issues to community groups through networking
- make presentations to diverse groups of people
- communicate with people using appropriate language and style.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- community structures, organisations and cultures
- relevant government community action programs
- process of delivery of programs
- current social and environmental affairs for local community and wider region
- need for the establishment of a community group
- group goals.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF406 Facilitate ongoing group development

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to facilitate ongoing group development.

It applies to those who support a community Landcare group or similar, in its ongoing management and resolution of issues.

This unit applies to individuals who take responsibility for others and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Maintain contact on group activities	1.1 Maintain contact with group on current and proposed activities and projects

Element	Performance criteria
	1.2 Provide advice on group operation and opportunities when sought 1.3 Define role of coordinator in group operations with the management committee to avoid misunderstanding
2. Provide fresh input into group	2.1 Identify relevant new initiatives and ideas from other groups and program areas 2.2 Seek new initiatives and ideas from appropriate sources 2.3 Develop any suggestions to include local group and program context
3. Maintain network of contacts	3.1 Maintain contacts with members of the group and community to provide interchange of ideas and information
4. Facilitate resolution of group operating difficulties	4.1 Identify issues with potential to hinder operations before damage occurs to the group 4.2 Assess external threats and facilitate negotiation of solutions between the group and external parties 4.3 Resolve internal conflict through facilitation and use of relevant expert advice 4.4 Implement change management processes for groups requiring major restructuring

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF406A Facilitate ongoing group development.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF406 Facilitate ongoing group development

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- maintain contact with group to facilitate community networking
- share ideas between groups to foster initiative and innovation
- identify sources of conflict and issues that detract from the effective and equitable functioning of a group
- resolve group conflict and refer group issues for specialist advice if required
- use a range of facilitation strategies to work with groups.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- group development and facilitation techniques
- program guidelines, purpose and aims
- general understanding of natural resource management, sciences and technologies associated with program
- committee and group procedures.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF407 Obtain resources from community and groups

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to obtain resources from community and groups and coordinate the use of resources in projects.

It applies to those who source resources from within the community and group to support Landcare or similar group activities and projects.

This unit applies to individuals who take responsibility for others and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify potential resources	1.1 Determine resources required to carry out a project, function or activity

Element	Performance criteria
	1.2 Identify potential resources in the group, community and agency to match project requirements as documented in plan 1.3 Identify likely conditions under which alternative resources would be sourced in order to determine suitable sources and conditions of supply
2. Seek commitment of resources	2.1 Approach owners of resources to discuss resource availability and conditions of availability 2.2 Review costs of alternative arrangements in context of the budget to determine which arrangements can be accepted or renegotiated 2.3 Make arrangements with resource owners to access resources within overall project plan and budget 2.4 Ensure approach and relationship with resource owners caters for range of viewpoints to ensure a positive image of program is maintained
3. Coordinate use of resources	3.1 Coordinate provision of resources to suit project plan and any changes in timing and availability of complementary resources 3.2 Record use of resources to program and project requirements 3.3 Acknowledge contributors of resources in project documentation or reports

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF407A Obtain resources from community and groups.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF407 Obtain resources from community and groups

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop a list of resources required to carry out a project or function
- identify resources that may be able to be donated, purchased or borrowed from community
- apply for access to resources from community with details of proposed use and justification
- negotiate use of resources in a way that maintains community support
- document the use of resources as part of project management and to allow acknowledgement of community contribution.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- project resource requirements
- task analysis, including hazard and risk analysis
- network of resources in the community
- program guidelines
- details of contracts for resource access.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF408 Promote community programs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to promote community programs to target markets with a view to encouraging participation.

It applies to individuals who work in known and changing contexts, take responsibility for own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF).

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify target markets	1.1 Identify potential of program to appeal to sections of community or industry in terms of benefits and costs 1.2 Identify sectors of community and industry that are potential users, customers and audiences of program 1.3 Develop a plan to promote program or local projects or group

Element	Performance criteria
	activities with other communication activities
2. Develop promotional materials	2.1 Determine range of promotional channels to reach target sectors 2.2 Source or develop promotional materials to suit promotional channels and target sectors 2.3 Test impact of promotional materials with group or community members 2.4 Obtain specialist marketing support to address specific marketing issues within budget and program and agency guidelines
3. Promote program to potential users	3.1 Approach potential users of program and services through promotional channels and directly 3.2 Assess impact of promotional activities to determine changes required 3.3 Adjust promotional plan and activities to achieve an improved impact
4. Obtain commitment to use program services	4.1 Present proposals for delivery of program services to interested potential users in terms of benefits, costs and other factors 4.2 Address issues raised by potential users to overcome objections 4.3 Obtain commitments to use program services or support program
5. Respond to enquiries	5.1 Address enquiries by members of community, industry and program in terms of good customer service 5.2 Keep records of contacts, enquiries and presentations for reporting and follow-up 5.3 Follow up enquiries and presentations to obtain commitments to program services and objectives

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF408A Promote community programs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF408 Promote community programs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify the potential of a program to appeal to sections of community or industry based on benefits and costs
- determine communication channels appropriate for promotion
- deliver presentations in a range of direct promotional situations to appropriate persons in organisation or group
- develop audio, written and graphic materials promotional materials appropriate to the program and in line with organisational requirements and standards
- respond to queries and enquiries generated by the promotion program.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- program services, objectives, goals and guidelines
- basic marketing principles
- local advertising channels
- local or regional community and industries that could be potential users of, customers and audiences of the program
- organisational policies and procedures for promoting programs and groups.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF409 Participate in assessments of project submissions

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to review and assess project submissions against applicable guidelines.

It applies to those who participate in the submission assessment process at regional and State or Territory levels for publicly funded community programs. This unit includes communicating solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Research the applicable program guidelines	1.1 Review policy and program information required to participate in the assessment of projects within a region or State/Territory 1.2 Identify own role and responsibilities within applicable program guidelines and legislative requirements 1.3 Build own knowledge of policy and program information and

Element	Performance criteria
	legislative requirements to understand program aims and goals 1.4 Identify changes in policy and program information for impact on assessment processes
2. Review submissions	2.1 Review project submissions in the context of policy and program information before the assessment committee meeting 2.2 Complete personal review and ranking of projects for the assessment committee meeting
3. Participate in committee assessment process	3.1 Identify projects which meet program guidelines 3.2 Identify and review submissions seeking further funding for existing projects under separate criteria 3.3 Give assessments of projects a balanced consideration to ensure equity and fairness in the process 3.4 Review and rank projects in terms of the priorities and other factors defined in the program guidelines 3.5 Use active listening approaches and appropriate questioning techniques to develop an understanding and a team approach 3.6 Select projects for recommendation
4. Maintain integrity of assessment	4.1 Maintain confidentiality requirements of the assessment process 4.2 Follow ethical and legislative standards and procedures in the assessment process

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF409A Participate in assessments of project submissions.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF409 Participate in assessments of project submissions

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- contribute to committee assessment processes for project submissions
- participate in committee meetings according to meeting rules and processes
- rank competing projects based on suitability to policies and program requirements
- interpret and follow organisational policies and program information and legislative requirements
- apply procedures to maintain confidentiality requirements of assessment processes
- conduct assessments according to ethical and legislative standards and procedures.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- policy and program information, including purpose, values and goals
- scope of programs
- legislative and program guidelines at appropriate local, regional and State levels
- project assessment processes
- program integrity requirements
- funding program principles, guidelines and eligibility requirements.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF410 Support individuals in resource management change processes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide support and information in resource management change processes.

It applies to those who support individuals or businesses to change their management of resources within the context of the program.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify change	1.1 Identify changes that will affect business operations and personal

Element	Performance criteria
processes	lives 1.2 Assess the extent of impact that resource management changes will have on businesses and personal lives
2. Conceptualise impact of changes	2.1 Start discussions with individuals and families regarding their life-style, values and views on resource management and program issues to identify potential for change 2.2 Identify difficulties or issues individuals and families may have implementing change in their business and personal lives 2.3 Identify appropriate information and support approaches
3. Implement support techniques	3.1 Obtain and provide information to support individuals and families facing or considering change 3.2 Give individuals and families encouragement and support as they consider and implement change 3.3 Provide support and information in a culturally sensitive and equitable manner 3.4 Provide people with avenues of assistance where this will help in their management of change
4. Review support outcomes	4.1 Assess results of support provided in terms of resources spent, change achieved and potential for further change 4.2 Change support approach in light of results

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF410A Support individuals in resource management change processes.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF410 Support individuals in resource management change processes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess the resource management change and its potential impact on individuals and affected families and businesses
- predict issues that are likely to arise from change, based on community feedback and statistical information
- provide information and support to individuals facing resource management changes in a sensitive manner
- review the methodology and effectiveness of support to improve support services for resource management change.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- local natural resource management issues
- relevant approaches to different cultures
- change management principles and practices
- networks of assistance.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF411 Develop approaches to include cultural and human diversity

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop approaches to include cultural and human diversity in land management activities.

It applies to those whose job role includes identifying and accessing culturally diverse groups in the community so that they are included in program development and implementation. A high level of cultural awareness and the need to observe cultural protocols are important parts of the process.

This unit applies to individuals who have limited responsibility for others and undertake problem solving in a range of known contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Identify potential for cultural diversity	1.1 Identify the range of cultural diversity using information on the population of the program area 1.2 Identify potential involvement of individuals and groups in the context of the program 1.3 Make adjustments to program and program materials to meet cultural frameworks of different peoples
2. Develop processes to include culturally diverse groups	2.1 Identify and acknowledge cultural protocols to ensure contact with individuals or communities is successful 2.2 Identify key persons needed for influencing relationships 2.3 Formulate plan to develop and maintain contact with culturally diverse groups in line with understanding of cultures, goals of the relationship and relevant organisational requirements 2.4 Ensure processes are inclusive of an equitable involvement of various sections of the community and their perspectives
3. Communicate potential and support for culturally diverse group	3.1 Communicate with individuals and groups of culturally diverse backgrounds to promote their potential involvement in groups and programs according to plan 3.2 Communicate potential of program and group activities in a culturally relevant manner 3.3 Adjust communication according to needs and protocols of different cultural groups 3.4 Facilitate links between culturally diverse individuals and groups to ensure good community relationships and development of the program

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF411A Develop approaches to include cultural and human diversity.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF411 Develop approaches to include cultural and human diversity

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify range of cultural and social groups in land management area
- negotiate and maintain cultural protocols for dealing with people from a range of cultures
- develop working relationships with representatives of cultural groups
- facilitate the involvement of culturally diverse groups in community issues related to land management
- communicate and work with individuals and groups in a culturally sensitive way.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- sources of culturally relevant materials and verbal information
- cultural protocols and perspectives
- relevant legislation and guidelines
- current relationships between culturally diverse groups in the area
- understanding of the role of various sections of the community in historical and relationship terms.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF415 Coordinate social events to support group purposes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to coordinate events that support group purposes.

This unit applies to community program leaders who coordinate events in the context of a workplace or a community group as a method of creating community interest in a Landcare program.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan events	1.1 Identify relevance of events within group's activities to ensure

Element	Performance criteria
	contribution to group goals 1.2 Canvass group members' preferences for types and frequency of activities 1.3 Develop concept, timing and resources for event to meet group's needs and support any community involvement 1.4 Manage risks of events, including group and public safety, and group image 1.5 Promote event to members and section of the community 1.6 Determine availability of personnel and resources for event 1.7 Support group to plan event within budget
2. Coordinate activities	2.1 Prepare location of event to cater for activity and people 2.2 Check availability of resources to ensure event will occur as planned 2.3 Coordinate people assisting in the event to provide an environment consistent with purpose of activity 2.4 Manage shortages in personnel and resources to minimise impact 2.5 Welcome and liaise with visitors and members to develop positive social environment
3. Close event	3.1 Clean and restore event site on completion of activity 3.2 Conduct evaluation of events including feedback from members

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF415A Coordinate social events to support group purposes.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF415 Coordinate social events to support group purposes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- facilitate small groups to plan event
- coordinate group members to organise and run events
- plan and follow-up tasks to be completed for the social event
- assess and manage risks to ensure safety of members and visitors
- close event and restore venue to clean, pre-event condition
- conduct evaluation of event to make recommendations for future events
- organise appropriate events in keeping with the community group's goals and vision

Knowledge Evidence

The candidate must demonstrate knowledge of:

- resources available in the community
- resources required for different types of events
- group goals and aim of events
- community views and cultures

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF416 Present proposed courses of action to meeting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop proposed courses of action and present recommendations at meeting.

This unit applies to community program facilitators. These individuals take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop course of action and documentation	1.1 Identify and compare a range of courses of action to proposed course of action 1.2 Determine best course of action related to goal, action strategy, project or issue to solve a problem or to advance the group 1.3 Determine legislative and ethical requirements and diverse

Element	Performance criteria
	viewpoints for inclusion in decision or discussion 1.4 Identify reasons for proposed course of action including costs and benefits
2. Present recommendations	2.1 Present recommendations and rationale to committee for approval

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF416A Present proposed courses of action to meeting.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF416 Present proposed courses of action to meeting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop solutions or appropriate courses of action on own or in small groups
- present recommendations to a meeting, including analysis of suitability of course of action

Knowledge Evidence

The candidate must demonstrate knowledge of:

- sources of knowledge and advice appropriate to submission
- legislation and regulations related to proposed course of action
- structure for presenting reasoned submissions

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF501 Evaluate project submissions

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop and apply evaluation criteria and processes to project submissions.

This unit applies to those who typically work as part of a team process to decide on government funding for community-based projects at regional and State/Territory levels.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Review previously planned project	1.1 Identify updates to proposed project outcomes and evaluation

Element	Performance criteria
outcomes	processes 1.2 Conduct consultations with community group leaders, coordinators and facilitators to identify any changes to original plan, timelines, outcomes, and to evaluation 1.3 Identify availability of data and suitable range of methods to evaluate project progress
2. Develop evaluation approach for project submissions	2.1 Develop criteria for evaluation of project applications or submissions 2.2 Develop decision making process for evaluating and accepting or rejecting project submissions 2.3 Consult with stakeholders on proposed criteria and decision making process 2.4 Review process based on stakeholder feedback and organisational requirements 2.5 Develop review panel for evaluation of project submissions 2.6 Communicate decision making process and selection criteria to review panel, project applicants and other key stakeholders
3. Evaluate project submissions	3.1 Acknowledge receipt of all project submissions 3.2 Use agreed processes and criteria to evaluate project submissions 3.3 Review decisions with other panellists to determine outcomes
4. Communicate decisions	4.1 Communicate decisions of panel to project applicants 4.2 Provide feedback on submissions and reasons for decisions 4.3 Publish outcomes according to organisational policies and procedures
5. Report on and implement conclusions	5.1 Prepare report to program, agency and project requirements 5.2 Check analysis and report conclusions with key stakeholders to identify any deficiencies to be removed or additional information that should be included 5.3 Ensure report meets required program and agency standards in terms of layout, format, style and process 5.4 Ensure data collection, analysis and reporting are timely to project agency requirements 5.5 Submit report according to project, program and agency requirements 5.6 Implement report conclusions to project, program and agency requirements and within the scope of the group resources and authority

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF501A Evaluate project submissions.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF501 Evaluate project submissions

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop evaluation approach and criteria
- develop review panel and review processes
- evaluate submissions against criteria
- communicate panel decisions to project applicants, including feedback on the reasons for decisions
- prepare reports to agency, project or program requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- facilitation and mediation techniques
- legislation and regulations appropriate to projects being submitted
- basic budgeting skills
- reporting and publishing requirements
- data collection and analysis techniques

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF502 Facilitate development of group goals and projects

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to facilitate development of group goals and projects.

This unit applies to those dealing with groups and communities involved in a Landcare or similar program and covers the facilitation role to assist a group to develop its direction and role in terms of goals, action plans and projects, and to prepare submissions for funding on relevant projects. These individuals take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Promote the identification of land management and	1.1 Encourage group members to identify local environmental issues within the context of the group's activities and program scope 1.2 Develop identified issues in terms of problems, causes and actions

Element	Performance criteria
environmental issues	<p>required</p> <p>1.3 Provide opportunities for group members to learn about environmental matters and to acquire additional related skills</p>
2. Facilitate development of priorities for action	<p>2.1 Facilitate group to develop potential action strategies for identified issues that comply with program scope</p> <p>2.2 Determine priorities for action strategies based on members' interests and skills, the impact on environmental issues and promotion of solutions, and compliance with the program guidelines</p> <p>2.3 Ensure facilitation processes used are appropriate to the level of group development</p>
3. Facilitate development of goals	<p>3.1 Facilitate the group to develop goals and link them to action strategies in a cohesive action plan</p> <p>3.2 Support group to document their goals and action strategies and achieve membership approval</p> <p>3.3 Review previous goals and action plans with the group as part of the development of new goals and action plans</p> <p>3.4 Identify role of coordinator in group development and management to reduce unrealistic expectations and conflict</p> <p>3.5 Manage individual views and interests to ensure group cohesion is maintained</p> <p>3.6 Enable group to develop its goals and projects within its rules of association and program guidelines</p> <p>3.7 Correlate goals and action strategies to regional plans and initiatives</p>
4. Support group to identify and evaluate potential projects	<p>4.1 Facilitate group to identify a range of potential projects within goals and action strategy</p> <p>4.2 Lead group through an evaluation process of alternative projects to determine: compliance with members' interests and skills; project scope within the resources of the group or network of regional groups; compliance within program scope; available funding; and potential for acceptance</p> <p>4.3 Encourage group to review the results of previous projects and submissions for funds as part of the development of new projects</p> <p>4.4 Ensure facilitation process is sensitive to individual member viewpoints, perspectives and cultures, and considerate of community goals and plans to manage any potential conflict</p>
5. Support group in development of project proposals and submissions	<p>5.1 Facilitate group to develop a project plan and costing within program guidelines</p> <p>5.2 Assist group to prepare project proposal in terms of the program requirements and to complete submission for lodgement to the</p>

Element	Performance criteria
	authorities by the due date 5.3 Assist group to document project evaluation requirements in accordance with program and proposal requirements 5.4 Source relevant information to assist the group with the submission

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF502A Facilitate development of group goals and projects.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF502 Facilitate development of group goals and projects

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- facilitate development of group goals and projects
- identify and discuss land management issues with local groups
- work with groups to identify local actions that they can become involved in to promote improved land management outcomes
- provide support to a group in developing project plans and preparing project proposals and submissions
- facilitate group to reach consensus in planning decisions
- facilitate group to allow all group members the opportunity to contribute to discussions

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the range of group facilitation styles
- previous group history
- local, regional and national environmental issues
- regional community, groups and cultures
- strategic planning principles
- national, State and regional funding priorities
- community and sector perspectives on land management and environmental issues
- project planning, budgeting and costing techniques
- mediation and facilitation strategies

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF503 Promote group formation and development

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to promote group formation and development to address land management programs or projects.

This unit applies to those who bring people together to form and strengthen a Landcare group or similar, its processes and outcomes. These individuals exercise autonomy and manage other to undertake complex work and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify potential for group	1.1 Carry out community research to determine potential interest in forming group in a locality or region 1.2 Encourage members of existing groups to use their networks to promote the group and program, and to obtain new members

Element	Performance criteria
2. Develop approach to create and maintain interest	2.1 Identify community organisations and media as potential avenues for promotion 2.2 Promote program in region or locality to create interest in it and its objectives 2.3 Modify approaches to diverse sections of the community to cater for their perspectives and cultures 2.4 Bring together people interested in forming new groups
3. Communicate group potential and achievements	3.1 Identify and promote environmental issues that have the potential to be addressed by the community and group to raise interest 3.2 Record and use group and regional achievements to promote the group and the program 3.3 Identify and address any tension or conflict between people in group formation and development using appropriate and consistent conflict resolution approaches
4. Enlist members and volunteers	4.1 Invite contacts to join the group and program to increase community involvement and resources 4.2 Identify interests and skills of community members to introduce them to relevant program activities and others with mutual interests 4.3 Give people who wish to form new groups advice, support and access to information and program resources 4.4 Ensure approaches and dealings with individuals and groups include appropriate regard for cultural issues, equity and disability 4.5 Manage minority interests within the group to develop group cohesiveness in line with program requirements 4.6 Use activities to facilitate group formation and bonding and to attract new members

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF503A Promote group formation and development.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF503 Promote group formation and development

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- investigate forming a group to progress a land management issue or project
- promote the land management initiative to assist group formation and gain support from existing groups
- use activities to facilitate group formation and bonding and to attract new members
- respond to and solve conflict constructively
- show appropriate regard for cultural issues, equity and disability

Knowledge Evidence

The candidate must demonstrate knowledge of:

- sources of local information on community interests and environmental issues
- structure and operation of community organisations
- group formation processes
- public relations principles
- principles of negotiation and conflict resolution
- program objectives, scope and guidelines
- agency procedures and related requirements

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF504 Support group and community changes in resource management

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to support group and community changes in resource management.

This unit applies to those who support change management processes in a group and community context. These individuals take personal responsibility and exercise autonomy in undertaking complex work and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify changes occurring at group and community levels	1.1 Identify changes at group and community level due to voluntary initiatives or legislative requirements

Element	Performance criteria
2. Identify potential impacts and reactions	2.1 Identify potential impact of changes and reactions at group and community level 2.2 Identify support in terms of change management initiatives that may be required to implement change in the group or community 2.3 Identify cultural and sector perspectives and viewpoints to address different reactions to change
3. Facilitate change management processes	3.1 Distribute information related to the changes in terms that assist understanding and acceptance 3.2 Enable group to develop understanding of change, to manage reactions and to develop response 3.3 Encourage group to develop and implement a plan to address change and its impacts

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF504A Support group and community changes in resource management.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF504 Support group and community changes in resource management

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify required or impending changes and potential impacts on a group or community
- develop change management strategies to deal with potential change issues
- distribute information about changes and provide advice and response to queries
- facilitate a group through a process of change

Knowledge Evidence

The candidate must demonstrate knowledge of:

- change management theories at individual and group level
- local networks and groups
- community viewpoints and cultures

Assessment Conditions

Assessors must satisfy current standards for assessment.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF505 Contribute to regional planning process

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to contribute to a regional planning process.

This unit applies to those whose job role requires them to contribute to and assist in the regional planning process under the broad direction of technical specialists, facilitator and/or group and panels. These individuals take personal responsibility and exercise autonomy in managing and undertaking complex work and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Participate in panels and group discussion on the planning	1.1 Submit natural resource management issues, economic and social factors, and potential solutions or directions to groups for discussion

Element	Performance criteria
process	1.2 Ensure contributions are positive to assist group to develop course of action and recommendations 1.3 Structure contributions to discussions and panels and groups to comply with legislative, program and agency requirements
2. Collect data and background information	2.1 Collect information on local natural resource management issues and survey local groups, projects and programs 2.2 Make arrangements for additional data to be collected for input into analysis and the planning process
3. Contribute to the plan	3.1 Highlight local natural resource management issues to the planning team for inclusion in planning considerations 3.2 Explore relationship between local and wider issues to submit views on natural resource management priorities and solutions 3.3 Review draft plans in terms of impact on the local and wider region to identify deficiencies and propose solutions 3.4 Ensure participation in community consultation assists the regional planner to obtain feedback on the draft plan 3.5 Base proposals for improvement to draft plans on natural resource management within relevant contexts

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF505A Contribute to regional planning process.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF505 Contribute to regional planning process

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- participate in panels and group discussion on the planning process
- collect information on local land management issues and relate to economic, industry and social factors
- submit views on natural resource management priorities and solutions
- review draft plans in terms of impact on the local and wider region to identify deficiencies and propose solutions
- participate in community consultation

Knowledge Evidence

The candidate must demonstrate knowledge of:

- local community issues including economic, industry and social factors
- natural resource management issues for local area or region
- legislative, program and other requirements for regional plans and the planning process
- regional planning concepts
- natural resource management processes
- consultation approaches

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF506 Manage the incorporation of a group

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage the incorporation of a group, including identifying association requirements, seeking incorporation approvals, and executing incorporation requirements.

This unit applies to individuals who take personal responsibility and exercise autonomy and management in undertaking complex work and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify association requirements	1.1 Obtain legislative requirements for incorporation from relevant authorities 1.2 Assess readiness of group to proceed with incorporation against program and legislative requirements

Element	Performance criteria
	1.3 Seek appropriate government agency and legal advice during incorporation procedures 1.4 Document changes required in group structure, membership and operating processes for presentation to the group
2. Seek incorporation approvals	2.1 Obtain consents from members and committee at the various stages of incorporation in accordance with legislative requirements 2.2 Elect or appoint committee, public officer, treasurer, auditor and other officers in accordance with proposed association rules 2.3 Obtain consent from membership to apply for incorporation and to advertise group's intention, in accordance with legislative requirements
3. Execute incorporation requirement	3.1 Define group's objectives and operating rules in accordance with the legislation and program guidelines 3.2 Select and reserve group name in accordance with legislative requirements 3.3 Provide appropriate notice of incorporation in accordance with legislative requirements 3.4 Submit appropriate forms and pay required fees to implement incorporation according to legislative requirements 3.5 Implement changes in association documents and processes in accordance with legislative requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF506A Manage the incorporation of a group.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF506 Manage the incorporation of a group

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- document changes required to group structure, membership and operating processes according to incorporation procedures
- seek and interpret government and legal advice for the incorporation of group
- give instructions for preparation of documents to legal and enterprise standards
- use negotiation and facilitation skills to resolve conflict
- prepare and present reports to legal requirements
- identify assessment requirements
- seek incorporation approvals
- execute incorporation requirements

Knowledge Evidence

The candidate must explain:

- required legal processes and related legislation for incorporating a group
- reporting procedures for incorporated groups and for groups in programs
- group organisational structures and processes
- required financial processes
- incorporation principles and local legislation
- incorporation and reporting requirements of program
- establishment of groups and operating procedures

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCCF601 Coordinate the development of regional plans

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to coordinate the development of regional plans in the context of natural resource management.

This unit applies to individuals who take responsibility for teams and exercise autonomy in undertaking complex work and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Community Coordination and Facilitation (CCF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Scope requirements	1.1 Determine reasons for development of a regional plan to identify broad goals and legislative requirements 1.2 Identify prior regional planning work as input to proposed regional planning process
2. Determine regional	2.1 Determine regional boundaries from economic, environmental

Element	Performance criteria
boundaries	<p>and social factors, that will produce a coherent plan</p> <p>2.2 Identify economic, environmental and social factors that overlap the proposed regional boundaries to develop a scope and weighting of the factors</p> <p>2.3 Review previous plans and reports to verify the suitability of the proposed regional boundaries</p> <p>2.4 Meet program requirements for the development of regional plans in the identification of regional boundaries</p>
3. Identify regional resource management issues	<p>3.1 Research regional natural resource issues from past documentation and from stakeholder views</p> <p>3.2 Research and assess current and potential impacts of government, economic, industry, environmental and social factors on natural resource management issues</p> <p>3.3 Estimate the likely depth of research required to obtain sufficient information on issues for planning purposes</p>
4. Scope stakeholders in regional resource management planning process	<p>4.1 Scope economic, industry, social and government activities to identify influential organisations, groups and people and their particular interests</p> <p>4.2 Approach organisations and groups to determine their interests, viewpoints on natural resource management issues, and willingness to participate in regional planning process</p> <p>4.3 Identify nature of community involvement in planning process from understanding of issues and community</p>
5. Develop proposal for regional plan	<p>5.1 Review the objectives of the plan after scoping to determine feasibility of proposed processes</p> <p>5.2 Develop proposal for a new or revised plan to obtain funding</p> <p>5.3 Make estimates of time to complete tasks including time for consultations and approvals and any discussion with Indigenous communities and groups</p> <p>5.4 Identify costs associated with development of regional plan from preliminary research</p> <p>5.5 Prepare proposal to address the requirements of program and relevant legislation and agency policies and processes</p> <p>5.6 Submit proposal for regional plan for approval and funding according to agency and program procedures</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCCF601A Map regional issues and stakeholders.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCCF601 Coordinate the development of regional plans

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- review existing planning documents and sources of information to inform the plan
- identify land management issues and potential solutions
- identify stakeholders to form discussion groups and seek individual input to planning
- organise for the collection and analysis of data to inform planning and monitor progress
- work with stakeholders and technical advisers to develop goals and performance criteria
- develop a draft plan for widespread consultation and feedback
- finalise the regional resource management plan

Knowledge Evidence

The candidate must demonstrate knowledge of:

- broad geographic indicators with particular emphasis on the region
- regional and rural planning concepts from town planning, rural industry planning, and natural resource planning perspectives
- impact of government processes and industry activities in social and economic terms
- consultative techniques
- National, State and Local policies, procedures and legislation that applies to regional planning
- natural resource management and issues

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM101 Follow basic chemical safety rules

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to follow instructions and direction for safe handling, storage and use of chemicals.

The unit applies to individuals who undertake a range of defined routine activities alongside a supervisor in most situations. They exercise limited autonomy within established and well-known parameters and identify and seek help for simple problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to work with chemicals	1.1 Confirm the activity to be undertaken with supervisor 1.2 Confirm tools and equipment to be used with supervisor 1.3 Use appropriate personal protective equipment (PPE) and ensure

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	correct fit as directed by supervisor 1.4 Identify functions of chemicals in the workplace
2. Identify risks associated with chemicals	2.1 Identify and interpret chemical labels, safety signs, symbols and safety data sheets according to supervisors' instructions 2.2 Identify health and safety hazards and risks in the workplace and report to supervisor 2.3 Control risks as directed
3. Follow chemical handling and storage rules	3.1 Identify and locate chemical store 3.2 Interpret and follow safe chemical handling, transport, and storage according to product label and supervisor instructions 3.3 Observe instructions for maintenance and storage of PPE and application equipment 3.4 Follow safety rules when working in areas where chemicals are stored 3.5 Identify emergency procedures to follow in the event of an accident or spillage 3.6 Record information as directed by supervisor

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret chemical labels, instructions and information
Oral Communication	<ul style="list-style-type: none"> Use clear language and concepts, tone and pace appropriate when communicating with supervisor
Navigate the world of work	<ul style="list-style-type: none"> Recognises organisational expectations and follows explicit instructions, protocols and procedures when working with chemicals
Get the work done	<ul style="list-style-type: none"> Follow clearly defined instructions and sequencing, and monitors own progress for the task, seeks assistance when necessary

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM101 Follow basic chemical safety rules Release 2	AHCCHM101 Follow basic chemical safety rules Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM101 Follow basic chemical safety rules

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have followed basic rules relevant to chemical safety, including:

- confirmed work requirements and equipment for chemical use with supervisor
- located and followed information on chemical labels and relevant safety data sheets according to supervisors' instructions
- recognised the use of chemicals and complied with chemical safety signs and symbols in the workplace
- recognised chemical hazards and risks and reported to supervisor and applied risk controls
- used, maintained and stored personal protective equipment (PPE)
- maintained and stored chemical application equipment according to supervisors' instructions
- located chemical store, handled, transported, stored and worked with chemicals according to supervisors' instructions
- followed emergency procedures for accidents or chemical spillage and reported to supervisor
- maintained records according to supervisor instructions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- rules and instructions for working with and around chemicals
- common types of chemicals used in the workplace
- common types of chemical application equipment to be maintained and stored
- the structure and purpose of chemical labels and safety data sheets

- basics of hazards and risks of chemical use
- safety signage and symbols for chemical use in the workplace
- level of hazard and risks associated with common chemicals used in the workplace and methods of control
- PPE, when and how it should be worn, stored and maintained
- methods of reporting to supervisors' chemical hazards and risks
- safe methods of transporting, handling and storage of chemicals
- types of emergencies and the procedures for accidents and spills of chemicals
- records commonly kept for chemical use.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
 - access to chemicals and chemical store
- resources, equipment and materials:
 - PPE
- specifications:
 - workplace instructions and procedures
 - chemical safety data sheets
 - common chemical labels
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM201 Apply chemicals under supervision

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to handle, transport, and apply chemicals under supervision using workplace specified chemicals and application equipment.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well-known parameters, providing solutions to a limited range of predictable problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to handle chemicals	1.1 Confirm the activity related to chemical handling to be undertaken with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Identify and select tools and equipment required according to supervisor instructions 1.3 Identify health and safety hazards and risks and apply controls according to supervisor instructions and workplace procedures 1.4 Select, ensure serviceability, fit and use personal protective equipment (PPE)
2. Check application equipment	2.1 Carry out pre-operational checks of application equipment and identify and replace any damaged or worn components or report to supervisor 2.2 Prepare application equipment for use according to workplace practice and safe chemical handling processes
3. Handle and transport chemicals	3.1 Confirm safety precautions for the handling and transport of chemicals with supervisor 3.2 Handle and transport chemicals according to chemical label, safety data sheets and supervisor instructions
4. Prepare chemical for application	4.1 Interpret and apply chemical label instructions according to safety data sheets for the chemical or substance being used 4.2 Select and use appropriate mixing equipment 4.3 Measure, mix and load application equipment with chemical according to application rates 4.4 Clear chemical spills according to chemical label and supervisor instructions 4.5 Check that output of application equipment is correct and in accordance with chemical application plan
5. Apply chemicals	5.1 Assess and record weather conditions and forecasts prior to and during application according to workplace requirements 5.2 Apply chemical safely according to chemical application plan, chemical label and supervisor instructions 5.3 Monitor conditions for application and take appropriate action when conditions are unsuitable according to workplace procedures 5.4 Minimise risks to others, product integrity and the environment prior to and during application
6. Finalise work	6.1 Clean and store PPE and application equipment in accordance with manufacturers and health and safety in the workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 6.2 Dispose of excess chemicals and clean containers in accordance with label instructions and regulatory requirements 6.3 Complete incident reports according to workplace procedures 6.4 Complete chemical application records according to workplace procedures 6.5 Store unused chemical and products according to workplace procedures 6.6 Adhere to all re-entry requirements for treated areas

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret instructions, chemical labels and safety documentation to identify relevant and key information to apply to mixing and application of chemicals
Writing	<ul style="list-style-type: none"> Use clear language and correct concepts and terminology when reporting incidents and completing chemical application records
Numeracy	<ul style="list-style-type: none"> Perform basic mathematical calculations when measuring and mixing chemicals and checking chemical application equipment
Oral Communication	<ul style="list-style-type: none"> Use clear language, concepts, tone and pace appropriate when confirming chemical application parameters with supervisor
Get the work done	<ul style="list-style-type: none"> Follow clearly defined instructions and sequencing, and monitors own progress for the task, seeks assistance when necessary

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCCHM201 Apply chemicals under supervision Release 2	AHCCHM201 Apply chemicals under supervision Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit
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Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM201 Apply chemicals under supervision

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has on at least one occasion demonstrated that chemicals have been applied under supervision, ensuring they have:

- identified hazards and risks and adopted safe work practices and used appropriate personal protective equipment (PPE) according to supervisors' instructions
- confirmed activity with supervisor and identified and selected tools and equipment necessary for the application of chemical treatment
- carried out pre-operational checks of application equipment and made it ready for operation
- handled and transported chemicals to be used according to chemical labels and supervisors' instructions
- followed directions on chemical labels and relevant safety data sheets to safely mix and prepare chemicals
- selected appropriate measuring equipment and measured, mixed and loaded application equipment with chemicals safely and correctly
- ensured chemical spills were cleared according to chemical label instruction and supervisor instructions
- checked the application equipment for output against plan and applied chemical safely complying with weather conditions
- monitored and recorded weather and applied chemical appropriate to prevailing conditions
- maintained a healthy and safe condition for the environment and others while applying and following chemical application
- cleaned application equipment and PPE and disposed of waste according to equipment manufacturer instructions, chemical label and supervisor instructions
- complied with equipment manufacturer instructions, chemical label and supervisor instructions

- maintained chemical application records and incident reports according to workplace procedures
- stored protection equipment, application equipment and unused chemicals according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- various handling and transport techniques and requirements for chemicals
- structure and content of chemical labels and safety data sheets and their use and purpose for safe chemical application
- principles and methods of measuring, mixing and applying chemicals
- features and functions of a range of application equipment relevant to the workplace their operations, and maintenance requirements
- risk factors to be taken into account for human and animal health, spillage and environmental impact relevant to chemical use before, during and following chemical application
- basic chemical groupings and types used in the workplace, including:
 - the of mode of action
 - the impact on chemical safety
 - application methods
- paths of entry of poisons into the body and the methods of limiting exposure through practices and personal protective clothing
- maintenance practices for chemical application related equipment and PPE and disposal procedures for chemical contaminants and containers
- assessing weather conditions and the impact on safe application of chemicals
- components of a workplace chemical application plan
- chemical related records and reports and their purpose.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
 - access to chemical store
- resources, equipment and materials:
 - common chemicals
 - PPE
 - chemical application equipment
 - chemical measuring and mixing equipment
- specifications:

- workplace documents, including work instructions and procedures
- chemical labels and safety data sheets
- chemical application plan and relevant chemical application rates
- manufacturers' operation and maintenance instructions for chemical measuring and application equipment
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM304 Transport and store chemicals

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to safely handle, transport and store chemicals.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to handle and	1.1 Identify health and safety hazards, assess risks and implement

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
transport chemicals	<p>controls according to workplace procedures</p> <p>1.2 Ensure contact details for emergency services are available in transport vehicle according to workplace procedures and transport regulations</p> <p>1.3 Ensure transport vehicle complies with transport regulations</p> <p>1.4 Ensure containers are secured, protected and in a condition to be safely transported according to workplace procedures, manufacturer instructions, legislative and regulatory requirements</p> <p>1.5 Ensure emergency equipment and procedures are available in the vehicle according to workplace safety procedures and regulations</p> <p>1.6 Ensure transport arrangements comply with legislative and regulatory requirements for the transport of hazardous substances and dangerous goods</p> <p>1.7 Obtain and use safety data sheets (SDS) for chemicals to be transported according to health and safety in the workplace procedures and legislative and regulatory requirements</p>
2. Handle and transport chemicals	<p>2.1 Handle, transport and load chemicals according to chemical safety data information, chemical label, legislative and regulatory requirements</p> <p>2.2 Carry out emergency procedures according to chemical label, SDS and workplace procedures</p> <p>2.3 Report transport incidents according to workplace procedures and health and safety in the workplace regulations</p>
3. Store chemicals in the workplace	<p>3.1 Select, ensure serviceability, fit and use personal protective equipment according to SDS and chemical label instructions</p> <p>3.2 Identify chemical storage requirements and store chemicals according to chemical label, safety data information and health and safety in the workplace procedures</p> <p>3.3 Maintain storage area according to legislative and regulatory requirements, health and safety in the workplace and environmental procedures.</p> <p>3.4 Dispose of chemicals and chemical waste according to chemical label instructions and environmental regulations</p> <p>3.5 Monitor chemical expiration dates and dispose of expired chemicals according to chemical label instructions, workplace and legislative and regulatory requirements</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Record storage details	4.1 Maintain register of stored chemicals and SDS according to workplace procedures and legislative and regulatory requirements 4.2 Report storage incidents according to legislative and regulatory requirements and workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret SDS, chemical labels, manufacturer instructions, operating instruction and other workplace documentation and consolidates information to safely transport and store chemicals
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational records using clear language, correct spelling and terminology when completing transport and storage records
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to determine chemical weights, volumes and quantities to determine handling and storage requirements
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following workplace policies, procedures and legislative and regulatory requirements Identify and implement chemical label requirements for handling and storage
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks required for chemical handling and storage activities Address problems and initiate standard procedures in response to emergencies applying problem solving processes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCCHM304 Transport and store chemicals Release 3	AHCCHM304 Transport and store chemicals Release 2	Changes to Performance Criteria for clarity. Consolidated where content duplicated. Updated Performance Evidence and Knowledge Evidence	Equivalent unit
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Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM304 Transport and store chemicals

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have safely transported and stored chemicals, including:

- identified health and safety hazards, assessed risks and implemented controls
- ensured emergency services contact details are available
- ensured transport vehicle meets regulations and that chemicals were loaded, secured and protected according to regulations and procedures
- ensured emergency equipment and procedures were available
- handled, transported and stored chemicals safely
- carried out emergency procedures safely and according to procedures
- maintained a chemical storage manifest and safety data sheets (SDS) according to legislative and regulatory requirements
- complied with chemical label instructions and SDS for transporting and storage of chemicals and legislative and regulatory requirements
- maintained inventory and records according to workplace procedures and legislative and regulatory requirements
- monitored chemical expiration and disposed of chemicals and waste according to workplace procedures and legislative and regulatory requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- chemical labels and SDS their purpose, use and terminology, including:

- chemical signs, symbols and coding
- basic chemical properties and reactivity related to SDS and labels
- legislation and regulations that apply to transporting and storing chemicals, including:
 - transport vehicle requirements
 - information and documentation
 - dangerous and hazardous chemicals
 - placarding requirements
- risk factors including human and animal health and environmental
- processes and procedures for the disposal of excess, unwanted, expired chemicals and chemical waste including industry disposal programs
- health and safety in the workplace requirements including personal protective equipment (PPE) and manual handling
- emergency procedures for spills and accidents
- recording and monitoring of chemical stores including, expiration and disposal procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
 - access to storage facility for chemicals
 - access to vehicle for transporting chemicals
- resources, equipment and materials:
 - chemicals
 - PPE
 - materials and equipment to handle, secure and protect chemical loads
- specifications:
 - specific workplace documents, including work instructions and procedures for chemical handling, storage and transport
 - chemical labels and safety data
 - legislation and regulations about handling, storage and transport of chemicals.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM307 Prepare and apply chemicals to control pest, weeds and diseases

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to safely prepare and apply chemicals for the control of pests, weeds and diseases, using general application equipment.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine the need for chemical use and prepare an application plan	1.1 Identify the pest, weed or disease, and assess the need for control 1.2 Assess the requirement for chemical use 1.3 Assess health and safety hazard, risks and controls for different chemicals

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Confirm requirement for chemical application according to workplace procedures 1.5 Assess off target risk of each application method 1.6 Assess the environmental risk for application method 1.7 Notify stakeholders of intended chemical application according to workplace procedures and legislative and regulatory requirements 1.8 Prepare application plan according to workplace procedures
2. Prepare chemical mixes	2.1 Identify and select chemical required for target according to application plan 2.2 Calculate the volume, rate or dose according to chemical label instructions 2.3 Identify and select application equipment and set-up requirements according to application plan and operator instructions 2.4 Identify hazards, assess risks and implement control measures for application method according to chemical label and health and safety in the workplace procedures 2.5 Identify, select, fit and use personal protective equipment (PPE) according to workplace procedures 2.6 Select appropriate mixing equipment and suitable location to prepare and load chemicals according to workplace procedures 2.7 Prepare chemicals according to chemical label instructions 2.8 Return unused chemical to store and clean preparation equipment and work site of residues and spillage according to chemical label instructions and workplace procedures
3. Calibrate application equipment	3.1 Select application equipment for chemical according to application plan, off target risks and workplace procedures 3.2 Conduct pre-operational checks of application equipment according to operator and maintenance manual 3.3 Calibrate equipment according to operating instructions and application plan 3.4 Load equipment with chemical according to operating instructions and workplace safety procedures
4. Apply chemicals	4.1 Monitor and assess weather conditions and forecasts to ensure effective chemical application according to application plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.2 Select, ensure serviceability, fit and use PPE according to chemical label instructions and workplace procedures</p> <p>4.3 Apply chemical according to label directions and application plan relating to the control of the pest, weed or disease</p> <p>4.4 Monitor application equipment for correct performance and ensure effective chemicals application according to operating instructions</p> <p>4.5 Identify health and safety in the workplace hazards and risks and implement controls</p> <p>4.6 Clean up spills during application according to chemical label instructions and workplace procedures</p>
5. Clean up equipment and complete records	<p>5.1 Clean and decontaminate application equipment according to operator instructions, safety data sheets (SDS) and legislative requirements</p> <p>5.2 Dispose of chemicals and used containers according to chemical label instructions, SDS and legislative requirements</p> <p>5.3 Clean and store PPE according to workplace procedures</p> <p>5.4 Record and report safety and environmental incidents according to workplace procedures and regulatory requirements</p> <p>5.5 Record details of chemical application according to workplace procedures and legislative requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret SDS, chemical labels, operating instruction and other documentation and consolidates information to determine chemical application actions and activity
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational records using clear language and terminology
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to determine rates of application chemical mixtures and calibration of equipment

Skill	Description
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following policies, procedures and regulations Identify and implement chemical label requirements
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks required for chemical application activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM307 Prepare and apply chemicals to control pest, weeds and diseases	AHCCHM303 Prepare and apply chemicals	<p>Minor change of title for clarity</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Updated Performance Evidence and Knowledge Evidence</p>	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM307 Prepare and apply chemicals to control pest, weeds and diseases

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has on at least one occasion demonstrated the ability to safely prepare and apply chemicals ensuring they have:

- determined and confirmed the need for chemical application by assessing the infestation, off target risk, and environmental risks
- developed an application plan for chemical application
- identified health and safety hazards, risk and implemented control procedures according to chemical label
- notified stakeholders of planned chemical application
- used personal protective equipment (PPE) according to workplace procedures
- interpreted chemical labels and applied chemical according to safety data sheets (SDS) and application plan
- identified and selected the chemical required for the target and calculated the amount and rates required according to chemical label
- identified and selected application equipment and suitable location, and determined the set up parameters according to application plan and operator instructions
- monitored and assessed weather conditions and equipment performance to ensure effective chemical application
- selected, conducted pre-operational checks according to operator and maintenance manual
- completed at least one calibration activity for application equipment
- prepared and loaded chemicals and returned unused chemicals to store in accordance with label, application plan and workplace procedures
- applied chemicals safely according to chemical labels, regulations and workplace procedures
- complied with chemical labels, SDS, regulations, maintenance manual, environmental procedures, operator instructions and application plan
- cleaned equipment and spills, and disposed of waste according to workplace and environmental procedures

- maintained records and reported incidents according to workplace procedures and regulatory requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- control options when selecting chemicals for pests, diseases and weeds infestations, including:
 - chemical
 - mechanical
 - cultural
 - biological
 - integrated pest management including resistance management principles
- types of pest, diseases and weed their treatment and resistance
- legal implications and requirements of chemical labels and SDS
- stakeholders and required notifications including, neighbours, staff and statutory notifications
- impact of weather factors on the safe and effective application of chemicals
- characteristics of chemicals, their mode of action and relevance to chemical selection and use, including:
 - translocated/systemic
 - contact
 - ingested poison
 - protectant
 - eradicant
 - knock-down
 - residual
 - selective/non selective
- factors that contribute to off target damage, including:
 - physical movement of chemicals (e.g. animals moving baits or soil movement)
 - chemical formulation
 - wind speed and direction
 - temperature and relative humidity
 - temperature inversions
 - controlling off target damage
 - rainfall
 - buffer zones and barriers
- hazards of chemical application, including:
 - human and animal health
 - environmental contamination

- residues in environment, plants and animals
- withholding/re-entry periods
- safety requirements when applying chemicals, including:
 - procedures
 - PPE
 - signage
- safe handling, transporting and storage of chemicals
- preparing chemicals including preparation, compatibility, adjuvants and water quality
- requirements for disposal of excess chemicals, clearing spillages and equipment clean up
- selecting and operating suitable application equipment
- features, functions and calibration techniques for powered and hand held application equipment, including:
 - pressure and volume of chemical
 - travel speed
 - nozzle identification, selection, operation
- legislation, regulations and licensing requirements in relation to chemical use.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - chemicals
 - PPE
 - application equipment
 - chemical measuring and mixing equipment
- specifications:
 - specific workplace documents, including work instructions and procedures for chemical application
 - chemical labels and SDS
 - regulations about use of chemicals
 - manufacturers' operation and maintenance instructions for equipment
 - access to weather forecasts or means to measure local weather.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM308 Use application equipment to apply fumigant in confined spaces

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to use application equipment to fumigate grain, seed, crops and plants housed in enclosures or confined spaces.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions for the purchase and use of fumigants.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan fumigation	1.1 Determine the need for fumigation as an option for pest management strategy of the workplace 1.2 Assess the facility and conditions for suitability of fumigation as a method to use 1.3 Select method of fumigant and application equipment to suit type

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>of pest, facility and material to be treated</p> <p>1.4 Identify and select fumigant to be used and its application rate according to chemical label</p> <p>1.5 Identify hazards, assess risks and implement control measures for fumigation in confined spaces</p> <p>1.6 Establish security measures to control access during fumigation and prescribed re-entry periods according to chemical label and workplace procedures</p> <p>1.7 Determine appropriate personal protective equipment (PPE) according to fumigant safety requirements</p>
2. Prepare storage facility, equipment and fumigants for fumigation activity	<p>2.1 Erect signage and barriers to control risk of inadvertent entry to facility</p> <p>2.2 Seal the facility and check the seal integrity</p> <p>2.3 Take appropriate measurements and calculations to ensure the concentration of fumigant will meet specification</p> <p>2.4 Check operational effectiveness of fumigation equipment according to operating procedures</p> <p>2.5 Calibrate fumigation equipment to deliver the correct rate of application according to chemical label and operating instructions</p> <p>2.6 Transport and store fumigants according to chemical label and safety data sheets (SDS) and regulatory requirements</p> <p>2.7 Select, ensure serviceability, fit and use PPE for selected fumigant according to chemical label and SDS</p> <p>2.8 Prepare fumigant according to chemical label and equipment operator instructions</p>
3. Conduct and monitor fumigation	<p>3.1 Apply fumigant according to planned application method, pest management strategy and chemical label</p> <p>3.2 Monitor fumigation site during exposure time and prevent unauthorised access</p> <p>3.3 Maintain integrity of seals throughout the active fumigation period</p> <p>3.4 Respond to emergency situations according to workplace emergency procedures</p>
4. Ventilate storage facility	4.1 Establish ventilation and re-entry times and risk controls according to chemical label and withholding periods

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.2 Ventilate facility using appropriate equipment to remove fumigant in a safe and controlled manner</p> <p>4.3 Test for evidence of residual gas according to workplace procedures, and maximum residue limits for the material being treated</p> <p>4.4 Notify appropriate personnel of any further risk control measures required</p>
5.Restore storage facility	<p>5.1 Collect and remove all equipment, sealants, fumigants and waste materials according to workplace procedures</p> <p>5.2 Remove signage and barriers according to site security measures</p>
6.Clean, safety-check and store equipment and fumigants	<p>6.1 Clean, decontaminate, check and store equipment and PPE according to workplace procedures, chemical labels, SDS and regulatory requirements</p> <p>6.2 Dispose of all waste according to chemical label instructions and workplace environmental procedures</p>
7.Record fumigation details	<p>7.1 Record details of fumigation applications according to workplace procedures</p> <p>7.2 Record and report safety incidents according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret safety data, labels, manufacturers specifications, operating procedures, specifications, and other documentation and consolidates information to determine fumigation actions and activity
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational documents using clear language and correct spelling, grammar and terminology
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to determine storage facility volumes and rates of application and to check, interpret and confirm results of tests

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges using active listening to convey and clarify post treatment risks and control measures
Navigate the world of work	<ul style="list-style-type: none"> Identify and implement manufacturer requirements for fumigants
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks required for fumigation activities Address problems and initiate standard procedures in response to emergencies applying problem solving processes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM308 Use application equipment to apply fumigant in enclosed spaces	AHCCHM301 Use application equipment to apply fumigant in enclosed spaces	Change to sequencing of Elements and Performance Criteria and editing changes for clarity Removal of prerequisite units Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM308 Use application equipment to apply fumigant in confined spaces

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has on at least one occasion demonstrated the ability to safely apply a fumigant on materials housed in an enclosure, ensuring they have:

- determined need, appropriateness and method for fumigating a storage facility
- determined hazards and risks and established safety and security resources and control measures required
- prepared facility for safe fumigation
- determined fumigant requirements and prepared the fumigant and equipment for treatment according to chemical label instructions and safety data sheets (SDS)
- ensured personal safety by using appropriate personal protective equipment (PPE)
- applied fumigant and monitored the safety and integrity of the fumigation process, responding appropriately to emergencies
- rendered the storage facility safe through ventilation, conducted tests to establish safe air quality notifying personnel of residual risks
- removed fumigation materials, waste and temporary resources from storage facility and disposed of waste according to workplace and environmental procedures
- complied with workplace and environmental procedures and chemical label instructions and SDS
- checked, decontaminated, cleaned and stored equipment used in the fumigation process according to workplace procedures
- maintained records of fumigation activities and incidents and reported according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- pests relevant to materials to be treated and factors and considerations in relation to the use of fumigation
- pest management strategies and relation to the use and selection of fumigation methods, including:
 - chemical
 - mechanical
 - biological
 - cultural
 - integrated pest management including resistance management principles
- types of fumigant used for treating storage facilities, their mode of action, methods of application, transport, storage and handling
- fumigant labels and SDS and how to interpret and apply label requirements for specific crops and facilities
- equipment used in fumigation, their setup, calibration, operation, shutdown, care and maintenance
- storage facilities and their suitability for fumigation, techniques used to seal a facility, and methods and calculations required to determine fumigant rates of application
- monitoring procedures during a fumigation process and methods of assessing leakage
- safety requirements including signage, equipment, PPE for use when handling fumigants and conducting fumigation activities
- legislation, regulations, licensing and codes of practice relevant to fumigant use
- risks associated with working near confined spaces including signage, gas detection and relevant entry and exit procedures
- chemical hazards and risk factors including human and animal health, leakage, spillage, environment damage and control measures required to mitigate risk
- methods for ventilating storage facilities and the equipment required
- how to assess for residual gas and safe re-entry periods including the consequence of fumigant residues and maximum residue limits
- requirements for disposal of excess fumigants, clearing spillages and equipment clean up
- procedures and processes for rendering a storage facility safe and operational after fumigation
- records required when conducting fumigation activities and related safety reporting procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
 - access to storage facility and materials for fumigation
- resources, equipment and materials:
 - fumigants

- PPE
- fumigation and ventilation equipment
- fumigation measuring and mixing equipment
- gas testing equipment
- materials required to seal facilities for fumigation
- specifications:
 - workplace documents, including work instructions and procedures for fumigation
 - fumigant labels and SDS
 - legislation, regulations, codes of practice relevant to handling, storage, transport and use of fumigants
 - manufacturers' operation and maintenance instructions for fumigation equipment
 - relevant standards for air quality for test results.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM309 Fumigate soil

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to select and use application equipment to fumigate soil or growing media for the control of pathogens and pests.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan fumigation	1.1 Determine the need for fumigation as an option for pest management strategy of the workplace 1.2 Assess site and soil conditions for suitability of fumigation as a method to use 1.3 Select method of fumigant and application equipment to suit type

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>of pest and soil or media to be treated</p> <p>1.4 Identify and select fumigant and its application rate according to chemical label</p> <p>1.5 Identify hazards, assess risks and implement control measures for soil and media fumigation</p> <p>1.6 Establish site security measures to control access during fumigation and prescribed re-entry periods according to chemical label and workplace procedures</p> <p>1.7 Determine appropriate personal protective equipment according to fumigant safety requirements</p>
2. Prepare site for fumigation	<p>2.1 Implement controls and site security measures according to workplace procedures</p> <p>2.2 Erect signage and barriers to control risk of inadvertent entry to facility</p> <p>2.3 Ensure site emergency procedures are in place and ready to implement</p> <p>2.4 Assess the soil for readiness for fumigation treatment</p>
3. Prepare application equipment and fumigants	<p>3.1 Select application equipment appropriate for the fumigant and according to workplace procedures and industry practice</p> <p>3.2 Check operational effectiveness of fumigation equipment according to operating procedures</p> <p>3.3 Calibrate fumigation equipment to deliver the correct application rate according to chemical label and operating instructions</p> <p>3.4 Transport and store fumigants according to chemical label and safety data sheets (SDS) and regulatory requirements</p> <p>3.5 Select, ensure serviceability, fit and use personal protective equipment for selected fumigant according to chemical label and SDS</p> <p>3.6 Prepare fumigant according to chemical label and equipment operating instructions</p>
4. Conduct and monitor fumigation	<p>4.1 Apply fumigant according to planned application method, pest management strategy and chemical label</p> <p>4.2 Apply appropriate soil sealing methods to contain fumigant</p> <p>4.3 Monitor fumigation site during exposure time to prevent unauthorised access</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.4 Aerate soils according to chemical label instructions and workplace procedures</p> <p>4.5 Test for evidence of residual fumigant according to workplace procedures and maximum residue limits for the soil or media</p> <p>4.6 Implement re-entry procedures to control risks to human and animal health</p> <p>4.7 Notify appropriate personnel of any further risk control measures required</p> <p>4.8 Ventilate fumigation enclosure in safe and controlled manner according to chemical labels instructions, SDS and workplace procedures</p> <p>4.9 Respond to emergency situations according to workplace emergency procedures</p>
5. Restore site	<p>5.1 Collect and remove equipment, fumigants and waste according to workplace procedures</p> <p>5.2 Remove signage according to site security measures</p>
6. Clean, safety-check and store equipment and fumigants	<p>6.1 Clean, decontaminate, check and store equipment and personal protective equipment according to workplace procedures, chemical labels, SDS and regulatory requirements</p> <p>6.2 Dispose of all waste according to chemical label instructions and workplace environmental procedures</p>
7. Record fumigation details	<p>7.1 Record details of fumigation applications according to workplace procedures and regulatory requirements</p> <p>7.2 Record and report safety incidents according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret safety data, labels, manufacturers specifications, operating procedures, specifications, and other documentation and consolidates information to determine fumigation actions and activity
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational documents using clear language and correct spelling, grammar and terminology
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to determine soil volumes and rates of application and to check, interpret and confirm results of tests
Oral Communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges using active listening to convey and clarify post treatment risks and control measures
Navigate the world of work	<ul style="list-style-type: none"> Identify and implement manufacturer requirements for fumigants
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks required for fumigation activities Address problems and initiate standard procedures in response to emergencies applying problem solving processes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM309 Fumigate soil	AHCCHM302 Fumigate soil	Removal of prerequisite units Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM309 Fumigate soil

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has on at least one occasion demonstrated the ability to safely apply a fumigant to soil ensuring they have:

- determined need, appropriateness and method for fumigating a soil
- determined hazards and risks and established safety and security resources and control measures required
- prepared soil for safe fumigation
- determined fumigant requirements and prepared the fumigant and equipment for treatment according to fumigant label instructions and safety data sheets (SDS)
- transported, handled and stored fumigants according to safety procedures, label and legislative requirements
- ensured personal safety by selecting, fitting and using appropriate personal protective equipment (PPE)
- applied fumigant and monitored the safety and integrity of the fumigation process, responding appropriately to emergencies
- rendered the soil and surrounding area safe through aeration and conducted tests to establish safe soil and air quality notifying personnel of residual risks
- removed fumigation materials, waste and temporary resources from treatment area and disposed of waste according to workplace and environmental procedures
- complied with fumigant label instructions and SDS
- checked, decontaminated, cleaned and stored equipment used in the fumigation process according to workplace procedures
- maintained records of fumigation activities and incidents and reported according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- primary and secondary soil pests, diseases and weeds to be treated and factors and considerations in relation to the use of fumigation including threshold pest levels and cost benefit
- pest management strategies and relation to the use and selection of fumigation methods, including:
 - chemical
 - mechanical
 - biological
 - cultural
 - integrated pest management including resistance management principles
- soil, media type, moisture and temperature factors relative to fumigation and methods employed to "seal" soils during fumigation
- types of fumigant used for treating soils, their mode of action, methods of application, transport, storage and handling
- fumigant labels and SDS and how to interpret and apply label requirements for specific soil and media situations
- equipment used in fumigation, their setup, calibration, operation, shutdown, care and maintenance
- calculations required to determine fumigant rates of application
- monitoring procedures during a fumigation process and methods of assessing escape
- safety requirements including signage, equipment, PPE for use when handling fumigants and conducting fumigation activities
- legislation, regulations, codes of practice and licensing requirements relevant to fumigant use, transport, storage and handling
- chemical hazards and risks factors including human and animal health, leakage, spillage, environment damage and control measures required to mitigate risk
- methods for aerating treated soils and assessment of residual fumigants including testing fumigant residues and maximum residue limits
- requirements for disposal of excess fumigants, clearing spillages and equipment clean up
- records required when conducting fumigation activities and related safety reporting procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - soil requiring fumigation
 - fumigants
 - PPE
 - fumigation and soil aeration equipment

- fumigant measuring and mixing equipment
- fumigant testing equipment
- materials required to seal soil for fumigation
- specifications:
 - specific workplace documents, including work instructions and procedures for fumigation
 - fumigant labels and SDS
 - legislation, regulations, codes of practice relevant to handling, storage, transport and use of fumigants
 - manufacturers' operation and maintenance instructions for fumigation equipment
 - relevant standards for fumigation test results.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM310 Conduct manual fumigation of vertebrate and invertebrate pests

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to determine, apply, monitor and clean up fumigants for the control of vertebrate and invertebrate pests.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine type and method of fumigation	1.1 Identify the pest characteristics and degree of infestation 1.2 Assess the infestation and determine threshold for fumigant treatment 1.3 Identify fumigant treatment options for vertebrate and invertebrate pests

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify and select fumigant and its application rate according to chemical label and pest to be controlled</p> <p>1.5 Identify hazards, assess risks and implement control measures for pest fumigation activities</p>
2. Prepare to use fumigant according to label and safety data sheets (SDS)	<p>2.1 Identify, select, fit and use personal protective equipment (PPE) according to chemical label instructions and workplace procedures</p> <p>2.2 Identify and calculate application rates for fumigation conditions according to chemical label instructions</p> <p>2.3 Prepare hazard exclusion barriers, signage and emergency response procedure according to health and safety in the workplace procedures and legislative and regulatory requirements</p> <p>2.4 Identify hazards, assess risks and implement control measures according to health and safety in the workplace procedures</p>
3. Conduct fumigation	<p>3.1 Ensure emergency response resources are ready and available according to workplace emergency response procedure</p> <p>3.2 Check current weather and forecast conditions are favourable for fumigation activity to proceed</p> <p>3.3 Create seal in treatment area to ensure maximum effectiveness of fumigant according to workplace and chemical label instructions</p> <p>3.4 Apply fumigant according to chemical label instructions and workplace procedures</p> <p>3.5 Transport and store fumigants according to workplace procedures and chemical transport and storage regulations</p>
4. Monitor fumigation	<p>4.1 Monitor fumigation site and control access to maintain safe conditions according to chemical label instructions and workplace procedures</p> <p>4.2 Monitor fumigation site for effective fumigation according to workplace procedures</p> <p>4.3 Assess fumigation seal and integrity and take action to rectify according to workplace procedures</p>
5. Ventilate fumigated area	<p>5.1 Determine ventilation parameters according to chemical label instructions and workplace procedures</p> <p>5.2 Calculate ventilation time according to chemical label instructions and workplace procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.3 Ventilate site according to chemical label instructions, SDS, workplace procedures and legislative and regulatory requirements 5.4 Check for residual fumigant according to chemical label instructions and workplace procedures
6. Clean up following fumigation	6.1 Remove site exclusion barriers, signs when safe to do so according to workplace procedures 6.2 Clean, decontaminate, check and store fumigation equipment, safety signs and equipment and PPE according to chemical label instructions, workplace procedures and legislative and regulatory requirements 6.3 Dispose of all waste according to chemical label instructions
7. Record application details	7.1 Record details of fumigation activities and application according to workplace practices and legislative and regulatory requirements 7.2 Update chemical and resource register for used and remaining stock according to workplace procedures and legislative and regulatory requirements 7.3 Record and report safety incidents according to workplace procedures and legislative and regulatory requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret SDS, chemical labels, manufacturer instructions, signs and symbols, equipment operating instruction and other documentation and consolidates information to determine fumigant application actions and activity
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational and legal records using clear language and terminology
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to determine rates of application of fumigant
Navigate the world of	<ul style="list-style-type: none"> Take responsibility for following policies, procedures and

Skill	Description
work	regulations <ul style="list-style-type: none"> Identify and implement chemical label requirements for fumigation
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks required for fumigation application activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM310 Conduct manual fumigation of vertebrate and invertebrate pests	AHCCHM305 Conduct manual fumigation of vertebrate and invertebrate pests	Minor changes to Performance Criteria for clarity Removal of prerequisite units Consolidated and deleted duplication Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM310 Conduct manual fumigation of vertebrate and invertebrate pests

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have fumigated vertebrate and invertebrate pests manually, including:

- selected the appropriate fumigant option for the pest characteristics and infestation
- determined fumigation parameters according to manufacturer instructions and safety data sheets (SDS)
- prepared fumigant according to chemical manufacturers instructions
- identified health and safety hazards, risks and implemented controls for fumigation activities
- transported, handled and stored fumigants according to safety procedures, fumigant label and legislative requirements
- maintained the fumigant inventory and disposed of waste fumigant and materials according to workplace and environmental procedures
- implemented emergency response procedures to maintain a safe site
- prepared site for fumigation and erected exclusion barriers and signage
- checked weather conditions and forecasts to decide on fumigation progression
- sealed treatment area, applied the fumigant, monitored fumigation activity and ventilated sites
- checked for residual fumigant according to workplace procedures
- restored the treatment area, cleaned and decontaminated the equipment
- complied with chemical manufacturers' instructions, workplace and legislative and regulatory requirements, safety procedures, fumigant label and legislative requirements, and environmental procedures
- maintained records, stock inventories and reported on work activities and incidents. according to workplace and legislative and regulatory requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- pests and their characteristics for fumigation control
- primary vertebrate and invertebrate pests that can be controlled by manual fumigation methods
- pest control strategies and the role of fumigation, including:
 - chemical
 - cultural
 - biological
 - mechanical
 - Integrated Pest Management
- fumigants their use and action
- fumigant selection criteria to consider, including:
 - size of area
 - weather conditions
 - type of material concentration
 - safety implications
- interpretation and use of labels and SDS
- techniques to seal fumigation treatment sites
- site characteristics and conditions for suitable for fumigation
- relevant legislation and regulatory requirements for fumigant use
- risk factors including human and animal health, weather, leakage, spillage and environment
- safety and environmental requirements for disposal of fumigant, spills and waste materials
- clean-up procedures and decontamination
- pre and post fumigation safety procedures
- transporting and storage requirements of fumigants, including:
 - legislation and regulations that apply to transporting and storing chemicals including:
 - transport vehicle requirements
 - dangerous and hazardous chemicals
 - placarding requirements
- processes and procedures for the disposal of excess, unwanted, expired fumigants and waste including industry disposal programs
- health and safety in the workplace requirements including personal protective equipment (PPE) and manual handling
- record keeping procedures and practices for workplaces and regulations
- tests and testing for residual fumigants
- inventory and stock records and procedures for fumigants.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
 - access to storage facilities for fumigants
- resources, equipment and materials:
 - site requiring fumigation
 - fumigants
 - PPE
 - fumigation aeration equipment
 - fumigant measuring and mixing equipment
 - fumigant testing equipment
 - materials required to seal treatment area
- specifications:
 - specific workplace documents, including work instructions and procedures for fumigation
 - chemical labels and SDS
 - legislation and regulations relevant to handling, storage, transport and use of fumigants
 - manufacturers' and maintenance instructions for hand fumigation equipment
 - relevant standards for residual fumigation test results.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM403 Prepare safe operating procedures for calibration of equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare workplace procedures for the calibration of equipment used in the application of pest, weed and disease control chemicals and bio-agents.

The unit applies to individuals who take responsibility for their own work and may provide direction to others. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify equipment requiring calibration	1.1 Assess the skill of operators in calibration in consultation with operators and supervisors

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
procedures	1.2 Identify, source and interpret information required for calibration from equipment manufacture and operating instructions
2. Prepare calibration procedure	2.1 Confirm information in calibration procedure complies with relevant regulatory requirements, manufacturers' instructions and industry practice 2.2 Carry out a risk assessment of the calibration procedure and incorporate risk controls in the calibration procedure 2.3 Document the procedures in a form appropriate to the intended use and according to workplace protocols 2.4 Document health and safety in the workplace issues relevant to the activities in the procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse and consolidate information to determine risks in calibration
Writing	<ul style="list-style-type: none"> Develops procedural material using clear and detailed language in order to convey explicit risk for calibration information
Navigate the world of work	<ul style="list-style-type: none"> Works independently or with others in making decisions to achieve organisation outcomes Takes full responsibility for following policies, procedures and legislative requirements
Get the work done	<ul style="list-style-type: none"> Accepts responsibility for planning and sequencing complex tasks and workload Applies systematic and analytical decision making processes for complex and non-routine situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM403 Prepare safe operating procedures for calibration of equipment Release 2	AHCCHM403 Prepare safe operating procedures for calibration of equipment Release 1	Changes to Performance Criteria for clarity Removed PCs 1.1 and 2.4 Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM403 Prepare safe operating procedures for calibration of equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have prepared safe operating procedures for calibration of equipment, including:

- identified and analysed the need for equipment calibration
- analysed and confirmed equipment calibration requirements and operator capability
- performed a risk assessment of the calibration activity and incorporated risk controls into the calibration procedure
- documented procedures for calibration according to intended use and workplace protocols.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislation, codes of practice and enterprise procedures relevant to pesticides, the environment and health and safety in the workplace
- sources of chemical safety information, including:
 - codes of practice
 - legislation and regulations
 - chemical manufacturer labels
 - safety data sheets
- chemical handling and application
- mechanical and electronic controls on application equipment
- calibration techniques
- hazards, risks and controls including use of personal protective equipment (PPE).

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - chemical application equipment
 - specific tools for calibration and adjustments
 - PPE
- specifications:
 - workplace documents including policies, procedures and processes
 - manufacturers' operating instructions for equipment to be calibrated
 - workplace instructions and specifications for calibration
- relationships:
 - access to supervisors and operators.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM404 Develop procedures to minimise risks in the use of chemicals

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to assess hazards and risks and determine controls and develop procedures to mitigate risks when using chemicals.

The unit applies to individuals who take responsibility for their own work and may provide direction to others. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify chemical use hazards and risks	1.1 Identify, source and analyse information relating to safe use of chemicals in industry 1.2 Identify steps for the process of using chemicals 1.3 Identify hazards and risks for the process of using chemicals

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Assess risks associated with chemical use and develop control procedures	<p>2.1 Assess risks associated with using chemicals in the workplace</p> <p>2.2 Develop control measures and emergency action plans to mitigate risk according to workplace procedures and industry best practice</p> <p>2.3 Develop procedures for risk control for operational activities using chemicals according to industry best practice</p> <p>2.4 Develop a continuous improvement strategy to address identified deficiencies in risk control procedures</p>
3. Monitor and assess adherence to chemical risk procedures	<p>3.1 Provide personnel with chemical use procedures, instruction and safety equipment, including personal protective equipment, for using chemical control strategies</p> <p>3.2 Monitor and assess personnel performance against procedures for selecting equipment for chemical use</p> <p>3.3 Monitor and assess personnel performance against procedures for operational activities of chemical use</p> <p>3.4 Measure the performance of personnel for following risk control procedures according to industry practice</p>
4. Evaluate risk control measures and maintain records	<p>4.1 Develop procedures for evaluating the effectiveness of risk control measures</p> <p>4.2 Identify shortfalls in procedures and document changes required</p> <p>4.3 Update procedures to reflect required changes according to industry best practice</p> <p>4.4 Develop and maintain record systems for risk assessment according to industry best practice and legislative and regulatory requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critical analysis information and consolidate to determine risks in chemical control procedures

Skill	Description
Writing	<ul style="list-style-type: none"> Develop procedural material using clear and detailed language in order to convey explicit risk control information
Oral Communication	<ul style="list-style-type: none"> Present complex information using clear and convincing language, tone and pace appropriate when briefing personnel on procedures
Navigate the world of work	<ul style="list-style-type: none"> Work independently or with others in making decisions to achieve organisation outcomes Contribute to roles and responsibilities of others Take full responsibility for following policies, procedures and legislative requirements
Interact with others	<ul style="list-style-type: none"> Implement strategies for a diverse range of colleagues in order to build rapport and foster strong relationships when instructing and monitoring performance Elicit feedback and provide feedback to others in order to improve workgroup behaviours and update procedures
Get the work done	<ul style="list-style-type: none"> Accept responsibility for planning and sequencing complex tasks and workload Monitor progress of procedures and reviews and amends them to meet demands and priorities Apply systematic and analytical decision making processes for complex and non-routine situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM404 Develop procedures to minimise risks in the use of chemicals	AHCCHM401 Develop procedures to minimise risks in the use of chemicals	<p>Changes to Performance Criteria for clarity</p> <p>Removal of prerequisites units</p> <p>Added PC's in Element 1 and Element 4</p> <p>Updated Performance Evidence and Knowledge Evidence</p>	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM404 Develop procedures to minimise risks in the use of chemicals

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have developed procedures to minimise risks in the use of chemicals, including:

- sourced information and analysed its content for safe chemical use
- identified steps in the chemical use process and identified hazards and risks
- assessed the risks and developed risk control procedures to mitigate the risk for chemical use
- implemented procedures, monitored and evaluated personnel using procedures
- developed a continuous improvement strategy for risk control procedures
- implemented, monitored and evaluated a chemical risk control procedure
- developed and maintained records for risk assessment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- sources of chemical safety information, including:
 - codes of practice
 - legislation and regulations
 - chemical manufacturer labels
 - safety data sheets (SDS)
- industry best practice requirements relating to chemical use
- strategies for identifying hazards, risks and controls
- risk factors, including:
 - human
 - animal health
 - product integrity

- weather
- residues and maximum residue levels
- spray drift, spillage and environment
- requirements for the disposal of excess chemicals, clearing spillages and equipment clean up
- chemical application equipment capabilities and limitations
- principles and practices of chemical handling, transporting and storage of chemicals and fumigants
- principles and practices of chemical application strategies and equipment including integrated pest management
- operational factors to consider in procedures, including:
 - transport, handling and storage
 - application methods, equipment and personal protective equipment (PPE)
 - cleaning and decontamination
 - disposal of waste
- strategies for instructing personnel, and monitoring and assessing personnel performance
- mandatory and workplace record keeping requirements for chemical storage, disposal, application and safety.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools and equipment required to implement the chemical use procedure
 - PPE
- specifications:
 - specific workplace documents including policies and processes
 - manufacturers' operating instructions for equipment and machinery
 - SDS
 - workplace instructions and job specifications
 - chemical information including legislation, codes of practice, manufacturer instructions
- relationships:
 - team member(s).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM405 Plan and implement a chemical use program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to assess and control the risks associated with chemical use and to plan and implement a program for chemical use.

The unit applies to individuals who take responsibility for their own work and provide direction to others. All work must be carried out to comply with workplace procedures, in accordance with applicable state/territory health and safety in the workplace, pesticide and environmental legislation and codes of practice.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify requirements for chemical use	1.1 Identify, source and interpret information required for planning and implementing a chemical use program 1.2 Assess the need for chemical use as an option 1.3 Ensure that personnel are adequately trained in chemical use according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Assess risks and develop control procedures	<p>2.1 Identify hazards, assess risks and develop control measures and emergency action plans for chemical use operational activities</p> <p>2.2 Assess weather conditions and forecasts to determine implications for off target contamination</p> <p>2.3 Assess the sensitivity of target area and impact of chemical on the environment according to chemical label instructions and safety data sheets (SDS)</p> <p>2.4 Assess the risk to human and animal health according to chemical label instructions and SDS</p> <p>2.5 Analyse assessments and document risk control procedures for the chemical application plan according to workplace procedures</p>
3. Develop an operational and maintenance program for chemical use	<p>3.1 Determine chemicals to be used according to workplace pest management strategy</p> <p>3.2 Calculate mixing requirements for chemicals according to chemical label instructions and workplace procedures</p> <p>3.3 Document operational checks and calibration requirements of equipment according to operators instructions and manufacturer specifications</p> <p>3.4 Develop and implement an operational and maintenance strategy for application equipment and personal protective equipment according to health and safety practices</p> <p>3.5 Document operational and maintenance procedures for chemical application plan according to workplace protocols</p>
4. Implement and monitor chemical application plan	<p>4.1 Provide personnel with chemical use procedures, and instruction on safety equipment for chemical application plan</p> <p>4.2 Monitor adherence with safe practice for preparation and application of chemicals according to chemical application plan</p> <p>4.3 Monitor adherence to procedures for handling, transport, storage, decontamination and disposal of chemicals according to chemical application plan</p> <p>4.4 Monitor adherence to maintenance procedures according to chemical application plan</p> <p>4.5 Monitor adherence to residue procedures for product and environment according to chemical application plan</p>
5. Finalise work	5.1 Ensure excess chemicals are disposed of according to waste

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
activities in accordance with chemical application plan	management and environment procedures 5.2 Ensure required records are completed according to operational and workplace, health and safety procedures
6. Evaluate chemical application plan and records for continuous improvement	6.1 Develop procedures for evaluating the effectiveness of chemical application plan 6.2 Identify and document shortfalls in chemical application plan 6.3 Develop a continuous improvement strategy to rectify the chemical application plan

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse and consolidate information to determine chemical control procedures and develop chemical application plan
Writing	<ul style="list-style-type: none"> Develop procedural material using clear and detailed language in order to convey explicit risk control information
Oral Communication	<ul style="list-style-type: none"> Present complex information using clear and convincing language, tone and pace appropriate when briefing personnel on chemical application plan
Navigate the world of work	<ul style="list-style-type: none"> Work independently or with others in making decisions to achieve organisation outcomes Contribute to roles and responsibilities of others through implementation of plans Take full responsibility for following policies, procedures and legislative requirements
Interact with others	<ul style="list-style-type: none"> Implement strategies for a diverse range of colleagues in order to build rapport and foster strong relationships when instructing and monitoring performance Elicit feedback and provides feedback to others in order to improve workgroup behaviours and update plans

Skill	Description
Get the work done	<ul style="list-style-type: none"> Accept responsibility for planning and sequencing complex tasks and workload Monitor progress of procedures and reviews and amends them to meet demands and priorities Apply systematic and analytical decision making processes for complex and non-routine situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM405 Plan and implement a chemical use program	AHCCHM402 Plan and implement a chemical use program	<p>Changes to Performance Criteria for clarity and added PC in Element 6.</p> <p>Removal of prerequisite units</p> <p>Updated Performance Evidence and Knowledge Evidence</p>	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM405 Plan and implement a chemical use program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have planned and implemented a chemical use program, including:

- sourced information and analysed its content for chemical application
- assessed the need for chemical use and ensured personnel are adequately trained in chemical use according to workplace procedures
- identified hazards, risks and provided controls, including personal protective equipment (PPE) for chemical application and off target impact
- assessed weather conditions and environmental sensitivity of the site
- documented chemical application and maintenance procedures according to workplace protocols
- determined chemicals required and mixing requirements according to workplace procedures and chemical label instructions
- develop a continuous improvement strategy to minimise risk
- communicated chemical application plan to personnel
- implemented procedures and monitored and evaluated personnel according to chemical application plan
- developed a continuous improvement strategy for chemical application plan
- implemented, monitored and evaluated a chemical application plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- source of information for developing plans, including:
 - legislation and regulations
 - codes of practice
 - chemical labels

- safety data sheets (SDS)
- industry requirements relating to chemical use
- strategies for identifying hazard, risks and controls
- risk factors, including:
 - human
 - animal health
 - product integrity
 - weather
 - residues and maximum residue levels
 - off target damage, spillage and environment
- principles of transport, handling and storing chemicals
- requirements for the disposal of excess chemicals, clearing spillages and equipment clean up
- chemical application equipment capabilities, limitations and calibration
- mixing chemicals, including:
 - rates
 - mixing order if more than one chemical
 - adjuvants
 - water quality
- life cycle of a variety of pests and the target stages
- implications of pest resistance to chemicals
- principles and practices of chemical application strategies and equipment including, integrated pest management and animal health strategies
- preparation and documentation of strategic plans and procedures
- signs of pest damage and signs of beneficial organisms
- operational factors to consider in a procedures, including:
 - transport, handling and storage
 - application methods, equipment and PPE
 - cleaning and decontamination
 - disposal of waste
- emergency procedures including first aid
- strategies for instructing personnel, and monitoring and assessing personnel performance
- mandatory and workplace record keeping requirements for chemical storage, disposal, application and safety.

Assessment Conditions

Competency is to be assessed in the workplace OR simulated environment that accurately reflects performance in a real workplace setting.

Assessment of skills must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools and equipment required to implement the chemical application program
 - PPE
 - chemicals and relevant weighing and mixing equipment
- specifications:
 - specific workplace documents including policies and processes
 - manufacturers' operating instructions for chemicals, equipment and machinery
 - SDS
 - workplace instructions and job specifications
 - chemical information including legislation, codes of practice, chemical label instructions
- relationships:
 - team member(s) or work crew
- timeframes:
 - schedules and planned completion dates for a chemical application plan.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCHM501 Develop and manage a chemical use strategy

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to develop and manage a chemical use strategy, including assessment of the risk of chemical transport, storage and handling.

The unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate a deep understanding in a specific technical area.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify and evaluate need for chemical use	1.1 Evaluate pest control strategies and their relevance to workplace requirements 1.2 Identify, assess and incorporate external factors that influence the

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	chemical use strategy according to workplace conditions, legislation and codes of practice 1.3 Document requirements for chemical use strategy according to workplace requirements, legislation and codes of practice 1.4 Identify and review available chemicals and their methods of application and assess the relevance to the workplace requirements
2. Develop a chemical use risk management strategy	2.1 Identify and assess health and safety in the workplace hazards in the handling, transportation and storage of chemicals 2.2 Identify and document risk factors associated with the use of chemicals 2.3 Identify health and safety in the workplace hazards, risks and develop control measures according to regulatory requirements 2.4 Develop a risk management strategy for chemical use according to legislation and workplace principles 2.5 Research and document insurance cover for intended chemical use according to workplace guidelines
3. Develop and implement procedures for chemical management and use	3.1 Develop procedures for management and use of chemicals according to workplace guidelines 3.2 Develop and document procedures for risk control measures according to workplace guidelines 3.3 Develop and document procedures for communicating with stakeholders according to workplace guidelines 3.4 Distribute information on procedures for chemical management and use to stakeholders
4. Identify training and supervision needs and solutions for chemical use in the workplace	4.1 Develop a strategy for training, assessing and supervising personnel involved in chemical use according to workplace guidelines 4.2 Organise and provide suitable training and assessment for implementation of chemical use strategy
5. Monitor and evaluate the implementation of a chemical use strategy	5.1 Monitor the implementation of the chemical use strategy according to regulatory requirements and workplace procedures 5.2 Evaluate the effectiveness of the chemical use strategy and identify underperformances 5.3 Rectify underperformances in implementation according to workplace policies and procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and critique ideas and information from a wide range of complex texts
Writing	<ul style="list-style-type: none"> Prepare strategies expressing ideas, exploring complex issues and construct logical, succinct and accurate procedures
Oral Communication	<ul style="list-style-type: none"> Establish and maintain complex and effective communications with key stakeholders
Navigate the world of work	<ul style="list-style-type: none"> Work autonomously making high level decisions to achieve and improve organisational strategies Develop and implement strategies that ensures organisational policies, procedures and regulatory requirements are being met
Interact with others	<ul style="list-style-type: none"> Develop and implement communications strategies with internal and external persons in order to build rapport Use a variety of relevant communication tools and strategies in building and maintaining effective working relationships
Get the work done	<ul style="list-style-type: none"> Plan strategic priorities and outcomes within a flexible, efficient and effective context in a diverse environment exposed to competing influences Identify key factors that impact on decisions and their outcomes, drawing on experience, competing priorities, and decision making strategies

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM501 Develop and manage a chemical use strategy Release 2	AHCCHM501 Develop and manage a chemical use strategy Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM501 Develop and manage a chemical use strategy

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have developed and managed a chemical use strategy, including:

- evaluated pest control strategies for workplace requirements
- identified, assessed and incorporated external factors, legislation, codes of practice and industry requirements into chemical use strategy
- reviewed available chemicals and their method of application and assessed their relevance to the workplace
- identified and assessed hazards and risks and developed control measures for a risk management strategy according to legislation and workplace guidelines
- researched and documented insurance cover for chemical use in the workplace
- developed procedures for management and use of chemicals according to workplace guidelines, including:
 - risk control measures
 - communication strategy to inform stakeholders of the chemical use strategy
- developed procedures that comply with legislation and workplace guidelines
- distributed information on procedures for chemical management to stakeholders
- developed and implemented a strategy for upskilling and supervising personnel for chemical use
- monitored the implementation of the chemical use strategy and evaluated and rectified underperformances, according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles of a chemical control strategies, including:
 - relevant legislation, codes of practice and industry requirements covering health and safety in the workplace, hazardous substances, environment and food safety
 - workplace and regulatory requirements and options for the keeping of records
 - documentation
- hazards to human health, agricultural produce, and all aspects of the environment and non-target species of flora and fauna associated with the transport, storage, handling, application and disposal of chemicals, including:
 - routes of entry of chemicals into the body and the implications of this on chemical use management strategies
 - safety procedures including the maintenance, use, fit and decontamination of personal protective equipment (PPE)
 - monitoring of staff health exposed to chemicals according to regulatory requirements
 - emergency procedures for safety incidents involving chemicals
 - purpose and role of chemical labels and safety data sheets (SDS) in determining chemical transport, storage, handling, application and disposal procedures and practices to all staff
- external factors that affect chemical use, including:
 - influence of meteorological factors (wind, temperature, humidity, rain) on quality of chemical application, drift potential, effectiveness and efficacy of use
 - elements of a spray drift management strategy including measures to assess the potential for spray drift and prevent or control its occurrence
- pest control strategies and their benefits in terms of risk management and evaluation, including:
 - chemical
 - biological
 - cultural
 - Integrated Pest Management
 - Integrated Resistance Management
 - Integrated Animal Health Management
 - off-label chemical application and procedures
- equipment required, calibration and operation
- principles of residue effects and their management, including:
 - persistence in soil and water
 - accumulation in agricultural produce
 - rate of breakdown of residues in produce and in the environment
 - withholding periods
 - ways in which residues can occur
 - maximum residue levels
 - movement of and persistence and degradation of different types of chemicals
 - industry waste agreements

- source and purpose of insurance for use, transportation and storage of chemicals
- communication and negotiation strategies with stakeholders including community, workers and management, including informing on:
 - staff responsibilities
 - how to act in an emergency
 - neighbours when chemical spraying is planned
 - make agencies aware when accidents occur
- types of training needs including internal and external
- monitoring methods and procedures including periodical reviews of procedures, workplace records.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace with pest control requirements personnel and physical resources to implement and monitor chemical use strategy or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - chemicals and spray equipment appropriate to control strategy
 - PPE
- specifications:
 - workplace documents including policies, procedures and processes to help formulate the chemical use strategy
 - manufacturers' operating and calibration instructions for equipment used in implementation to inform the procedures within the strategy
 - SDS
 - workplace instructions and procedures for implementing chemical use strategy
 - specific legislation, regulations and codes of practice
- relationships:
 - work team tasked with chemical control activities.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCOM201 Assess and receive raw materials for composting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to receive green waste for processing at a compost facility, including measuring quantity for billing and assessing material quality for acceptability against specified enterprise requirements.

It applies to an employee of an enterprise engaged in commercial-scale composting operations.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Composting (COM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Organise for work	1.1 Confirm specifications for raw materials 1.2 Select hand tools and check for serviceability 1.3 Identify, assess and report existing and potential hazards to health and safety 1.4 Use, maintain and store suitable personal protective equipment
2. Receive raw materials	2.1 Recognise and assess raw materials against acceptance criteria 2.2 Reject non-conforming materials 2.3 Note and report non-conformances 2.4 Estimate and record raw materials quantity 2.5 Calculate fee and charge to customer based on raw material type and quantity 2.6 Record fee payment and provide receipt
3. Unload raw materials	3.1 Give drivers directions for unloading at a specific location 3.2 Provide unloading assistance as required 3.3 Inspect and assess raw materials against specified acceptance criteria 3.4 Reject unacceptable materials 3.5 Note and report unacceptable materials 3.6 Identify and monitor designated unloading areas to ensure compliance with unloading instructions, containment and segregation of materials and availability of storage capacity
4. Remove contaminants and stockpile acceptable raw material	4.1 Remove physical unacceptable materials from raw materials 4.2 Segregate, stockpile and contain or otherwise manage raw materials in appropriate areas 4.3 Monitor raw material stockpiles to ensure adequate available storage capacity and containment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCOM201A Assess and receive raw materials for composting.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCOM201 Assess and receive raw materials for composting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- inspect raw materials for contamination and acceptability against established criteria
- measure quantity for billing
- operate a weighbridge
- provide clear directions to drivers entering site
- receive raw material for processing at a compost facility
- record raw material quantity and calculate fee

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of composting raw material assessment
- characteristics of a range of raw green waste
- enterprise policies and procedures including workplace health and safety procedures
- safety risks to self and product posed by contaminants in raw materials and products
- standard risk control measures used in the industry to minimise risk associated with handling raw materials and products

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCOM202 Recognise and respond to fire emergencies on a composting site

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prevent, recognise and provide first response to fire in material or compost piles.

This unit applies to a yard or general hand under supervision of an operations team leader or site foreman and fire brigade personnel.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Composting (COM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Recognise a fire risk and undertake preventative actions	1.1 Obtain and clarify procedures for first response to fire 1.2 Identify location of firefighting equipment and check to ensure all equipment is available and ready for use 1.3 Recognise and report conditions that lead to fire and signs of fire 1.4 Observe enterprise procedures for emergencies 1.5 Implement temperature and moisture management procedures
2. Recognise and initiate response to fire	2.1 Identify nature and extent of fire 2.2 Report fire details and raise alarm 2.3 Implement preparations for water availability for fire brigade attendance 2.4 Identify hazards associated with fire emergency and take action to minimise risks to self, others and property 2.5 Secure immediate area of the emergency 2.6 Remove machinery and equipment from area where safe to do so 2.7 Select and set up firefighting equipment as directed by fire brigade personnel
3. Attack fire under direction of fire brigade	3.1 Apply appropriate firefighting and containment media in a safe and coordinated manner 3.2 Use firefighting methods and tactics as directed 3.3 Report and act upon potential for change in fire behaviour to fire brigade and supervisor 3.4 Identify and maintain clear line of retreat at all times 3.5 Observe conditions at fire and report their effects on fire development 3.6 Report significant changes to status of fire to supervisor and fire brigade
4. Carry out post-fire activities	4.1 Identify and control smouldering fire residuals according to fire brigade directions 4.2 Undertake break-up of windrows, buildings or structures 4.3 Remove spent fuel or burnt compost and debris 4.4 Undertake activities to complement post-fire operations and prevent further damage 4.5 Clear and clean site and equipment 4.6 Provide assistance to fire brigade to complete and record appropriate incident information 4.7 Report effectiveness of tactics employed 4.8 Seek feedback on performance and note improvements for future action

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCOM202A Recognise and respond to fire emergencies on a composting site.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCOM202 Recognise and respond to fire emergencies on a composting site

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- follow emergency procedures
- operate pumps and set up water delivery system
- read and interpret site operation plans or maps
- recognise and report fire risks and incidents

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for recognising fire emergencies
- characteristics and operation of joints, hoses, valves and sprinkler components
- work health and safety and emergency management plans as part of enterprise operating procedures
- fire behaviour, extinguishing media and operating firefighting equipment
- fire control tactics and techniques, fire hazards and safety techniques
- operation of pumps
- pile size, moisture and porosity as causes of combustion
- procedures for safely using power and hand tools
- standard risk control measures used in the industry to minimise risk associated with fire response

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCOM203 Recognise raw materials, production processes and products on a composting site

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to recognise raw materials and products. It applies to the employee of an enterprise engaged in commercial-scale composting operations.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Composting (COM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Recognise, handle and locate raw materials on site	1.1 Recognise composting potential of raw materials 1.2 Compare characteristics of raw materials with site operating guidelines

Element	Performance criteria
	1.3 Recognise potential hazards handling raw materials 1.4 Confirm initial handling requirements, stockpiling location and arrangement from site operating guidelines 1.5 Identify and record contaminants in raw materials 1.6 Confirm physical contaminant handling, stockpiling location and arrangement from site operating guidelines
2. Recognise and locate key processes and technologies	2.1 Confirm composting technologies and methods, key process control steps and locations from site map 2.2 Identify windrows or vessels by batch or code numbers 2.3 Confirm machinery, plant and equipment from site operating guidelines
3. Recognise, handle and locate compost and other products on site	3.1 Describe intended use of compost and or products 3.2 Compare site operating guidelines with the handling risks and potential or common contaminants that characterise different products 3.3 Recognise potential hazards in handling products 3.4 Confirm handling requirements, stockpiling location and arrangement from site operating guidelines 3.5 Recognise and avoid potential for contamination of products 3.6 Match batching sheets or other product formulas to end product 3.7 Identify and report contaminants present in products 3.8 Identify physical contaminant handling, stockpiling location and arrangement on site
4. Identify and carry out site maintenance requirement	4.1 Identify and undertake site maintenance requirements 4.2 Identify traffic access routes and traffic and pedestrian safety rules from site operating plan 4.3 Maintain vehicle access routes 4.4 Identify and maintain machinery and site security requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCOM203A Recognise raw materials, production processes and products on a composting site.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCOM203 Recognise raw materials, production processes and products on a composting site

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify, confirm, locate, handle and maintain raw materials, products and physical contaminants on site
- implement site machinery and traffic management plans
- maintain site and machinery security requirements
- maintain site arrangement and segregation of materials and products to avoid contamination
- read and follow batch numbers and codes, and site operating plan
- recognise and locate key process control stages of production cycle and associated machinery on site

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for raw material recognition
- characteristics of a range of raw materials
- company policies and procedures, including workplace health and safety requirements
- key process control stages critical to consistent quality in compost production
- overview of systems and technologies used in compost production, particularly as relevant to workplace
- range and characteristics of products
- safety risks associated with vehicles and machinery movement on site
- safety risks to self and product posed by contaminants in raw materials and products
- standard operating procedures to minimise risk associated with handling raw materials and products

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCOM301 Operate compost processing plant, machinery and equipment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to operate compost processing plant, machinery and equipment to prepare raw materials to produce compost products.

It applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Composting (COM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Organise plant, machinery and equipment operations	1.1 Review job sheet or work order to identify operating requirements 1.2 Organise equipment, materials and personnel requirements 1.3 Select, use, maintain and store personal protective equipment

Element	Performance criteria
	(PPE)
2. Prepare plant, machinery and equipment for use	2.1 Check service log to ensure service requirements have been maintained 2.2 Check communication equipment, safety devices, lighting and alarm systems for correct operation 2.3 Carry out routine pre-operational checks 2.4 Check and calibrate operational systems for correct operation 2.5 Identify and safety tag faulty plant, machinery or equipment safety 2.6 Identify and risk assess hazards associated with plant, machinery and equipment operation
3. Start and operate plant, machinery and equipment	3.1 Check operational area and inform personnel of start of operation 3.2 Operate plant, machinery and equipment in a safe and controlled manner 3.3 Monitor input materials and identify non-conformances 3.4 Monitor processing outputs and adjust plant operation to meet job specifications 3.5 Identify, rectify and report out-of-specification product or process outcomes to maintain the process within specification
4. Shut down plant, machinery and equipment	4.1 Shut down plant, machinery and equipment 4.2 Remove debris and contaminants from plant, machinery and equipment to ensure safe and efficient operation 4.3 Clean, secure and store plant, machinery and equipment 4.4 Tag or lock unsafe plant, machinery or equipment
5. Maintain records	5.1 Maintain plant, machinery and equipment operational records 5.2 Record maintenance, damage, malfunctions or irregular performance, and unsafe plant, machinery or equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCOM301A Operate compost processing plant, machinery and equipment.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCOM301 Operate compost processing plant, machinery and equipment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine appropriate operating methods
- implement work and equipment maintenance plans
- monitor input materials and report non-conformances
- monitor outputs and report out-of-specification product
- perform shutdown procedures and maintain records
- select and use a range of compost processing plant, machinery and equipment

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for operating compost processing plant
- enterprise guidelines associated with operation of plant, machinery and equipment
- environmental licenses, impacts and procedures identification of contaminants
- legislation, regulations and codes of practice with regard to operator licensing, roads and traffic requirements
- legislation, regulations and codes of practice with regard to workplace health and safety and the use and control of hazardous substances, such as fuel and recipe inputs
- lock-out and tag-out procedures for plant, machinery and equipment
- manufacturer specifications for servicing of plant, machinery and equipment
- operating principles and operating methods for plant, machinery and equipment
- potential risks and hazards associated with operation of plant, machinery and equipment
- principles of weight distribution with regard to load-shifting and machinery movement
- procedures for cleaning, securing and storing machinery, equipment and materials

- product types and characteristics
- raw material types and characteristics
- workplace health and safety legislation, codes of practice and specific hazards such as hazardous substances and exposure to organic micro particles

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCOM401 Develop a composting recipe

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare and mix raw materials of known characteristics in specified proportions for composting.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Composting (COM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify and characterise raw materials	1.1 Identify raw materials against established enterprise criteria 1.2 Enter raw material characteristics into compost recipe calculator to achieve a balanced recipe 1.3 Take samples of material for analysis where raw material identity

Element	Performance criteria
	<p>or characteristics are uncertain</p> <p>1.4 Determine receivable and handling requirements of raw materials</p>
2. Establish production objectives	<p>2.1 Develop product specifications for identified markets using product performance data and enterprise records</p> <p>2.2 Identify raw material combinations that meet market requirements</p>
3. Calculate compost recipe	<p>3.1 Record raw material characteristics in compost recipe</p> <p>3.2 Specify raw material ratios by weight in resulting compost recipe</p> <p>3.3 Determine raw material pre-processing requirements, volumes of compost upon formation and compost production plan</p> <p>3.4 Review composting batch management procedures and document variations to management procedures as a new procedure</p> <p>3.5 Estimate and document compost production schedule</p> <p>3.6 Confirm compatibility of compost recipe and production schedule against documented customer requirements</p> <p>3.7 Quantify density of pre-processed raw materials and translate weight-based recipe into volume-based recipe for production</p> <p>3.8 Record volumetric compost recipe and production procedures as operational batch or bucket recipe and procedures</p>
4. Validate compost recipe	<p>4.1 Prepare and mix raw materials to form feedstock for composting</p> <p>4.2 Manage composting batch according to enterprise procedure</p> <p>4.3 Monitor composting process for efficiency in relation to estimated production schedule and enterprise requirements</p> <p>4.4 Monitor environmental and health and safety aspects and impacts</p> <p>4.5 Identify faults, variations or problems carry out remedial action</p> <p>4.6 Sample and test material to determine completion of process</p> <p>4.7 Evaluate end product quality against product specifications</p> <p>4.8 Revise compost recipe, production schedule and procedures</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCOM401A Develop a composting recipe.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCOM401 Develop a composting recipe

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- calculate a compost recipe that is consistent with the technology and method available from combinations of raw materials
- document compost production plan consistent with plant capabilities and site constraints
- produce a compost recipe that will achieve defined product specifications

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of compost recipes
- control of hazards in handling raw materials and composting materials
- processing duration required for various raw materials
- range of commercial compost-based products
- raw materials and their characteristics
- relationship between key compost recipe variables and compost production
- systems, technologies and methods in compost production

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCCOM402 Plan and schedule compost production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan and schedule compost production. This unit applies to product managers at a commercial-scale composting facility.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Composting (COM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Establish production requirements	1.1 Quantify production requirements from raw material supply contracts and receipt data, sales and market trend information, and corporate marketing plan and strategy

Element	Performance criteria
	1.2 Identify conditions that affect production requirements with management, sales and marketing personnel 1.3 Estimate production requirements to meet customer requirements and site and equipment capacity in consultation with management, sales and marketing personnel 1.4 Monitor environmental and work health and safety impacts for compliance with enterprise plan and licence conditions 1.5 Document and submit production plan for management approval 1.6 Confirm availability of personnel, machinery and equipment for compost production 1.7 Develop contingency plan for oversupply or undersupply of raw material or product
2. Schedule production to meet requirement	2.1 Calculate batch types and volumes of compost-based products 2.2 Obtain laboratory and field test data of compost materials during and after production 2.3 Monitor and adjust production schedule according to field and laboratory test results 2.4 Make product available to customer in required quantities, to required quality and at required time

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCCOM402A Plan and schedule compost production.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCOM402 Plan and schedule compost production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop and document contingency plans for compost production
- document a compost production plan consistent with enterprise capabilities and constraints
- identify and interpret relevant information and conditions that could influence compost production
- make product available to customers as required
- produce and document a compost production schedule

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of compost production scheduling
- control of hazards in handling raw materials and product
- processing duration for various raw materials
- raw materials and their characteristics
- relationship between key compost recipe variables and compost production
- systems, technologies and methods in compost production

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCFAU501 Manage fauna populations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare a fauna management plan, including controlling or maintaining fauna populations.

The unit applies to individuals who manage natural areas, and technical specialists who manage and provide advice on fauna populations.

Firearms licensing conditions may apply to this unit. Scientific licenses and permits may be required in some jurisdictions where the management plan involves endangered or threatened species, or critical habitats.

Pre-requisite Unit

Nil

Unit Sector

Fauna (FAU)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess fauna populations	1.1 Conduct surveys for distribution, ecology, viability, genetic diversity and threats 1.2 Determine increase or decrease in species population size and range

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Assess desirability of the population change and impact on immediate environment</p> <p>1.4 Assess condition of the environment and habitats for ongoing support of species</p> <p>1.5 Research species numbers in other locations to determine significance of local population</p> <p>1.6 Assess attitudes of stakeholders to the species to determine acceptable range of population management options</p> <p>1.7 Complete a cost/benefit analysis of population management options</p>
2. Prepare management plan	<p>2.1 Develop plan of management from assessment</p> <p>2.2 Prepare submissions for funding to implement management plan</p> <p>2.3 Reconcile costs of plan for management against available funds</p>
3. Control or maintain fauna population	<p>3.1 Develop plan to manage species using a series of intervention measures according to resource constraints and legislative requirements</p> <p>3.2 Implement measures to manage population</p> <p>3.3 Obtain permits for population management according to legislative requirements</p> <p>3.4 Inform stakeholders and staff about population management measures</p> <p>3.5 Ensure management measures comply with workplace health and safety, animal welfare, biosecurity and environmental sustainability policies and procedures</p> <p>3.6 Ensure staff are trained and comply with licensing requirements for managing population</p> <p>3.7 Manage incidents with species according to legislative, workplace health and safety and public safety requirements</p> <p>3.8 Monitor and adjust management plan and record results in accordance with legislative and workplace requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Conduct literature reviews on the impact of animal populations, and critically review results for the development of a fauna management plan
Writing	<ul style="list-style-type: none"> Prepare fauna management plans and supporting texts, expressing ideas and exploring complex issues that are constructed logically, succinctly and accurately
Oral communication	<ul style="list-style-type: none"> Establish and maintain effective oral communication with stakeholders and staff
Numeracy	<ul style="list-style-type: none"> Calculate animal population densities and compare results with researched results for comparable locations Prepare costing for management plan and reconciliation with available funding

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCFAU501 Manage fauna populations Release 2	AHCFAU501 Manage fauna populations Release 1	Minor changes to Application Minor changes to Performance Criteria for clarity Added Foundation Skills Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCFAU501 Manage fauna populations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared and implemented a management plan for at least one fauna species in its ecological environment.

There must also be evidence that the individual has:

- assessed fauna populations and their habitat
- assessed the impact of fauna population on the environment
- determined the stability and importance of fauna populations for their species
- planned intervention measures to improve species distribution, habitat and survivability
- prepared a fauna management plan in accordance with legislative requirements and workplace procedures, including:
 - developed workplace health and safety procedures
 - incorporated biosecurity procedures
 - informed staff and stakeholders
- implemented plan to control or maintain fauna populations
- applied ethical welfare practices when managing fauna populations
- applied appropriate sustainability practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislative and workplace requirements, including:
 - ethical standards and practices when working with fauna

- laws relevant to the protection of flora, fauna and marine environments
- ecological principles and practices as they apply to:
 - fauna species and their interrelationships with the environment
 - fauna and their habitat
 - predators and fauna population
 - competition between fauna species
- survey and assessment techniques, including:
 - survey materials and equipment
 - documenting and recording survey results
- key anatomical and behavioural characteristics and reproduction patterns of fauna species
- signs and symptoms of health issues in the species
- management planning methods and procedures
- requirements of licences for scientific, educational and conservation activities
- requirements for ensuring the welfare of animals described in the relevant codes of practice.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated for at least one fauna species in its ecological environment
- resources, equipment and materials:
 - fauna in the ecological environment
 - survey materials and equipment
- specifications:
 - specific workplace policies, procedures, processes for working with fauna
 - manufacturer operating instructions for survey equipment
 - legislation/codes of practice and standards for the ethical management of fauna.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCHYD301 Implement a maintenance program for hydroponic systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement a maintenance program for hydroponic growing systems.

It applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Hydroponics (HYD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor plant health	1.1 Interpret and clarify workplace information about the existing hydroponic system 1.2 Assess growth rate of plants against targets set in the production plan

Element	Performance criteria
	1.3 Assess plants for overall health 1.4 Assess plant for onset of fruit according to production plan
2. Monitor the hydroponic environment	2.1 Monitor environmental parameters according to the production plan and make adjustments as required 2.2 Collect samples and send off for analysis to identify potential sources of contamination 2.3 Monitor and adjust hygiene procedures 2.4 Monitor disposal of materials to ensure it follows enterprise guidelines
3. Monitor nutrient solution	3.1 Identify ingredients of the hydroponic nutrient solution 3.2 Take samples for testing and analysis 3.3 Interpret and discuss results 3.4 Modify nutrient solution to ensure correct balance of ingredients
4. Perform routine maintenance checks	4.1 Inspect all buildings and structures for wear and tear 4.2 Check equipment for delivering the nutrient solution 4.3 Check equipment controlling the atmospheric and root zone environments
5. Complete monitoring activities	5.1 Report problems to the manager 5.2 Record all checks

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCHYD301A Implement a maintenance program for hydroponic systems.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCHYD301 Implement a maintenance program for hydroponic systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- monitor and assess plant health
- administer nutrients to a hydroponic system as instructed
- assist in performing nutrient measurement tests
- read nutrient analysis information
- undertake hydroponic system maintenance and repairs
- monitor hydroponic maintenance programs

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for implementing a hydroponic maintenance program
- characteristics of healthy and unhealthy plants
- environmental implications of the disposal of chemicals or chemical containers and the drainage of high nutrient effluent
- equipment used in hydroponic systems
- plant growing media choices and their properties
- potential problems associated with a range of crops grown in a hydroponic environment
- properties of a nutrient solution
- recirculated and non-recirculated systems
- testing methods for a hydroponic nutrient solution
- testing methods for the gauging of environmental parameters

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCHYD302 Install hydroponic systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to install recirculating or non-recirculating hydroponic systems.

It applies to individuals who take responsibility for own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Hydroponics (HYD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for installation	1.1 Interpret and clarify site plans and design specifications 1.2 Locate underground services according to site plans 1.3 Identify any potential site problems 1.4 Identify environmental implications of installing the system

Element	Performance criteria
	1.5 Clear the site for installation 1.6 Determine and arrange equipment and materials according to design and layout plans
2. Install a hydroponic system	2.1 Prepare site for and install drainage channels and water collection, and storage facilities according to design specifications 2.2 Assemble system infrastructure according to design specifications 2.3 Install system components according to design and layout plans and manufacturers specifications 2.4 Communicate problems associated with installation to the client or manager
3. Test and calibrate the system	3.1 Check infrastructure and systems are in working order and meet specifications 3.2 Calibrate hydroponic equipment 3.3 Install growing media 3.4 Test the system 3.5 Complete check list of all testing results
4. Complete installation operations	4.1 Clean and store all tools and equipment 4.2 Tidy site and remove and dispose of waste

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCHYD302A Install hydroponic systems.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCHYD302 Install hydroponic systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- commission a hydroponic system according to instructions and directions
- prepare a site for installation of a hydroponics system
- prepare materials and equipment for installation
- install components and structures associated with a hydroponic system
- test and calibrate a hydroponic system
- store and maintain associated installation equipment and materials

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of hydroponic system installation
- environmental implications of the drainage of high nutrient effluents
- head pressure and flow rates
- legislation regarding the installation of hydroponic systems
- plant growing media choices and their properties
- recirculated and non-recirculated systems

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCHYD501 Develop a plan for a hydroponic system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design a hydroponic system. It applies to those who design systems for hydroponic production of horticultural crops.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Hydroponics (HYD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Carry out preliminary research	1.1 Research type of crop to be grown based on sound marketing principles

Element	Performance criteria
	1.2 Research the growing requirements of the crop based on sound horticultural practices 1.3 Establish the associated risks of growing a particular crop based on sound horticultural practices 1.4 Calculate estimated yield and crop turnover time from historical data and research statistics 1.5 Determine quantity of the plants to be grown based on a cost benefit analysis
2. Assess the suitability of a site	2.1 Assess the physical characteristics of the site 2.2 Ascertain and assess the proximity of the site to markets 2.3 Identify legal requirements in relation to the site and the development of a hydroponic farm 2.4 Identify and consider the environmental implications of developing a hydroponic farm on the site
3. Select the required system	3.1 Research main types of hydroponic systems 3.2 Carry out analysis on each type of system for the chosen crops 3.3 Carry out a cost/benefit analysis on each system for each type of crop 3.4 Determine the type of hydroponic system to be installed
4. Design the hydroponic system	4.1 Select and document the water collection and storage system on the plan 4.2 Select the irrigation system and its components according to the required volume of water and flow rate 4.3 Select and document the fertigation system 4.4 Determine the dimensions of the controlled environment structure following full consideration of the relevant factors 4.5 Determine the environmental control system and document specifications on the plan
5. Prepare and document the design	5.1 Develop a design plan 5.2 Determine specifications and detailed costings with the help of experts, if required 5.3 Develop and document detailed production procedures and schedules 5.4 Present documentation to the client for final approval

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCHYD501A Develop a plan for a hydroponic system.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCHYD501 Develop a plan for a hydroponic system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research the growing requirements, risks and returns of the proposed crop
- select, design or customise a system for the site and purpose
- survey the site for suitability and environmental impacts, and gain approvals
- develop a design plan
- present a design plan to clients

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices for developing a hydroponic system plan
- advantages and disadvantages of the different equipment used in hydroponic systems
- environmental implications of the disposal of chemicals or chemical containers and the drainage of high nutrient effluent
- legislation and regulations relating to the establishment of a hydroponic system
- plant growing media choices, their properties and enterprise specifications
- technical requirements and operating parameters of recirculated and non-recirculated systems

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM201 Maintain cultural places

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain Indigenous cultural places according to Community guidelines and cultural protocols.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. This includes undertaking defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess maintenance work required	1.1 Identify works required under the management plan and enterprise procedures 1.2 Identify machine, equipment and materials necessary to carry out maintenance works 1.3 Estimate materials required for maintenance work

Element	Performance criteria
2. Prepare for maintenance	2.1 Organise machine, equipment and materials to carry out maintenance works 2.2 Prepare and assemble safety equipment and materials
3. Maintain condition of place	3.1 Undertake maintenance work according to work programs and work health and safety policies and procedures 3.2 Report presence of threats 3.3 Report evidence of deterioration and wear 3.4 Clean up site on completion of maintenance works
4. Protect cultural place	4.1 Report any evidence of damage to place to supervisor 4.2 Report any breach of legislation or enterprise regulations to supervisor 4.3 Maintain protective barriers and signs

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM201A Maintain cultural places.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM201 Maintain cultural places

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess the level of work required to maintain the cultural place
- prepare for and carry out maintenance activities in accordance with organisational, cultural and environmental requirements
- report deterioration or damage to place to supervisor
- report incidents of breaches of legislation including vandalism
- apply work health and safety practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- potential threats to area
- techniques of site maintenance and protection
- range of maintenance works undertaken on cultural sites
- enterprise procedures relating to the reporting of deterioration or damage to place or reporting of incidents

Assessment Conditions

Assessment must comply with Community protocols and guidelines and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM202 Observe and report plants or animals

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to observe, record and report on the presence of plants or animals against criteria provided by a supervisor or as required under legislation or regulations.

All work is performed according to Community guidelines and cultural protocols.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. This includes undertaking defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and organise observations	1.1 Prepare a defined process for observation and seek agreement from supervisor 1.2 Obtain equipment for observation 1.3 Note requirements of legislation, protection agreements and enterprise procedures for species
2. Collect and record information	2.1 Identify and record presence of plants or animals, according to enterprise requirements 2.2 Collect plants or animal samples according to enterprise requirements and animal welfare codes of practice, where applicable 2.3 Follow protection and quarantine requirements under legislation, protection agreements and enterprise procedures for biosecurity 2.4 Make sure observation activities minimise degradation and disturbance to the environment, plants and animals 2.5 Carry out observation activities in accordance with work health and safety policies and procedures
3. Report data	3.1 Record and organise information on observed plants or animals according to enterprise recording and database arrangements 3.2 Communicate information to supervisors 3.3 Plot and describe locations of an organism using maps, Global Positioning System (GPS) and grid references

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM202A Observe and report plants and/or animals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM202 Observe and report plants or animals

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- observe and accurately identify species of animals or plants in a natural area
- record and report observations in required format
- carry out a survey of plants and animals in a natural area in a manner that minimises disruption or degradation to the environment
- apply work health and safety practices in the context of own work
- use maps or GPS to accurately plot or describe locations

Knowledge Evidence

The candidate must demonstrate knowledge of:

- criteria used to group species
- common, Indigenous and scientific names of plants or animals
- biological species occurring in the study area
- undesirable plants (weeds) and animals
- the basic requirements for ensuring the welfare of animals included in the observation activity described in the relevant Codes of Practice, if animals are being observed

Assessment Conditions

Assessment must comply with community protocols and guidelines and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for assessment.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM203 Record information about Country

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to record information and knowledge on Country from both an Indigenous and non-Indigenous perspective according to Community guidelines and cultural protocols.

This unit applies to working individually and also within a hierarchy of management and with others in a culturally appropriate way.

Individuals undertake defined activities and work in a structured context exercising limited autonomy with some accountability for own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Collect information	1.1 Determine boundaries and extent of Country

Element	Performance criteria
	1.2 Identify and record plant and animal species by Indigenous or common name 1.3 Identify and record special features and sites of Country 1.4 Determine relationships of plants and animals from Indigenous land and sea management and cultural perspectives 1.5 Collect information on relevant management practices for Country 1.6 Determine history of dispossession from Community sources and available literature 1.7 Determine simple food chains relevant to Country 1.8 Follow work health and safety policies and procedures when collecting information on Country
2. Review changes	2.1 Identify environmental changes since dispossession and the impacts of these changes on plant and animal communities 2.2 Document environmental trends and the impacts to Country 2.3 Record land and sea management practices that address environmental change
3. Document information	3.1 Record historical and cultural information about Country 3.2 Provide access to information to those who are authorised according to Community guidelines and protocols 3.3 Recognise and record ownership of information 3.4 Document conditions and parameters for using information

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM203A Record information about country.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM203 Record information about Country

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- record details of plant and animal species according to enterprise procedures
- record information on Indigenous culture and history for Country
- document environmental changes and trends according to enterprise procedures
- collect and use information according to Community guidelines and protocols
- complete all documentation to enterprise standards, using Indigenous names or standard industry terminology, where appropriate
- apply work health and safety practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- designated areas and features of Country
- local Indigenous or common names for plants and animals
- relationships between plants and animals and Indigenous culture
- protocols and customs relating to disclosure of knowledge about Country

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM302 Provide appropriate information on cultural knowledge

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to investigate the maintenance of cultural knowledge by Indigenous people and provide this knowledge to others, if permitted by cultural authorities. All work is performed according to Community guidelines and cultural protocols.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Investigate cultural knowledge	1.1 Obtain cultural knowledge from an appropriate person within the Community 1.2 Determine and record key principles, values and practices of cultural knowledge 1.3 Define the relationship between cultural knowledge and management of Country 1.4 Establish ownership of and parameters for transferring cultural knowledge
2. Identify locations and patterns of plants and animals in a specific area	2.1 Identify and document relationships between land, rivers, lakes and sea management practices and seasonal cycles in an accessible record 2.2 Use common and Indigenous names to describe plants and animals 2.3 Note relationships between spirituality and people to complement the accessible record
3. Identify plants, animals and resources used for medicine and food	3.1 Identify and record bush foods and medicines for a specific area 3.2 Use common and Indigenous names to describe plants and animals 3.3 Collect plant and animal samples for future identification in accordance with legislative requirements, enterprise procedures and environmentally sustainable practices and animal welfare codes of practice, where applicable 3.4 Follow work health and safety policies and procedures when working on Country 3.5 Define and document issues in relation to Indigenous access and use
4. Relate information on cultural knowledge to others	4.1 Provide information on cultural knowledge to those who are authorised to possess that knowledge 4.2 Relate information on cultural knowledge in an appropriate format and medium 4.3 Refer requests for disclosure of information on cultural heritage that infringes intellectual property rights of a group or Community to appropriate persons 4.4 Decline requests for disclosure of information on aspects of cultural knowledge by unauthorised individuals

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM302A Provide appropriate information on cultural knowledge.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM302 Provide appropriate information on cultural knowledge

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- access and provide appropriate information on cultural knowledge
- investigate cultural knowledge in accordance with cultural protocols
- determine relationships between land features, seasons and spirituality
- identify plants, animals and resources used for medicine and food in a given area
- provide information on cultural knowledge in accordance with cultural protocols
- follow cultural protocols when carrying out work
- collect plant and animal samples in accordance with legislative requirements and animal welfare codes of practice, where appropriate
- apply environmentally sustainable work practices when working on Country
- identify individuals who are authorised to possess cultural knowledge
- use common and Indigenous names for plants and animals
- apply work health and safety practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- plant and animal uses and significance relating to a particular Community, group or region
- common and Indigenous names for plants and animals significant to the Community
- cultural protocols relevant to region, Community and scope and type of cultural knowledge
- role and rights of Indigenous peoples in maintaining and controlling cultural knowledge

- Indigenous protocols for identifying individuals who are authorised to possess cultural knowledge
- intellectual and cultural property rights
- the basic requirements for ensuring the welfare of animals described in the relevant Codes of Practice

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM305 Work with an Aboriginal Community or organisation

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to work with an Aboriginal Community or organisation while demonstrating an awareness of Aboriginal identity, history and spirituality.

All work is performed according to Community guidelines and cultural protocols.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Define Australian	1.1 Determine major characteristics of the social structures of a

Element	Performance criteria
history from an Aboriginal cultural and Community perspective	specific Aboriginal Community 1.2 Identify impacts on Aboriginal social structures following European colonisation 1.3 Record examples of resistance to European colonisation 1.4 Document positive and negative effects of European colonisation 1.5 Determine various approaches and resources which can be employed in order to identify cultural authorities for specific Country and Community 1.6 Research contemporary Aboriginal social, economic and political trends in the context of Community life
2. Outline strategies for working with Aboriginal organisations and people	2.1 Acknowledge and consider differences in working within Aboriginal and non-Aboriginal Communities and organisations 2.2 Identify Aboriginal ways of working 2.3 Recognise potential conflicts 2.4 Identify and implement strategies for minimisation of conflicts
3. Operate effectively in a job role working with an Aboriginal Community or organisation	3.1 Observe Aboriginal cultural protocols according to Community and organisational guidelines and procedures 3.2 Respect Community traditions and customs 3.3 Build and maintain productive relationships within the Aboriginal Community and organisation 3.4 Create and give mutual respect as evidenced by effective engagement and shared outcomes with the Community and organisation over time 3.5 Obtain and value feedback on personal work performance, interpersonal ways of relating, and adherence to Aboriginal cultural protocols

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM305A Work with an Aboriginal Community or organisation.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM305 Work with an Aboriginal Community or organisation

Modification History

Release Number	TP Version	Comments
1	RGRv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- work within and between Aboriginal and non-Aboriginal social structures
- demonstrate empathy and respect in working with Aboriginal Communities and organisations
- build effective and productive working relationships with Aboriginal people and Communities

Knowledge Evidence

The candidate must demonstrate knowledge of:

- Aboriginal history, cultural values and interpersonal and Community protocols
- social structures of the Aboriginal Community
- Aboriginal cultural customs and heritage of local Communities
- key aspects of Aboriginal history and impact of European colonisation on Community and individuals

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM306 Follow Aboriginal cultural protocols

Modification History

Release Number	TP Version	Comments
1	RGRv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop awareness of, and apply the protocols of Aboriginal culture, including the need to identify the appropriate persons when approaching a Community and the cultural and social protocols associated with that task.

This unit applies to following cultural protocols and details the specific cultural, gender and kinship sensitivities of working in Aboriginal Communities and on Country with diverse cultural requirements.

The unit applies to individuals working with lore/law men and women either autonomously or under the supervision and cultural authority of Traditional Owners or Elders for specific Country. They work under broad direction and use discretion and judgement in the selection and use of available resources.

This unit is also applicable to the work of repatriation workers and anthropologists. However, cultural beliefs and practices vary across locations and communities however and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify Aboriginal beliefs and associated cultural protocols for different Country	1.1 Identify and document the importance of Aboriginal beliefs and the relationship of these beliefs with cultural landscapes 1.2 Recognise and respect gender roles 1.3 Respect language groups and kinship networks within specific Country that inform the basis of social relationships and Community roles 1.4 Recognise and respect cultural taboos, factions and avoidance relationships 1.5 Acknowledge the rights of individuals within Communities and on Country to hold specific knowledge and ceremony 1.6 Acknowledge the rights of individuals within Communities and on Country to hold responsibility for Aboriginal sites and the cultural rules associated with sharing that knowledge 1.7 Respect and affirm the inherent diversity that exists within cultures and Communities
2. Identify Aboriginal cultural authorities for specific Country in culturally appropriate ways	2.1 Apply various approaches and resources to identify cultural authorities for specific Country 2.2 Research difficulties in identifying cultural authorities in various states and territories 2.3 Identify and consult appropriate cultural authorities 2.4 Apply the identification by cultural authorities of appropriate persons within Communities who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and places 2.5 Respect and implement the provision of advice by cultural authorities 2.6 Respect and implement rights and responsibilities associated with cultural knowledge, story, song, site and ceremony 2.7 Support cultural knowledge holders to inform the decision-making process to determine the cultural significance of objects and places 2.8 Acknowledge and respect traditional knowledge and practices in managing Country and environment

Element	Performance criteria
3. Relate Aboriginal cultural protocols to Community consultation	3.1 Identify and record key protocols required for Aboriginal Community consultation 3.2 Acknowledge determination of Aboriginal people as the primary source of cultural information 3.3 Select participants for and methods of consultation in accordance with decisions made by Aboriginal cultural authorities 3.4 Use communication approaches that place Aboriginal cultural protocols and values as a principal concern 3.5 Undertake participation in Community consultation following appropriate cultural protocols for that Country and Community
4. Recognise and administer Aboriginal ownership and intellectual property rights	4.1 Establish ownership rights and intellectual property rights of Aboriginal cultural information and material 4.2 Recognise rights to control cultural heritage by Aboriginal people as custodians of Aboriginal culture 4.3 Apply access restrictions to cultural knowledge, information and material 4.4 Follow confidentiality measures for recording secret, sacred materials 4.5 Determine and administer the ownership of cultural knowledge, information and material 4.6 Report any identified infringement of copyright
5. Access, transfer and use cultural information and material	5.1 Seek permissions from cultural authorities, relevant individuals and organisations for access and use of Aboriginal cultural information and material 5.2 Abide by decisions from cultural authorities, relevant individuals and organisations to deny permission for access and use of Aboriginal cultural information and material 5.3 Establish and implement parameters for processes of transfer of cultural knowledge 5.4 Observe cultural restrictions on Aboriginal cultural information and Aboriginal material 5.5 Acknowledge and observe copyright and licensing issues related to access and use of Aboriginal cultural material and cultural information 5.6 Follow Aboriginal cultural requirements for communications about, and display, access and handling of Aboriginal cultural information and material 5.7 Acknowledge and agree to the implications of consent for accessing, transferring and using cultural information and materials
6. Use appropriate	6.1 Observe appropriate use of personal protocols for addressing and

Element	Performance criteria
personal and social protocols	<p>greeting persons, personal contact, and gestures</p> <p>6.2 Allow respect for local and Community traditions to guide personal presentation and conduct</p> <p>6.3 Use personal communication styles such as language, non-verbal communication, discussion, meaning, questioning, eye contact and silence that reflect the customs and idioms of the local Community</p> <p>6.4 Maintain a flexible attitude to address situations of cultural diversity and cross-cultural differences</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM306A Follow Aboriginal cultural protocols.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM306 Follow Aboriginal cultural protocols

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify and consult with appropriate cultural authorities for a Community, place or site
- identify cultural information, material and cultural expression that is appropriate to be shared
- identify groups to be consulted in relation to owners or custodians of cultural and Community knowledge, information and/or material
- follow cultural protocols for consultation, research and recording information about particular Communities
- show respect and cultural sensitivity towards Aboriginal people, their beliefs, customs, values, lore/law, ceremonies and history

Knowledge Evidence

The candidate must demonstrate knowledge of:

- cultural diversity within Aboriginal Communities
- the cultural rights and responsibilities when using Community knowledge, information and material
- Aboriginal cultural values and interpersonal and Community protocols
- authentic and authoritative sources for Aboriginal cultural information, material and expression able to be accessed and shared
- customs, history, protocols of the Community with which they are working

Assessment Conditions

Assessment of this unit must be conducted by recognised and appropriate Community Elders and/or Custodians with appropriate assessor qualifications or co-assessed by a qualified assessor in cooperation and discussion with an appropriate with Community Elders and/or Custodians.

Assessors must satisfy the current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM307 Implement Aboriginal cultural burning practices

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to use traditional Aboriginal controlled burning practices on Country to manage natural and cultural resources.

This unit applies to Aboriginal sites workers and Land Managers who carry out burns on Country as part of their job role. They work under broad direction and use discretion and judgement in the selection and use of available resources.

The unit involves and requires a high level of awareness and experience with Aboriginal culture and communities and the need to observe Aboriginal cultural protocols. It is expected that this work will be undertaken as part of a team working under supervision in most cases.

Cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge and/or materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication. However, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan burn activities	1.1 Develop working relationships that will assist in the planning and implementation of traditional Aboriginal cultural burning on Country with stakeholders 1.2 Identify and consult appropriate cultural authorities and obtain approval to be on Country 1.3 Obtain cultural knowledge through the appropriate knowledge holder or Cultural Manager 1.4 Identify ceremonial requirements for fire practices necessary for inclusion in burn plan 1.5 Develop a burning plan and schedule for the target area based on traditional cultural knowledge of seasonal conditions, historical information on burns, Aboriginal ceremonial requirements, legislative requirements, environmental sustainability, biosecurity and work health and safety considerations and safety concerns 1.6 Advise local fire services and agencies of proposed burn plan
2. Protect life, property and conserve fauna and flora species in burn area	2.1 Implement burn according to Aboriginal cultural burning techniques and consistent with the burn plan and schedule 2.2 Exclude visitors from target areas, entertainment areas and areas possibly affected by smoke or risk from escaping fire 2.3 Advise neighbours and agencies of the intention to burn to ensure safety and maintain client relations 2.4 Protect Aboriginal sites, assets and entertainment areas according to Aboriginal cultural protocols and fire industry practices 2.5 Apply fire breaks to the area to maintain control of the fire and burn intensity 2.6 Remove animals in danger in the burn area before starting the controlled cultural burn, where possible 2.7 Assess flora for impact on fire-sensitive communities and species
3. Burn defined areas	3.1 Maintain radio communication with other workers in the area throughout the burn 3.2 Use appropriate personal protective equipment and follow work health and safety policies and procedures during the burn 3.3 Assess weather forecasts and current weather conditions to determine appropriate conditions and timing for burn 3.4 Use appropriate ignition techniques, patterns, fire control and safety procedures to conduct the burn

Element	Performance criteria
	3.5 Apply fire to targeted areas according to Aboriginal cultural burning techniques, traditional frequency and organisation requirements 3.6 Identify targeted areas defined by burn specification or limiting factors 3.7 Check area to ensure all sections have received required burn in accordance with the burning plan 3.8 Complete and record assessment of burn 3.9 Monitor burning area to avoid wildfire outbreaks 3.10 Assess seasonal conditions and life cycles of flora and fauna for the end of fire practices

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM307A Implement Aboriginal cultural burning practices.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM307 Implement Aboriginal cultural burning practices

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated on at least one occasion.

The candidate must provide evidence that they can:

- identify appropriate cultural authorities for a Community, place or for a site
- develop working relationships with Aboriginal and non-Aboriginal stakeholders
- apply traditional Aboriginal cultural burning techniques
- follow burn plans and control burning operations according to enterprise procedures to:
- protect Aboriginal sites, assets and entertainment areas to Community protocols and requirements
- protect life, property and conserve fauna and flora species during burning
- achieve the correct intensity of burn
- maintain biosecurity
- meet environmental sustainability requirements
- adhere to organisational safety and environmental protection policies and procedures
- select existing, and construct additional fire breaks according to enterprise requirements to maintain control of fire
- ignite fires according to burn plan and enterprise procedures
- use radio communication according to enterprise procedures
- apply appropriate animal welfare practices when handling and moving animals in preparation for the burn
- follow work health and safety policies and procedures throughout the burn process to protect self and others

Knowledge Evidence

The candidate must demonstrate knowledge of:

- cultural Authorities within the Community
- traditional Aboriginal rationale and techniques for cultural burning
- the life cycles of flora and fauna of forests/plantations and effect of burning operations
- required intensity and appropriate frequency of fire
- sequence, location and pattern of recent and historical fire burns
- Aboriginal ceremonial requirements for fire practices
- seasonal cycle of weather patterns
- work health and safety policies and procedures
- emergency procedures
- ignition techniques and patterns
- fire control techniques
- emergency fire services
- organisational and enterprise policies and procedures for conservation of places of cultural significance
- key concepts of Cultural and Heritage Legislation or National Parks and Wildlife Service (NPWS) legislation relevant to own prescribed burns
- sustainable environmental practices
- safety procedures for conducting fire operations
- enterprise work health and safety policies and procedures for carrying out controlled burning
- basic requirements for ensuring the welfare of animals described in the relevant Codes of Practice

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM308 Identify traditional customs and land rights for an Indigenous Community

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to identify and propose the use of traditional customs by Indigenous people in caring for Country. All work is performed according to Community guidelines and cultural protocols.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify the role of traditional customs in Indigenous Communities	1.1 Identify traditional customs of the Community related to own work 1.2 Identify traditional gender-specific roles that relate to Indigenous land management practices

Element	Performance criteria
	1.3 Identify changes that have occurred in traditional customs related to management of Country since European settlement
2. Outline impact of native title rights and interests recognised under non-Indigenous law	2.1 Outline briefly the process to be followed in applying for native title 2.2 Provide an overview to Community members of the difference between native title rights and land rights 2.3 Identify the type of rights the Community has, or wants for a particular land or site 2.4 Identify organisations or groups who can provide advice relating to native title land claims
3. Propose appropriate applications of traditional customs	3.1 Identify examples of successful native title applications 3.2 Identify the traditional customs used for decision making processes in the Community 3.3 Determine traditional activities or sacred sites relevant to native title land

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - no equivalent.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM308 Identify traditional customs and land rights for an Indigenous Community

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify the role of traditional customs in Indigenous Communities
- outline impact of native title rights and interests recognised under non-indigenous law
- propose appropriate applications of traditional customs

Knowledge Evidence

The candidate must demonstrate knowledge of:

- cultural customs and heritage for the Community
- sources for legal advice on native title rights and interests
- outline of process required to apply for native title rights
- traditional customs for decision making
- gender roles of Community for land management practices

The candidate must demonstrate a basic understanding of relevant state land and resources acts/legislation.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM401 Protect places of cultural significance

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to protect places of cultural significance.

This unit applies to those whose work includes protecting Indigenous peoples' places of culture in co-operation with stakeholders and protecting places of cultural significance with reference to Indigenous Communities or line management. A high level of cultural awareness and the need to observe cultural protocols are important in parts of the process.

This unit applies to individuals who demonstrate autonomy, judgement and limited responsibility for others in known or changing contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Communicate with	1.1 Develop working relationships with stakeholders that assist in the

Element	Performance criteria
stakeholders	management of culturally significant places 1.2 Develop communication approaches that accommodate cultural views and observe cultural protocols 1.3 Obtain views on the way in which the cultural significance and resources can be conserved and used 1.4 Convey views obtained into enterprise and park or reserve planning process
2. Conserve significance	2.1 Use enterprise conservation policies and plans with stakeholder views to plan ongoing conservation actions 2.2 Develop and implement operational activities to implement the conservation strategies and plans in a culturally sensitive manner 2.3 Organise staff to implement conservation actions that minimise deterioration and damage 2.4 Supervise staff during restoration projects 2.5 Obtain resources for conservation and restoration activities 2.6 Make submissions to the enterprise budget process for funds to implement the conservation and restoration activities
3. Manage incident	3.1 Develop operational plans to manage incidents consistent with plan of management and risk management analysis 3.2 Assign staff responsibilities to manage types of incidents 3.3 Obtain and maintain equipment and supplies to enable effective response to incidents 3.4 Train staff in the management of the types of incidents for which they have an involvement, including related work health and safety and environmental sustainability policies and procedures 3.5 Make submissions to the enterprise budget process for funds to support the incident management activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM401A Protect places of cultural significance.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM401 Protect places of cultural significance

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop working relationships with stakeholders in cultural sites
- canvass views in a culturally sensitive way to determine the heritage value and preservation issues of a cultural site
- observe cultural protocols in dealing with stakeholders and land managers
- develop action and emergency plans to mitigate and manage the risk of damaging incidents or loss of heritage value
- document the submissions to implement conservation and restoration activities and support the incident management activities
- supervise staff in performing restoration and conservation activities
- include work health and safety procedures in operational plans and training to manage incidents
- ensure plans include environmentally sustainability practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- enterprise policies and procedures for conservation of places of cultural significance
- operational activities engaged for conservation, restoration and risk management
- Indigenous protocols, consultation processes and networks
- budgetary and financial approval processes

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM402 Report on place of potential cultural significance

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to report on place of potential cultural significance.

This unit applies to those whose job role includes investigating and reporting on places of potential cultural significance in consultation with stakeholders and Traditional Owners. A high level of cultural awareness and the need to observe cultural protocols are important parts of the process.

This unit applies to individuals who demonstrate autonomy, judgement and limited responsibility for others in known or changing contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Investigate evidence of	1.1 Manage movement through park or reserve to minimise

Element	Performance criteria
past activities	<p>disturbance and degradation to the park or reserve and surrounding environments, especially in relation to known and potential places of significance, and to comply with Community protocols, legislative requirements, Codes of Practice and the park or reserve management strategy and plan</p> <p>1.2 Survey an area for land forms including caves and potential sites for rock art, flora, fauna and settings to identify potential places of previous human activity which could have cultural or natural significance</p> <p>1.3 Assess and document signs of previous human activity</p> <p>1.4 Review park or reserve activities in light of potential significance and maintain, modify or halt activities to maintain significance</p> <p>1.5 Where activities have affected or may affect the potential significance, record the original state of the non-Indigenous activities at the place, or for Indigenous activities, seek directions from Indigenous stakeholders or cultural reference group</p> <p>1.6 Where potential places of significance are identified, take field notes of location in terms of other park or reserve features, survey markers or global positioning</p> <p>1.7 Record reasons for identifying potential significance</p> <p>1.8 Refer location to Indigenous stakeholders or cultural reference group for further directions</p> <p>1.9 Follow work health and safety policies and procedures when working on site</p>
2. Implement interim protection measures	<p>2.1 Identify immediate and longer-term threats or risks associated with the conservation of the place according to enterprise guidelines, relevant charters and Codes of Practice</p> <p>2.2 Take interim protective measures to avoid degradation, disturbance, and deterioration and any action which may break cultural protocols</p> <p>2.3 Modify existing activities of personnel and visitors to reduce or eliminate risks to the significance of the place</p>
3. Report observation	<p>3.1 Collate and record field notes on location</p> <p>3.2 Review enterprise records to reveal any existing information about the non-Indigenous significance of the place</p> <p>3.3 Report finding and interim protective measures to colleagues</p> <p>3.4 Seek advice on the potential cultural and natural significance of the place and any additional required protective measures from Indigenous stakeholders or cultural reference group, from specialists in or external to the enterprise</p> <p>3.5 Document and report interim assessment of place according to legislative requirements, best practice guidelines and Codes of</p>

Element	Performance criteria
	Practice

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM402A Report on place of potential cultural significance.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM402 Report on place of potential cultural significance

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- survey an area for landforms and sites that may hold cultural significance
- assess any physical signs, and source local information on human activity in the area, to indicate culturally significant sites
- ensure cultural protocols are followed
- maintain field notes on the location and details of sites in accordance with enterprise procedures or guidelines
- implement protection measures pending further investigation
- develop and document an assessment report for places of cultural significance according to enterprise and legislative standards
- apply work health and safety practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of cultural places in land based, coastal zones and marine parks or reserves
- threats to cultural places from both natural causes and human activity
- application of State or Territory and Commonwealth legislation relevant to Indigenous land management
- enterprise procedures for reporting places of potential significance
- relevant protection measures for significant sites
- methods of locating position of site

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM403 Contribute to the proposal for a negotiated outcome for a given area of Country

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to contribute to the proposal for a negotiated outcome for a given area of Country.

This unit applies to those whose job role includes supporting and contributing to development proposals that relate to a given area of Country. It applies to individuals who demonstrate autonomy, judgement and limited responsibility for others in known or changing contexts.

All work is undertaken according to Community protocols.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Gather information to	1.1 Identify, gather, record and store information required to support

Element	Performance criteria
<p>support the proposal for a negotiated outcome for a given area of land</p>	<p>the proposal development</p> <p>1.2 Review legislation and government policies and plans of management relevant to the proposal</p> <p>1.3 Undertake consultation about the proposal with stakeholders, including Traditional Owners or custodians, community groups and other organisations involved in land and sea management in the specified area</p> <p>1.4 Identify areas of conflict between the different legislation and traditional customs and notify the proposal developer</p> <p>1.5 Define the scope of available alternatives for management and/or resolution of land, rivers, lakes and sea use issues</p> <p>1.6 Outline a description of the types of circumstances under which different alternatives can be applied</p> <p>1.7 Define processes that can be used to implement alternatives and relate to both mainstream ideas and culturally appropriate approaches for the area</p>
<p>2. Contribute to the development of the proposal</p>	<p>2.1 Identify, gather, record, store and analyse information relating to the expected outcomes of the proposal</p> <p>2.2 Identify, gather, record, store and analyse information relating to the proposal development</p> <p>2.3 Relate information about the expected outcomes of the proposal to stakeholders during proposal development process</p> <p>2.4 Identify main characteristics of any relevant State or Territory and Commonwealth Native Title Legislation and Lands Acts that apply to given area of Country</p> <p>2.5 Detail the implications of Native Title on given area of Country using appropriate formats</p>
<p>3. Provide feedback on the development of proposal</p>	<p>3.1 Provide oral or written feedback on the proposal to the proposal developer according to enterprise requirements</p> <p>3.2 Explain the proposal to key stakeholders using appropriate formats according to Community protocols</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM403A Contribute to the proposal for a negotiated outcome for a given area of country.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM403 Contribute to the proposal for a negotiated outcome for a given area of Country

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- gather information to support the proposal for a negotiated outcome for a given area of land
- conduct culturally appropriate consultation with stakeholders
- determine the relevance and implications of applicable acts and legislation
- contribute to the development of the proposal
- provide feedback on the development of proposal

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant State land and sea resources acts and legislation
- relevant Local Government land and sea resources acts and legislation
- relevant Commonwealth land and sea resources acts and legislation
- roles of different organisations in land and sea management
- the existence of alternative forms of input and control in land and sea management

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM404 Record and document Community history

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to record and document Community history.

All work is done according to enterprise procedures and cultural protocols.

This unit applies to individuals who demonstrate autonomy, judgement and limited responsibility for others in known or changing contexts.

Cultural beliefs and practices vary across locations and communities and in some situations non-Aboriginal learners may not be able to access the cultural knowledge or materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites. In these situations the Registered Training Organisation will be required to make alternative arrangements for learners that are still consistent with the delivery and assessment requirements for this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for interviews with Community members	1.1 Determine purpose and objectives of interviews 1.2 Research background to topic and events 1.3 Identify people (narrators) who may be able to provide information on topic and events 1.4 Develop process for individual or group sessions with narrators according to topic and events to be covered 1.5 Develop and check basic questions for interviews with narrators 1.6 Obtain and check equipment, locations and other resources 1.7 Obtain permissions from Cultural Authority to conduct interviews about Community history and culture 1.8 Invite selected narrators
2. Conduct interviews with Community members	2.1 Explain oral history process to narrators to obtain their consent to record and use information provided 2.2 Set up and test recording equipment for operation 2.3 Identify recording media for later reference 2.4 Follow cultural protocols and use appropriate language 2.5 Use basic questions to initiate the interview 2.6 Take notes to identify supplementary questions and to support recording media 2.7 Manage interview process to obtain expected and unexpected information, including memories of incidents 2.8 Support narrator to express memories and opinions in an uncritical and positive setting 2.9 Provide positive feedback on the narrator's assistance 2.10 Manage the environment and distractions to maintain a positive response from the narrator 2.11 Manage session lengths to avoid tiring narrators and interviewer
3. Transcribe and edit information	3.1 Handle recorded media and transcripts to maintain recording quality and accuracy and security and privacy requirements 3.2 Transcribe interviews according to agreements with narrators 3.3 Provide draft written or oral transcripts to narrators for editing according to agreement with narrators 3.4 Complete editing according to narrator's wishes 3.5 Record and manage information on narrator's doubts or hesitancy on certain facts, and conflicting information between interviews

Element	Performance criteria
	separately from transcripts
4. Store records	4.1 Store recorded media and transcripts to maintain recording quality, accuracy, security and privacy requirements 4.2 Control access to records according to the narrator's wishes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM404A Record and document community history.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM404 Record and document Community history

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- record and document Community history in accordance with Community protocols and permissions
- prepare for interviews by identifying topics, people to be interviewed, questions and interview processes and checking equipment
- identify appropriate individuals or groups for interviews and obtain necessary permissions
- use communication skills and language appropriate to the interviewee
- set up all recording equipment according to enterprise procedures and needs of interview processes
- conduct either individual or group interviews to elicit a wide range of information
- take detailed notes of conversations for further reference and to help source supporting information
- transcribe and edit information, using supporting documentation where possible
- store recorded media and transcripts to maintain recording quality and accuracy and security and privacy requirements according to enterprise procedures

Knowledge Evidence

The candidate must demonstrate knowledge of:

- background and context of subject areas covered in the interviews/sessions
- objectives of the natural and/or cultural resource research
- range of communication approaches
- relevant cultural protocols
- enterprise procedures relating to the recording, management and storage of oral and community information

- recording techniques and media
- set-up and use of microphones and video cameras
- use of still cameras
- Community protocols, customs and Cultural Authorities for recording cultural knowledge and history

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current Standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM405 Develop work practices to accommodate cultural identity

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop work practices to accommodate cultural identity.

This unit applies to individuals who demonstrate autonomy, judgement and limited responsibility in known or changing contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Investigate government policies and practices relating to Indigenous peoples since European settlement	1.1 Outline the intentions of government policies and practices since European settlement 1.2 Summarise the effects of these policies and practices on Aboriginal and Torres Strait Islander Communities 1.3 Outline how these policies and practices affected Community or

Element	Performance criteria
	family
2. Identify changes that have occurred in Indigenous societies	2.1 Summarise and document government policies operating since European settlement 2.2 Outline the changes that have occurred to Aboriginal and Torres Strait Islander societies as a result of policies and practices, the responses and the views of Indigenous groups 2.3 Describe the impacts of these changes on the Indigenous Community or family
3. Outline effects of current work related issues on Indigenous societies	3.1 Define key work related issues that impact on Aboriginal and Torres Strait Islander societies today 3.2 Describe and record the people involved in key issues 3.3 Summarise and record Community views on issues 3.4 Identify methods of addressing the keys issues 3.5 Predict the future outcomes or resolutions for these issues
4. Determine the impacts of competing factors on self-esteem and identity	4.1 Describe events and occurrences in everyday life that give rise to feelings of both positive and negative self-esteem for Indigenous personnel 4.2 Identify elements which affect self-esteem 4.3 Describe and record how these elements impact on self-esteem 4.4 Develop positive strategies for dealing with impacts on self-esteem and identity
5. Design work practices to accommodate cultural identity	5.1 Define and implement work practices which enhance individual's morale 5.2 Incorporate elements which affect self-esteem in work environments into the work practices 5.3 Consult staff in the preparation and design of these work practices according to Community and organisational protocols and guidelines 5.4 Develop positive strategies for dealing with work practices that impact on self-esteem and identity

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM405A Develop work practices to accommodate cultural identity.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM405 Develop work practices to accommodate cultural identity

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- outline effects of current work related issues for Indigenous Communities and individuals
- determine the impacts of competing factors on self-esteem and identity
- design work practices to accommodate cultural identity
- incorporate elements to boost self-esteem of Indigenous workers
- respond to workplace issues where work practices are poorly aligned to cultural identity

Knowledge Evidence

The candidate must demonstrate knowledge of:

- Indigenous Communities with whom the organisation works, and their protocols
- cultural customs and heritage
- connections between self-esteem, identity, Community and work
- Indigenous history of particular Communities
- legislation and policies impacting on Indigenous Communities and organisations
- strategies to support development of workers' self-esteem and identity

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM501 Conduct field research into natural and cultural resources

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to conduct field research into natural resource and cultural areas for resource management and related purposes.

This unit applies to individuals who work autonomously and apply judgement and defined responsibility in known or changing contexts and within broad but established parameters.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Review existing knowledge	1.1 Examine existing information gathered through investigation and enterprise recording processes to determine key features 1.2 Review oral evidence, where it exists 1.3 Inspect sites to assess condition and availability of further information 1.4 Identify information, records and places previously destroyed or damaged or under threat as factors to be incorporated in the assessment process, strategies and plans 1.5 Assess scope of information for adequacy against the requirements of legislation, Codes of Practice, Burra Charter guidelines and protocols 1.6 Identify appropriate database, geographic information system and other electronic and manual recording systems for data collection 1.7 Identify and access sources of expertise in research environments, identification of pollution, degradation and disturbance, and national and international issues and agreements within and external to the enterprise 1.8 Identify and record areas of inadequate information
2. Identify stakeholders	2.1 Identify stakeholders in conjunction with local Communities and groups, and government documentation and interviews under the direction of a relevant cultural reference group 2.2 Investigate and record the current and relevant past land tenure for the place/area 2.3 Determine Indigenous interests through culturally appropriate approaches to regional and Community organisations and individuals 2.4 Apply proper protocols and conduct key consultations approaches to regional and Community organisations and individuals 2.5 Comply with privacy requirements according to the directions of stakeholders and legislative and enterprise requirements
3. Develop research approach	3.1 Determine objectives of the field research in conjunction with those commissioning the research 3.2 Use objectives to identify specific types of investigation, techniques to be used, and physical areas of investigation 3.3 Assess the types of investigation and techniques selected for hazards and risks in designated environment, including the work health and safety requirements, access issues, and management of the research in a range of weather and area conditions 3.4 Review existing information and data records to determine the starting points for the fieldwork 3.5 Ensure research methodology is consistent with the research objectives and in accordance with established natural resource

Element	Performance criteria
	<p>management practice</p> <p>3.6 Identify required resources to establish and maintain the research program within the required time schedules and ensure they are appropriate to the environments that will be encountered</p> <p>3.7 Select personnel for their competency in research techniques and safe operation in the expected environmental and cultural conditions</p> <p>3.8 Identify stakeholders to be included in the consultation process</p> <p>3.9 Estimate and submit costs of field research for approval</p> <p>3.10 Establish sampling and recording processes for research information according to best practice and scientific standards</p> <p>3.11 Ensure investigations comply with Burra Charter guidelines and other legislative requirements.</p>
4. Conduct field investigations	<p>4.1 Undertake consultation and fieldwork to obtain information required to meet investigation objectives</p> <p>4.2 Follow work health and safety, environmental sustainability and biosecurity policies and procedures when working in field</p> <p>4.3 Adjust previously determined methodology in light of progressive results and stakeholder feedback</p> <p>4.4 Coordinate observations, records and monitoring in accordance with scientific practice and to meet research objectives</p> <p>4.5 Determine ecological, biological and geological, microbiological and entomological diversity within specified area</p> <p>4.6 Identify and record evidence of cultural resources in area</p> <p>4.7 Identify impacts from areas external to natural and cultural resources in area under investigation</p> <p>4.8 Deploy equipment, techniques and people to carry out investigations</p> <p>4.9 Document and approve each field operation according to legislative and enterprise requirements for work in the research environment</p> <p>4.10 Source appropriate equipment and skills for the capture, management and sampling of animal species</p> <p>4.11 Analyse information for impact on previously held hypothesis and other resources</p>
5. Develop process for involving decision-makers	<p>5.1 Use information on stakeholders to determine interests held by organisations, groups and individuals and cultural dimensions</p> <p>5.2 Define issues to be addressed with interest groups</p> <p>5.3 Develop consultation and decision-making process to address the issues with individuals, groups and organisations in a culturally appropriate manner</p>

Element	Performance criteria
	5.4 Provide appropriate time for consultative processes within groups and between individuals to occur and to obtain feedback on issues 5.5 Form a decision-making group, such as cultural reference groups and other groups, where assistance is required to direct investigation, access information to address issues or review the significance of place or area
6. Report on the field investigation	6.1 Consult stakeholders on draft findings 6.2 Document the basis for the determination of outcomes to legislative requirements, the organisation's policies and practices, and international and national processes 6.3 Submit the determination of significance report to the organisation and its external review processes as required by legislation and Codes of Practice

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM501A Conduct field research into natural and cultural resources.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM501 Conduct field research into natural and cultural resources

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- use a range of electronic and manual recording systems to support research
- identify stakeholders including current tenure, Indigenous history and community interest
- review existing knowledge of national and cultural resources and sites using literature reviews, site inspections, consultation and expert advice
- develop research objectives and research design
- coordinate staff and resources for research project
- conduct field investigations to investigate impacts on fauna, flora and natural resources of the site
- facilitate a consultation and decision-making process
- report on the field investigation to enterprise and legislative requirements
- apply work health and safety practices in field investigations
- apply biosecurity measures in the context of own work
- apply appropriate sustainability practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- application of conservation legislation, charters, Codes of Practice relating to natural and cultural resource areas
- systems and processes for assessing significance
- ecology and biological diversity of the area under assessment, including aspects of living organisms, habitats and communities, and interactions between species
- geological diversity including aspects of stratigraphy, palaeontology, paedology, and soil classification of the area under assessment

- microbiology including entomology for the area under assessment
- accepted scientific processes, including conservation processes and charters
- major impacts on natural resources, such as geological settings, ecological processes, and interaction between natural and cultural processes
- monitoring requirements including fabric deterioration, damage and likely causes of deterioration and damage
- relevant legislation and agreements that apply to area, including a good understanding of the concepts and potential operation of the Burra Charter
- legislation under which enterprise operates and research is commissioned

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM502 Develop conservation strategies for cultural resources

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop conservation strategies for cultural resources.

This unit applies to those who develop conservation strategies and management policies for cultural resources as part of the overall park management and planning process. These individuals take responsibility for their own work and who provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Define components of cultural heritage significance	1.1 Define geographic and operational boundaries for conservation policy 1.2 Review and collate results of studies of cultural significance for

Element	Performance criteria
	<p>places and areas within the boundaries to develop park, reserve or region significance</p> <p>1.3 Develop limits of acceptable change in the forms of deterioration and damage to the places of cultural significance to legislative and enterprise requirements</p>
2. Review past strategies, plans and activities	<p>2.1 Compare previous strategies and plans with collated assessment of significance to determine compatibility</p> <p>2.2 Review current activities in the area to assess their compatibility with the collated assessment of significance</p> <p>2.3 Document areas of incompatibility</p>
3. Review current and potential resource uses	<p>3.1 Assess impact of current uses of the cultural resources against the set limits of acceptable change to determine success of conservation approach</p> <p>3.2 Assess feasible uses of resources against client requirements</p> <p>3.3 Develop possible changes to resource use to ensure sustainability of cultural values and environment</p>
4. Identify threats to cultural places	<p>4.1 Identify threats to cultural significance and the environment both external and internal to the area under consideration</p> <p>4.2 Make a risk assessment of all threats to determine potential impact on strategies</p> <p>4.3 Document policy changes required to address the threats</p>
5. Develop strategies for management of cultural resource	<p>5.1 Develop draft policy to address the cultural significance that meets any shortfalls in previous strategies, allows for compatible resource uses and addresses risks associated with any threats to the cultural values of the area</p> <p>5.2 Review policy to ensure compliance with Burra Charter guidelines</p> <p>5.3 Conduct consultations with stakeholders on draft policy in accordance with legislative, enterprise and good practice requirements</p> <p>5.4 Ensure consultations comply with cultural protocols and enterprise approaches to stakeholders</p> <p>5.5 Finalise management strategies to reflect stakeholder views as required in legislation, government policies, enterprise strategies and procedures, and environmental sustainability requirements</p> <p>5.6 Submit strategies for approval to legislative and enterprise requirements</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM502A Develop conservation strategies for cultural resources.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM502 Develop conservation strategies for cultural resources

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- review the cultural resources in the area and level of deterioration
- assess the compatibility of current utilisation with cultural and heritage values
- investigate feasible land uses that maintain the cultural integrity of the site
- carry out a risk assessment for damage/deterioration to cultural sites
- consult with stakeholders according to cultural protocols
- develop strategies for management of cultural resources that take into account cultural and environmental requirements
- apply cultural protocols to investigation and development of policies
- apply enterprise policies and procedures to undertake assessment of resources, consultation with stakeholders and development of new policies
- apply appropriate sustainability practices to management strategies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the range of conservation strategies for cultural areas
- policies from all levels of government and within the specific region, including those under catchment plans that apply to land management practices
- the application and interpretation of Australian Natural Heritage Charter and the Burra Charter and the interpretation of the charters as they apply to use of cultural resources
- enterprise policies and procedures for carrying out investigations, consultations and development of policies
- design and implementation of consultation processes
- policy analysis and impact statements

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM503 Manage restoration of cultural places

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage the restoration of cultural places.

This unit applies to individuals who work autonomously and apply judgement and defined responsibility in known or changing contexts and within broad but established parameters. Individuals are required to manage large teams and projects.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan required restoration measures	1.1 Access prior assessment of cultural significance of place to determine range of actions 1.2 Develop short term plan of management and conservation from area strategies and plans according to legislative requirements, enterprise procedures and national and international charters

Element	Performance criteria
	1.3 Research traditional building techniques, materials and material availability to plan maintenance of fabric in traditional styles 1.4 Identify any prior works not in keeping with significance to determine appropriate maintenance actions 1.5 Determine any necessary structural engineering maintenance with experts to incorporate actions into maintenance schedule 1.6 Develop maintenance schedule to meet plan of management and conservation 1.7 Make submissions to obtain appropriate funds to complete works 1.8 Plan restoration work 1.9 Review plans to ensure compliance with Burra Charter guidelines and other legislative requirements
2. Manage restoration works	2.1 Obtain expert advice on specific maintenance works and contracts to meet requirements of management and conservation plans 2.2 Specify special building and conservation requirements in maintenance documentation to maintain significance, and use traditional building techniques, where appropriate 2.3 Supervise workers and contractors to ensure risk assessment is undertaken and work health and safety policies and procedures are followed 2.4 Inform and supervise workers to ensure significance of place is maintained and no damage or degradation is caused to environment
3. Clean-up after work	3.1 Supervise workers to ensure no damage is caused to surrounds, environment, fabric or building 3.2 Supervise workers to ensure work health and safety policies and procedures are followed 3.3 Supervise workers to remove materials, equipment and tools from place on completion of work

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM503A Manage restoration of cultural places.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM503 Manage restoration of cultural places

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- incorporate the prior assessment of significance into an operational plan
- research traditional building techniques to carry out repairs and maintenance
- seek expert advice to meet special building and conservation requirements from the plan of management
- maintain the cultural and environmental integrity of the site and surrounds during and on completion of building
- supervise the work of others to ensure compliance with restoration plan and requirements
- apply work health and safety practices in the context of own work and the work of others
- apply environmentally sustainable practices in maintenance and restoration works

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant concepts of the Burra Charter, heritage and building acts, and other relevant legislation
- conservation architecture techniques applicable to the restoration of cultural places
- interpretation of archaeological reports or assessments of Aboriginal cultural sites and artefacts
- traditional and current building practices
- project management processes
- building or maintenance requirements and specifications
- work health and safety requirements and risk management practices

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM504 Develop strategies for Indigenous land or sea management

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop strategies for contemporary land or sea management from an Indigenous perspective.

All work is undertaken according to Community guidelines and cultural protocols.

This unit applies to individuals who work autonomously and apply judgement and defined responsibility in known or changing contexts and within broad but established parameters.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Research contemporary	1.1 Outline relevant contemporary Indigenous land and sea management practices

Element	Performance criteria
Indigenous land and sea management practices	1.2 Define relevant issues connected with this practice 1.3 Consult relevant and appropriate people 1.4 Identify associated issues related to contemporary Indigenous land and sea management practices 1.5 Document details of consultation and research
2. Develop management strategies for a specified area	2.1 Base strategies on contemporary Indigenous land and sea management practices, incorporating biosecurity measures, and environmentally sustainable practices 2.2 Identify priorities for management according to level of importance or threats to area 2.3 Develop new approaches to management to address priorities within the context of legislation, cultural protocols and Community needs 2.4 Develop timelines and steps for implementation of strategies 2.5 Define costs of resources, labour and materials required to action management strategies 2.6 Complete preliminary project design to identify project steps and funding requirements 2.7 Make arrangements for project implementation to enterprise requirements and legislation
3. Source and apply for funds	3.1 Identify appropriate funding sources 3.2 Make applications for funds according to legislative, Community and enterprise requirements 3.3 Ensure applications are endorsed by appropriate persons before submission
4. Consult with others on strategies, priorities and project work	4.1 Brief authorised persons on the strategies, priorities and actions planned 4.2 Train staff in new procedures developed to address strategies 4.3 Implement work health and safety policies and procedures to ensure the safety of self and staff 4.4 Develop project implementation plan in consultation with staff, appropriate persons and communities 4.5 Obtain endorsement from appropriate persons, groups and communities, and relevant government stakeholders before works start

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM504A Develop strategies for Indigenous land or sea management.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM504 Develop strategies for Indigenous land or sea management

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research contemporary Indigenous land and sea management practices
- develop management strategies for a specified area based on contemporary Indigenous land and sea management practices
- identify appropriate source of funds and apply for funds according to organisational requirements
- consult with others on strategies, priorities and project works
- develop plans to enterprise standards
- apply work health and safety practices in the context of own work
- apply biosecurity measures in the management strategies
- apply appropriate sustainability practices in the management strategies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- Indigenous land/sea management practices
- cultural customs and heritage
- components of State land acts/legislation relevant to Indigenous land or sea management
- relationship between natural and cultural management processes

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM505 Map relationship of business enterprise to culture and Country

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to map the relationship of business enterprises to culture and Country.

This unit applies to individuals who work autonomously and apply judgement and defined responsibility in known or changing contexts and within broad but established parameters.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Establish reasons for entering or establishing business	1.1 Describe the reasons and goals for entering or establishing business 1.2 Map the relationship between culture and the reasons for entering or establishing business 1.3 Explain the business activity as it relates to the structure of

Element	Performance criteria
	Community or family grouping 1.4 Explain the business activity as it relates to Country
2. Interpret the legal parameters of the business enterprise	2.1 Define the organisational structure 2.2 Identify the legal basis and appropriate documentation for the structure 2.3 Review the documentation 2.4 Analyse the powers and authorities of the business 2.5 Describe the legal limitations and requirements
3. Investigate the roles of key positions in the enterprise and Community	3.1 Identify and list titles of key positions in the enterprise and Community 3.2 Summarise the duties of these positions 3.3 Outline the source of power or responsibility for these positions 3.4 Describe the limitations of the duties and decisions that may be made by these positions 3.5 Analyse the role of these positions in terms of the structure of the Community or family grouping 3.6 Analyse the role of these positions in the relationship to Country
4. Evaluate the decision making process as it relates to the enterprise and Community	4.1 Describe the decision making process required to be followed in the enterprise and Community 4.2 Identify the responsibilities of each position in this decision-making process 4.3 Describe decisions that have been made using this process 4.4 Evaluate the effectiveness of the decision making process 4.5 Explain the dynamics of the processes in making these decisions 4.6 Make recommendations as to how this process can be improved

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM505A Map relationship of business enterprise to culture and country.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM505 Map relationship of business enterprise to culture and Country

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- describe the goals and activities of the enterprise
- define the legal parameters of the business organisation
- analyse the positions and power relationships for decision making within an Indigenous Community
- relate Indigenous Community and business roles to the concept of Country
- make recommendations to support the concept and implementation of Indigenous management principles

Knowledge Evidence

The candidate must demonstrate knowledge of:

- national, state and local legislation that relates to business operations
- legal aspects of business structures
- constitutions and other corporate documentation
- organisational structures theories
- decision-making processes
- Community structure and protocols that impact on business operations and decision making

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM506 Operate within Community cultures and goals

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to explore and understand the culture and goals of a Community or group and operate appropriately within those parameters.

This unit applies to individuals who work autonomously and apply judgement and defined responsibility in known or changing contexts and within broad but established parameters.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify Community values	1.1 Identify Community values relevant to program activities for planning of promotional and group activities 1.2 Seek permissions and advice from Cultural Authority in accordance with Community protocols 1.3 Work with Cultural Authority to identify Community Elders or

Element	Performance criteria
	Custodians and their roles within the Community relevant to Community consultation
2. Research Community history and plans	2.1 Research history of Community relevant to program and seek permission from Community Elders and Custodians to use research in promotional, educational and group activities 2.2 Identify relevant documents, symbols, places of value and oral traditions to place program and group in local context 2.3 Identify Community plans and seek permission from Community Elders and Custodians to use plans in promotional, educational and group activities
3. Establish role of program in Community	3.1 Identify current Community social and environmental issues and plans through consultation with Community Elders and Custodians 3.2 Identify potential roles of program to Community 3.3 Manage interaction with Community to build rapport with individuals and groups 3.4 Establish and maintain consultation processes with Community members and groups in accordance with permissions and Community protocols 3.5 Maintain image of program in Community by following Community protocols, acknowledging Community concerns and promoting positive image of program

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM506A Operate within Community cultures and goals.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM506 Operate within Community cultures and goals

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- investigate a Community's culture
- identify the roles of Cultural Authorities, Elders, Custodians and other members of the Community
- follow Community protocols for consultation, promotion and use of information
- research the background and goals of Community, and their perspectives on natural resource management issues
- promote Community programs, plans and history according to permissions given by Cultural Authority, Elders or Custodians
- plan for consultation within the Community by working with their culture and goals and applying Community protocols

Knowledge Evidence

The candidate must demonstrate knowledge of:

- Community structure or hierarchy
- research methods for investigating Community history
- current social and environment affairs for Community and wider region

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM508 Propose a negotiated outcome for a given area of Country

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop a proposal for a negotiated outcome for a given area of Country. It includes conducting required research, consultation and all work according to Community and agency guidelines and best practice procedures.

This unit applies to individuals who apply autonomy, judgement and defined responsibility for others in known or changing contexts and within broad but established parameters.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify, select and define relevant issues related to the given	1.1 Identify Community, government and agency perspectives and issues likely to impact on proposals 1.2 Identify the implications and impact of issues and perspectives on

Element	Performance criteria
area of Country	<p>the given area of Country</p> <p>1.3 Recommend priority areas for further research, assessment and clarification of issues</p> <p>1.4 Define proposals for given area of Country in terms of context, issues to be addressed, expected outcomes, possible complications, precedents and key stakeholders</p> <p>1.5 Detail with the support of Elders and other key stakeholders, an outline of the scope and appropriate processes for conducting negotiated outcomes for that area of Country in accordance with Community customs and protocols</p>
2. Gather and analyse information on given area of Country	<p>2.1 Identify information required to support proposals, including cultural significance and current and historical land use and management</p> <p>2.2 Gather, analyse and interpret information required to support proposals</p> <p>2.3 Develop an analytical framework for the development of an appropriate approach to the proposal</p> <p>2.4 Investigate and implement legislation, national and international protocols and conventions relevant to the given area of Country</p> <p>2.5 Describe the implications for own people from these examples in ways that stakeholders can understand</p>
3. Formulate and communicate proposals for given area of Country	<p>3.1 Develop a range of options for the proposal, mechanisms for implementation, monitoring and evaluation</p> <p>3.2 Communicate the range of options in a timely manner and a way which is understandable to those who are party to negotiations</p> <p>3.3 Consult with relevant people to be included in the negotiation as appropriate, and keep them informed of progress of work</p> <p>3.4 Make recommendations for options based on likely effectiveness, implementation timeframe and costs, interaction with other proposals, and consistency with government legislation and policy</p> <p>3.5 Collate examples of instances where other Indigenous peoples have used international legal systems to support environmental issues in their own Countries</p>
4. Complete a proposal for a negotiated outcome for a given area of Country	<p>4.1 Describe possible alternatives to use ensuring compatibility with legal and administrative circumstances for the area of Country</p> <p>4.2 Consult relevant people to be included in the negotiation on final draft proposal and implications for the Community</p> <p>4.3 Complete proposal following endorsement from key stakeholders for given area of Country</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM508A Propose a negotiated outcome for a given area of country.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM508 Propose a negotiated outcome for a given area of Country

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- propose a negotiated outcome for a given area of Country according to Community guidelines
- identify implications for an area of Country for government, agency and Community perspectives and issues
- gather and analyse information on a given area to develop an analytical framework for land use
- formulate and communicate proposals for given area of Country according to Community and government requirements
- document and seek endorsement for a proposal that seeks to negotiate an outcome for a given area of Country
- prepare documentation to Community, government and organisational requirements
- follow Community customs, protocols, heritage, Country and culture relevant to proposal

Knowledge Evidence

The candidate must demonstrate knowledge of:

- consultation approaches
- cultural customs and heritage of Country
- application of State land and resources acts and legislation relevant to Country
- relevant international and national conventions and agreements
- management and use of the resources of the specific area
- processes and proposals for resolving issues regarding access and use of land according to consultation outcomes and organisational procedures

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM510 Plan for successful cultural practice at work

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan for culturally appropriate work practices that enable Aboriginal and non-Aboriginal practitioners to be successful in their chosen field of work or vocation.

This unit applies to individuals who manage an organisation's cultural diversity plans and directions.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCILM306 Follow Aboriginal cultural protocols

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Analyse essential features of Aboriginal families and cultures	1.1 Access and review information about Australian Aboriginal history up to the present time 1.2 Research concepts such as Dreaming, connection to Country and other Aboriginal beliefs 1.3 Identify traditional and contemporary social structures of

Element	Performance criteria
	<p>Aboriginal families and societies</p> <p>1.4 Research elements of Aboriginal societies and use to inform interactions with Aboriginal people</p>
<p>2. Review changes to Aboriginal societies since European settlement</p>	<p>2.1 Research and document colonisation and the impacts on Aboriginal peoples</p> <p>2.2 Identify racist behaviours and the impact that these have had on Aboriginal peoples</p> <p>2.3 Analyse personal responses to information about the positive and negative effects of colonisation</p> <p>2.4 Conduct and analyse research into the impacts of colonisation, settlement and government policies on Aboriginal cultural practices</p>
<p>3. Identify government efforts to address continuing effects of colonisation</p>	<p>3.1 Investigate and analyse various policies implemented by governments in Aboriginal affairs</p> <p>3.2 Identify the processes involved in government consultation with Aboriginal people, Communities and organisations</p> <p>3.3 Evaluate effects of government policies in Aboriginal affairs and their implementation processes on Communities</p> <p>3.4 Investigate and evaluate effectiveness of a chosen government policy through Community consultation</p> <p>3.5 Develop strategies for addressing any public perception of 'special treatment' for Indigenous peoples in relation to the chosen policy in consultation with Community</p>
<p>4. Apply understanding of Aboriginal cultural protocols and identity to daily work routines</p>	<p>4.1 Identify features of Aboriginal identity and personal cultural maintenance</p> <p>4.2 Analyse and use how these features are expressed in daily work life to inform workplace relationships and interactions</p> <p>4.3 Identify and analyse the obligations of cultural maintenance in relation to a work issue</p> <p>4.4 Apply allowances for absences due to family/seasonal cultural practices and bereavement</p> <p>4.5 Work through and deal with workplace conflicts in culturally appropriate ways</p> <p>4.6 Develop possible strategies for cultural maintenance in work and the workplace</p>
<p>5. Plan culturally appropriate work practices</p>	<p>5.1 Develop a vision and workplace goals for own work</p> <p>5.2 Identify and discuss common culturally inappropriate work practices</p> <p>5.3 Develop strategies to change these practices collaboratively</p> <p>5.4 Develop an implementation and evaluation plan for the strategies</p>

Element	Performance criteria
	5.5 Propose ways in which Aboriginal practitioners can effect change to create greater cultural awareness in the workplace

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM510A Plan for successful cultural practice at work.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM510 Plan for successful cultural practice at work

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan for culturally appropriate work practices to enable Aboriginal and non-Aboriginal practitioners to be successful in their chosen field of work or vocation
- demonstrate comprehensive understanding of the essential features of Aboriginal families and culture applied in workplace relationships
- apply practices in the workplace aimed at sustaining Aboriginal cultural maintenance
- plan culturally appropriate work practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- practices in the workplace aimed at sustaining Aboriginal cultural maintenance
- culturally appropriate work practices
- history and impacts of European invasion and subsequent government policies on Aboriginal and Torres Strait Islander peoples
- the concept of cultural maintenance
- Aboriginal cultural protocols and identify as they apply to the workplace

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCILM601 Manage cultural processes in an Indigenous organisation

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage cultural processes in an Indigenous organisation according to Community and organisational guidelines and best practice procedures.

This unit applies to individuals who plan and manage strategic direction for indigenous organisations with the need to work within cultural protocols and promote cultural diversity and integrity.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Indigenous Land Management (ILM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Define Indigenous management processes as compared with	1.1 Identify the framework or organisational structure for the organisation or Community 1.2 Define Indigenous management processes

Element	Performance criteria
non-indigenous strategies	1.3 Define non-indigenous management processes 1.4 Record comparisons between Indigenous management process and non-Indigenous management processes 1.5 Record and analyse differences between Indigenous management structures and non-Indigenous management processes 1.6 Investigate ways of applying Indigenous management processes to legal frameworks in which all businesses operate
2. Analyse strategies for working with non-Indigenous organisations and people	2.1 Record differences in relation to working as an Indigenous person within a non-Indigenous organisation or person 2.2 Recognise potential conflicts 2.3 Identify and implement strategies for minimisation of conflicts
3. Analyse the impact of a non-Indigenous framework on an Indigenous business structure	3.1 Identify and analyse requirements of a non-indigenous framework and legislative requirements for businesses 3.2 Identify and analyse Indigenous ways of working 3.3 Identify and record potential conflicts in relation to an Indigenous organisation working within a non-Indigenous structure 3.4 Identify and implement strategies to negotiate through the conflict
4. Develop and implement a vision for the business	4.1 Identify and evaluate strategies and planning processes 4.2 Identify goals and directions for the business 4.3 Apply goals and directions to operate within a culturally appropriate framework 4.4 Develop and present a model for planning business activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCILM601A Manage cultural processes in an Indigenous organisation.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCILM601 Manage cultural processes in an Indigenous organisation

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- define and apply cultural processes within an Indigenous organisation according to Community and organisational guidelines and best practice procedures
- recognise differences between Indigenous and non-Indigenous management processes
- identify the accommodation required to meet non-Indigenous business requirements through Indigenous management processes

Knowledge Evidence

The candidate must demonstrate knowledge of:

- contemporary management practices and styles
- Indigenous management practices and styles
- business planning and strategic planning practices
- Candidates must demonstrate an in depth knowledge of legislation and regulations that apply to management of an organisation.

Assessment Conditions

Assessment must comply with Community protocols and be supported by Elders and Custodians of Country.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCINF201 Carry out basic electric fencing operations

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to install and maintain basic electric fences.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well-known parameters, providing solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Infrastructure (INF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for basic electric fencing operations	1.1 Confirm work instructions with supervisor 1.2 Identify health and safety hazards and risks in the workplace and report to supervisor 1.3 Select tools and equipment appropriate to meet job requirements 1.4 Carry out routine pre-operational checks of tools 1.5 Identify faulty or unsafe tools and segregate for repair or replacement 1.6 Select, check and fit appropriate personal protective equipment
2. Perform basic electric fencing operations	2.1 Identify and recover re-useable electric fencing materials 2.2 Identify and carry out repair requirements according to instructions 2.3 Calculate electric fencing wire requirements 2.4 Erect electric fences to contour 2.5 Install electric fence components according to manufacturer instructions
3. Complete basic electric fencing operations	3.1 Fill post holes to remove potential hazards and minimise environmental impact according to workplace procedures 3.2 Clear and tidy work site and dispose of all non-reusable materials according to environmental procedures 3.3 Transport and store tools and re-usable materials 3.4 Report on further work or repair requirements according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Reads and interprets workplace instructions to formulate an understanding of expected requirements and activity
Numeracy	<ul style="list-style-type: none"> Determine fencing resources and measurements to construct

Skill	Description
	fencing
Oral Communication	<ul style="list-style-type: none"> Uses concepts and terminology appropriate for clarifying instructions and communicating with supervisor
Navigate the world of work	<ul style="list-style-type: none"> Complies with explicit policies and procedures. Seeks clarification or assistance when required
Get the work done	<ul style="list-style-type: none"> Plans and implements routine tasks and workload making limited decisions on sequencing and timing Responds to predictable routine problems and implements standard or logical solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCINF201 Carry out basic electric fencing operations Release 3	AHCINF201 Carry out basic electric fencing operations Release 2	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCINF201 Carry out basic electric fencing operations

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have carried out basic electric fencing operations, including:

- identified health and safety hazards and risks and reported to supervisor
- interpreted work plans and confirmed with supervisor
- selected electric fencing tools and equipment and carried out pre-operational checks and replaced or repaired identified faulty equipment
- selected, checked and correctly fitted personal protection equipment (PPE)
- calculated and measured electric fencing wire requirements
- identified and recovered useful electric fencing materials
- erected and repaired electric fencing according to instructions
- minimised environmental impact
- cleaned and tidied up work area, stored tools and equipment and disposed of waste according to environmental procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- uses and structures of electric fence types
- uses and types of standard fencing tools, materials and their maintenance and storage
- common electric fencing hazards and safety
- portable and mains power electric fences

- installation, construction and repair techniques for electric fences
- estimating and calculating electric fencing requirements
- relevant work health and safety and environmental code of practice for electric fencing
- health and safety in the workplace, including:
 - PPE required for working on electric fences
- environmental considerations when disposing of waste materials.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an outdoor environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - electric fencing materials, tools and equipment
 - PPE
- specifications:
 - workplace documents, including procedures, processes, instructions and job specifications
 - manufacturers' operating instructions for fencing equipment
 - legislation/codes of practice for fencing
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCINF202 Install, maintain and repair farm fencing

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to install, maintain and repair farm fencing using appropriate tools and techniques.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well-known parameters, providing solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Infrastructure (INF)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for farm fencing work	1.1 Confirm work instructions with supervisor 1.2 Identify health and safety hazards and risks in the workplace and report to supervisor 1.3 Select tools and equipment according to job requirements 1.4 Carry out routine pre-operational checks of tools 1.5 Identify faulty or unsafe tools and segregate for repair or replacement 1.6 Select, check and fit appropriate personal protective equipment (PPE) 1.7 Arrange transport of fencing materials, tools and equipment to worksite
2. Undertake farm fence installation	2.1 Install and secure posts and stays according to work instructions 2.2 String and tension wire according to job requirements and wire specifications 2.3 Attach wire netting or other fencing materials according to work instructions 2.4 Position and attach gates and check their operation according to manufacturers' instructions
3. Maintain and repair farm fencing	3.1 Identify faults or structural damage and carry out necessary repairs 3.2 Dismantle fences and recover re-useable materials 3.3 Identify and report further maintenance or repair works according to workplace procedures 3.4 Pack for reuse, or dispose of, used fencing material
4. Complete farm fencing work	4.1 Clear and tidy work area and dispose of all waste according to environmental procedures 4.2 Clean and store tools, PPE and re-useable materials according to workplace procedures 4.3 Complete records according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Reads and interprets workplace instructions to formulate an understanding of expected requirements and activity
Writing	<ul style="list-style-type: none"> Prepares workplace records accurately using clear language and industry relevant terminology
Numeracy	<ul style="list-style-type: none"> Determine fencing resources and measurements to construct fencing
Oral Communication	<ul style="list-style-type: none"> Uses concepts and terminology appropriate for clarifying instructions and communicating with supervisor
Navigate the world of work	<ul style="list-style-type: none"> Complies with explicit policies and procedures. Seeks clarification or assistance when required
Get the work done	<ul style="list-style-type: none"> Plans and implements routine tasks and workload making limited decisions on sequencing and timing Responds to predictable routine problems and implements standard or logical solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCINF202 Install, maintain and repair farm fencing Release 3	AHCINF202 Install, maintain and repair farm fencing Release 2	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCINF202 Install, maintain and repair farm fencing

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have installed and maintained farm fencing, including:

- identified health and safety hazards and risks and reported to supervisor
- selected, checked and correctly fitted personal protective equipment (PPE)
- selected materials, tools and equipment and arranged for availability on site
- conducted pre-operational checks and repaired or replaced tools and equipment identified with faults
- assessed and confirmed farm fencing requirements and confirmed with supervisor
- dismantled and recovered usable materials from existing fence
- installed and repaired fence posts and stays, erected fences, installed and tensioned fencing wire and netting, installed and checked gates and components
- recorded work activities according to work instructions
- cleaned up the fencing site and removed and disposed of, or recycled, waste according to environmental procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- designs and purpose of a range of conventional fencing
- wire types, knots, tensions applications and limitations
- common hazards involved in fencing installation, maintenance and repair

- tools and equipment used for fencing and their safe operation, storage and maintenance
- fencing materials manufacturers specifications and guidelines
- health and safety in the workplace, including:
 - PPE required for working on farm fences
- environmental considerations when disposing of waste materials.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an outdoor environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - fences, fencing tools, materials and equipment
 - PPE
- specifications:
 - workplace documents including procedures, instructions and wire specifications
 - manufacturers' operating instructions for fencing equipment
 - legislation/codes of practice for fencing
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCINF203 Maintain properties and structures

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain and repair properties and structures in situations that don't require the specialist skills of another trade.

All work is carried out to comply with workplace procedures, work health and safety legislation and codes, manufacturer's specifications and sustainability practices

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Infrastructure (INF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify and confirm maintenance	1.1 Confirm work instructions with supervisor

Element	Performance criteria
requirements	1.2 Identify hazards and report to supervisor 1.3 Select and fit appropriate personal protective equipment 1.4 Inspect structures and facilities to locate and evaluate defects, deterioration and impending defects 1.5 Check property infrastructure and resources for correct operation, minor maintenance needs and damage 1.6 Confirm maintenance plan
2. Select and prepare tools, equipment and materials	2.1 Select and check tools, equipment and materials for serviceability 2.2 Identify and segregate for repair or replacement faulty or unsafe tools 2.3 Identify, assess and report existing and potential hazards to health and safety 2.4 Select and fit personal protective equipment
3. Carry out routine maintenance	3.1 Carry out routine maintenance to infrastructure, structures and facilities 3.2 Carry out minor repairs to building cladding and paint
4. Complete maintenance activities	4.1 Clean, maintain and store worksite, tools and materials 4.2 Collect, treat and dispose of or recycle unwanted materials and waste from maintenance activities 4.3 Complete workplace records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCINF203A Maintain properties and structures.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCINF203 Maintain properties and structures

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be observed and repairing properties and structures, in a situation that does not require the specialist skills of another trade.

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and following safe work practices
- interpret and apply task instructions
- communicate with work team and supervisor
- select, prepare and safely use of a broad range of tools
- carry out routine maintenance to infrastructure, structures and facilities
- store or dispose of unused or waste materials

Knowledge Evidence

The candidate must demonstrate knowledge of:

- characteristics, capabilities and limitations of materials, equipment and tools
- operation of water taps and reticulation systems
- types of building cladding and finishes, purpose and use
- identification of defects and appropriate repair methods
- appropriate selection of repair materials
- work health and safety legislative requirements and Codes of Practice
- relevant Codes of Practice and procedures with regard to protection of the environment

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCINF204 Fabricate and repair metal or plastic structures

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to undertake minor fabrication and repair of metal or plastic structures where the services of a specialist trades person is not necessary.

All work is carried out to comply with workplace procedures, work health and safety legislation and codes, industry practice, manufacturer's specifications and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Infrastructure (INF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare for fabrication or repair	1.1 Confirm work instructions with supervisor 1.2 Identify hazards and report to supervisor 1.3 Select and fit appropriate personal protective equipment 1.4 Confirm items for repair or fabrication 1.5 Select tools and equipment appropriate to job requirements 1.6 Select jointing or welding materials suitable to the job requirements
2. Assist with maintaining structures and facilities	2.1 Repair or fabricate equipment and structures 2.2 Use appropriate jointing methods
3. Complete fabrication and repair	3.1 Clean and store materials and equipment 3.2 Clean and maintain work area and remove hazardous materials in an environmentally responsible manner 3.3 Complete workplace records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCINF204A Fabricate and repair metal or plastic structures

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCINF204 Fabricate and repair metal or plastic structures

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be observed undertaking minor fabrication and repair of metal or plastic structures where the services of a specialist trades person is not necessary.

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify job requirements and select materials, tools and equipment
- identify hazards apply safe work practices including use of personal protective equipment
- identify and use jointing methods and safe repair and fabrication techniques
- use welding and thermal cutting equipment safely
- clean up after operations

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of fabrication materials and their various applications
- range of metals and non-metal materials that may be used in fabrication and repair
- industry joining and welding techniques and fabrication and repair methods
- work health and safety requirements
- environmental codes of practice with regard to equipment operation and maintenance activities
- operating principles and operating methods for equipment
- various types of welders and respective functions
- environmental impacts and minimisation measures

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCINF301 Implement property improvement, construction and repair

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out maintenance and construction of improvements to properties.

All work is carried out to comply with workplace procedures, work health and safety legislation and codes, manufacturer's specifications and sustainability practices

This unit applies to individuals who work under broad direction and take responsibility for their own work and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Infrastructure (INF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Assess property condition	1.1 Confirm work plan and priorities with enterprise supervisor or manager 1.2 Assess property structures for soundness 1.3 Identify and determine property improvements and maintenance requirements 1.4 Confirm any planning and permissions have been obtained where required
2. Prepare tools and equipment	2.1 Identify and arrange tools, equipment and materials for the task 2.2 Check tools and equipment for serviceability 2.3 Identify faulty or unsafe tools and equipment and segregate them for repair or replacement 2.4 Identify, assess and report hazards to health and safety 2.5 Select, use and maintain and store suitable personal protective equipment
3. Carry out property improvements	3.1 Construct, repair or dismantle property structures 3.2 Carry out basic concrete, masonry or metal repairs 3.3 Determine and carry out maintenance to roads and tracks 3.4 Comply with planning or building requirements or restrictions
4. Complete maintenance and improvement activities	4.1 Monitor, maintain and improve property structures and surrounds 4.2 Clean, maintain and store worksite, tools and equipment 4.3 Collect, treat and dispose of or recycle unwanted materials and waste from maintenance activities according to enterprise environmental requirements 4.4 Complete workplace records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCINF301A Implement property improvement, construction and repair.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCINF301 Implement property improvement, construction and repair

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a range of contexts.

The candidate must provide evidence that they can:

- identify and report hazards and use safe work practices
- confirm work plan and priorities with enterprise supervisor or manager
- assess the nature of required repairs and maintenance
- read and interpret maps, plans, site drawings and simple technical drawings
- carry out building or construction work efficiently and safely
- confirm that the completed or repaired structure meets the standard specified
- operate a broad range of tools and equipment
- complete minor earthworks to specifications
- minimise environmental impacts and dispose of waste appropriately
- estimate and calculate volumes, usage and measurements
- apply enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- machinery and equipment required to carry out property improvements, construction and repairs
- types of building materials required to carry out property improvements, construction and repairs
- concreting procedures and techniques
- wood and steel fabrication procedures
- drainage requirements around structures, tracks and roads
- legislative requirements with regard to construction and structural improvements

- types of building cladding and finishes, purpose and use
- relevant Codes of Practice with regard to protection of the environment
- work health and safety and environmental legislative and enterprise procedures

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCINF302 Plan and construct an electric fence

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan, construct and maintain an electric fence.

All work is carried out to comply with workplace procedures, work health and safety legislation and codes, manufacturer's specifications and sustainability practices

This unit applies to individuals who work under broad direction and take responsibility for their own work and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Infrastructure (INF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine electric	1.1 Access property maps and assess fencing requirements according

Element	Performance criteria
fencing requirements	to enterprise objectives and legislative requirements 1.2 Determine equipment, materials and labour requirements and ensure estimated costings are within budgetary constraints 1.3 Compare alternative electric fencing options to ensure cost-effectiveness 1.4 Prepare fencing plan giving consideration to siting fences in relation to natural features and proposed uses
2. Prepare for construction	2.1 Seek clarification of work plan 2.2 Organise and transport tools and equipment to the work site 2.3 Confirm and arrange labour requirements if required 2.4 Assess risk and minimise potential and existing hazards appropriately
3. Construct electric fence	3.1 Select, use and maintain suitable personal protective equipment 3.2 Construct electric fence according to work plan 3.3 Attach and position gates for correct operation and function 3.4 Install energiser according to manufacturer's specifications.
4. Complete fencing operations	4.1 Check fencing for correct installation and performance 4.2 Identify and fix electric fence faults 4.3 Clear and tidy work site and dispose of all waste in an environmentally responsible manner 4.4 Transport tools and fencing equipment from the work site and check and store 4.5 Record and maintain relevant information

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCINF302A Plan and construct an electric fence.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCINF302 Plan and construct an electric fence

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop an electric fencing plan for the enterprise
- identify hazards and implement safe operating procedures
- calculate and measure fencing requirements and calculate costings off the fencing plan
- read and interpret plans and site maps and mark out fence lines
- construct an electric fence that meets specifications and the needs of the enterprise
- operate fencing tools and construction equipment
- test and monitor the electric fence for earthing and current flow, resistance and leakage
- follow enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- basic operation of electric fences including earthing and current flow, resistance and leakage
- differences between portable and mains power
- issues affecting electric fencing in relation to the whole property plan
- range of electric fencing designs, construction methods and materials
- dangers posed by electricity to personnel and livestock
- conditions under which electric fences may cause fire
- safe methods for diagnosing routine faults
- common electric fencing hazards and safety precautions
- relevant State/Territory legislation and regulations regarding electric fences
- work health and safety legislative requirements

- relevant codes of practice with regard to protection of the environment

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCINF303 Plan and construct conventional fencing

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan and construct conventional fencing.

All work is carried out to comply with workplace procedures, work health and safety legislation and codes, manufacturer's specifications and sustainability practices

This unit applies to individuals who work under broad direction and take responsibility for their own work and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Infrastructure (INF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine fencing	1.1 Determine fencing requirements

Element	Performance criteria
requirements	1.2 Prepare fencing plan giving consideration to siting fences in relation to natural features and proposed uses
2. Prepare for construction	2.1 Check proposed fencing against property maps and work plan 2.2 Identify services, structures and features which may impact on the fencing work and incorporate into the fencing plan 2.3 Organise and transport tools and equipment to the work site 2.4 Confirm and arrange labour requirements if required 2.5 Identify work health and safety hazards, assess risks and implement risk controls
3. Construct conventional fence	3.1 Select, use, maintain and store suitable personal protective equipment 3.2 Mark out and check fence lines against work plan and property maps 3.3 Construct fence according to work plan and fence design 3.4 Attach and position gates for correct operation and function
4. Complete fencing operations	4.1 Clear and tidy work site and dispose of all waste in an environmentally responsible manner 4.2 Transport tools and fencing equipment from the work site and store according to workplace procedures 4.3 Report tools and equipment faults or malfunctions 4.4 Record and maintain relevant information

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCINF303A Plan and construct conventional fencing.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCINF303 Plan and construct conventional fencing

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a range of contexts.

The candidate must provide evidence that they can:

- site the fence line according to property or land management plan
- estimate, cost and source fencing materials and arrange delivery
- identify hazards and implement safe work practices
- carry out fencing operations safely and efficiently
- construct a fence that meets specifications in plan or contract and is within tolerances for materials
- construct gate assemblies and swing gates
- string and strain wires to manufacturer's recommended tension
- use and maintain fencing machinery and equipment
- follow enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- issues affecting property fence planning and construction
- procedures for planning fencing in relation to the whole property plan
- range of fencing designs, construction methods and materials
- types of fencing construction tools and equipment
- fencing materials and costings
- common fencing hazards and safety precautions
- work health and safety legislative requirements and Codes of Practice
- relevant Codes of Practice with regard to the protection of the environment
- hazard identification, assessment and control

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCINF304 Install and terminate extra low voltage wiring systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to install wiring enclosures, cable support systems, cables and accessories in electrical systems of 36 volts or less.

All work must be carried out to comply with workplace procedures, work health and safety requirements, relevant legislation and codes and manufacturer's specifications.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

Licensing, legislative, regulatory or certification requirements may apply to this unit. Specific determination should be sought through the relevant State or Territory.

Pre-requisite Unit

Nil.

Unit Sector

Infrastructure (INF)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Plan and prepare for installation of extra low voltage wiring	1.1 Plan and prepare installation to ensure policies and procedures are followed, and the work is appropriately sequenced according to requirements 1.2 Consult with appropriate personnel to ensure the work is co-ordinated effectively with others on the work site 1.3 Size cables and wires to suit calculated load 1.4 Check wiring system components against job requirements 1.5 Source accessories according to established procedures and to comply with organisational and task requirements 1.6 Determine location in which specific items of accessories, apparatus and circuits are to be installed from job requirements 1.7 Obtain materials necessary to complete the work according to established procedures and checked against the job requirement 1.8 Source tools, equipment and testing devices needed to carry out the installation work, checked for correct operation and safety 1.9 Check preparatory work to ensure that it complies with requirements and no unnecessary damage has occurred
2. Install wiring systems	2.1. Follow work health and safety policies and procedures for installing electrical wiring systems 2.2. Install wiring systems to meet requirements without damage or distortion to the surrounding environment or services 2.3. Terminate accessories and connect wire as required to solenoids and controllers, according to manufacturer and enterprise requirements 2.4. Respond to unplanned events or conditions using established procedures 2.5. Obtain approval from appropriate personnel according to established procedures before any contingencies are implemented 2.6. Undertake on-going checks of the quality of the work according to established procedures
3. Check and notify completion of work	3.1. Undertake final checks to ensure the installed wiring systems conform to requirements 3.2. Test system is to ensure that it works 3.3. Notify work completion according to established procedures

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCTEQ301A Install and terminate extra low voltage wiring systems.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCINF304 Install and terminate extra low voltage wiring systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe systems of work
- read labels and signage to differentiate between extra low voltage and other electrical systems
- read and follow manufactures manuals and enterprise procedures for extra low voltage wiring
- size cables and wires to suit calculated load
- install wiring systems
- check and notify completed installation activities
- follow enterprise work health and safety procedures and safely work with extra low voltage systems

Knowledge Evidence

The candidate must demonstrate knowledge of:

- basic electricity and electrical principles relating to extra low voltage wiring
- applications, materials and techniques relevant to the industry sector
- isolation and tagging procedures
- computerised controller systems
- enterprise policies and procedures
- testing equipment and procedures
- relevant legislation and guidelines for installing extra low voltage wiring.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK101 Support extensive livestock work

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to analyse and interpret animal, crop and horticultural production data.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

This unit applies to individuals who take responsibility for their own work. They undertake a range of routine and non-routine activities and work in known and changing contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance criteria

<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare materials, tools and equipment for extensive livestock work	<p>1.1 Identify the required materials, tools and equipment using provided lists and supervisor's instructions</p> <p>1.2 Carry out checks on all materials, tools and equipment and report insufficient or faulty items to the supervisor</p> <p>1.3 Use safe manual handling techniques when loading and unloading materials and equipment</p> <p>1.4 Select and use suitable personal protective equipment (PPE) and check prior to use</p> <p>1.5 Identify hazards and report to supervisor</p>
2. Undertake extensive livestock work as directed	<p>2.1 Follow instructions and directions provided by supervisor and seek clarification when necessary</p> <p>2.2 Carry out work in a safe and environmentally appropriate manner</p> <p>2.3 Interact with other staff and customers in a positive and professional manner</p> <p>2.4 Report problems or difficulties in completing work to required standards or timelines to supervisor</p> <p>2.5 Carry out livestock handling and husbandry activities in line with enterprise animal welfare policies</p>
3. Handle materials and equipment	<p>3.1 Store waste material produced during work in a designated area according to supervisor's instructions</p> <p>3.2 Handle and transport materials, equipment and machinery appropriately</p> <p>3.3 Maintain a clean and safe work site</p>
4. Clean up on completion of work	<p>4.1 Return materials to store or dispose of appropriately</p> <p>4.2 Clean, maintain and store tools and equipment</p> <p>4.3 Report work outcomes to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK101 Support extensive livestock work Release 2	AHCLSK101 Support extensive livestock work Release 1	Minor typographical errors corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK101 Support extensive livestock work

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- follow safe work practices
- participate in teams and contribute to team objectives
- understand instructions
- read labels and work health and safety symbols
- use safe animal handling techniques
- use livestock handling tools and equipment
- assist in monitoring livestock health and welfare
- provide assistance to repair and maintain facilities
- follow work health and safety policies
- follow enterprise animal welfare and sustainability practices.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- safe work practices
- animal handling techniques including animal welfare requirements
- tools and equipment
- repair and maintenance of facilities
- work health and safety and environmental protection legislation and enterprise procedures.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK102 Support intensive livestock work

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide support to others undertaking intensive livestock production.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work alongside a supervisor in most situations and exercise limited autonomy. They undertake defined routine activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare materials, tools and equipment for intensive livestock	1.1 Identify required materials, tools and equipment from lists and instructions provided by enterprise and supervisor

Element	Performance criteria
work	1.2 Carry out checks on all materials, tools and equipment and report insufficient or faulty items to the supervisor 1.3 Use safe manual handling techniques when loading and unloading materials and equipment 1.4 Select, check and use suitable personal protective equipment (PPE) 1.5 Identify work health and safety hazards and report to or seek support from supervisor
2. Undertake intensive livestock work as directed	2.1 Follow instructions and directions provided by supervisor and seek clarification when necessary 2.2 Carry out work in a safe and environmentally appropriate manner 2.3 Carry out livestock work in line with enterprise animal welfare policies 2.4 Interact with other staff and customers in a positive and professional manner 2.5 Report problems or difficulties in completing work to required standards or timelines to supervisor
3. Handle materials and equipment	3.1 Store waste material produced during work in a designated area according to supervisor's instructions 3.2 Handle and transport materials, equipment and machinery appropriately 3.3 Maintain a clean and safe work site
4. Clean up on completion of work	4.1 Return materials to store or dispose of appropriately 4.2 Clean, maintain and store tools and equipment appropriately 4.3 Report work outcomes to supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK102A Support intensive livestock work

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK102 Support intensive livestock work

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- follow work health and safety procedures and instructions provided by enterprise and supervisor
- prepare materials, tools and equipment for intensive livestock work
- undertake intensive livestock work as directed
- handle materials and equipment appropriately
- clean up on completion of work appropriately
- follow enterprise environmental, animal welfare and biosecurity policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant work health and safety, animal welfare and biosecurity requirements and sustainability practices
- materials, tools and equipment used for intensive livestock work
- safe manual handling techniques for loading and unloading materials and equipment
- use, maintenance and storage of appropriate Personal Protective Equipment
- animal handling techniques including animal welfare
- positive and professional communication
- methods of waste storage
- handling and transportation of materials, equipment and machinery
- methods for maintenance of a clean and safe work site
- storage of materials
- cleaning, maintenance and storage of tools and equipment

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK201 Assist with feeding in a production system

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to assist with the process of preparing and providing feed and water for livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare and distribute	1.1 Check requirements for the daily feeding program with supervisor

Element	Performance criteria
feed	1.2 Identify hazards and report to supervisor 1.3 Select, use and maintain suitable personal protective equipment 1.4 Select and check tools, machinery and equipment for readiness 1.5 Provide assistance for weighing and measuring feed 1.6 Load feed into trolleys from silos or other storage bins and distribute feed 1.7 Check automatic or computerised feeders, where used, for blockages and correct functioning 1.8 Report abnormalities or irregularities with feed stocks to supervisor
2. Check watering systems	2.1 Adjust watering systems for height or position where appropriate 2.2 Check water level and flow and make adjustments accordingly 2.3 Empty and clean watering containers or lines where necessary
3. Keep workplace records	3.1 Keep basic feeding records and report to supervisor 3.2 Clean, maintain and store tools, machinery and equipment 3.3 Apply enterprise biosecurity and environmental policies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK201A Assist with feeding in a production system

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK201 Assist with feeding in a production system

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and follow safety directions
- identify a range of feed types and qualities
- identify feed contaminants
- prepare and distribute feed
- check watering systems
- recognise and rectify minor operational faults
- interpret and apply task instructions, communicate with work team and supervisor and record and report faults, workplace hazards and accidents
- complete records and documentation of feed use and volumes for the enterprise section
- use machinery and equipment associated with providing feed
- report on feeding to supervisors
- follow enterprise work health and safety policies
- follow enterprise biosecurity and environmental policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- silo operations, tractors and associated feeding machinery and equipment
- cleaning and storage of machinery, equipment and materials
- enterprise recording and reporting procedures
- common grains, meals, pelleted and liquid feeds
- evidence of spoilage and handling of spoilt feeds
- enterprise work health and safety, biosecurity and environmental policies

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK202 Care for health and welfare of livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to care for the health and welfare of livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to work	1.1 Discuss work requirements with supervisor and seek clarification where necessary 1.2 Identify work health and safety risks and inform supervisor 1.3 Prepare and use suitable personal protective equipment 1.4 Select and prepare appropriate tools and equipment
2. Monitor and assess livestock health and welfare	2.1 Check livestock regularly to assess health and welfare 2.2 Recognise and report symptoms of injuries, ill health or abnormal behaviour 2.3 Handle livestock in line with enterprise animal welfare policies
3. Implement livestock health and welfare procedures	3.1 Follow quarantine and biosecurity procedures as instructed to minimise the risk of disease 3.2 Maintain thorough personal hygiene practices in all activities associated with handling livestock to reduce risks from diseases that are transmissible to humans 3.3 Treat sick and injured livestock or make arrangements to humanely destroy livestock if necessary 3.4 Recognise environmental implications associated with livestock husbandry practices and follow relevant procedures 3.5 Follow the regulations and codes of practice appropriate for the industry 3.6 Follow enterprise animal welfare emergency procedures where required
4. Administer drenches, vaccines and prescribed treatments to livestock	4.1 Prepare livestock treatment site and facilities 4.2 Prepare livestock treatments 4.3 Move, yard and control livestock and inspect for treatment requirements 4.4 Use safe work practices with regard to livestock handling 4.5 Administer treatment if required as instructed or under supervision
5. Monitor treated livestock and maintain records	5.1 Monitor livestock post-treatment for signs of treatment effectiveness 5.2 Recognise and report livestock health and condition abnormalities 5.3 Record disease incidence, livestock losses, and treatments 5.4 Report post-treatment information to the supervisor so that prevention strategies can be planned and implemented

Element	Performance criteria
6. Complete work	6.1 Dispose of treatment materials appropriately 6.2 Clean, maintain and store equipment, materials and facilities 6.3 Dispose of livestock residues and waste in an environmentally responsible manner

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK202A Care for health and welfare of livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK202 Care for health and welfare of livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- handle livestock safely and humanely
- monitor and assess livestock health and welfare
- select, use and maintain specialised animal health equipment
- prepare treatment site, facilities and equipment
- administer treatments to livestock
- monitor the effectiveness of treatments and report issues
- keep and maintain records
- dispose of unused treatments safely and in an environmentally correct manner
- recognise ill health and abnormal behaviour in livestock
- recognise fear and aggressive behaviour in livestock
- recognise heat stress
- follow enterprise animal welfare emergency procedures
- follow enterprise work health and safety policies
- follow enterprise biosecurity, animal welfare and sustainability policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- water quality and animal requirements
- feed requirements and quality
- workplace biosecurity and euthanasia procedures
- safe handling of sick and dead livestock
- livestock handling principles and livestock behaviour

- signs of heat stress
- symptoms of ill-health in livestock
- the range of common diseases affecting livestock
- vaccination programs
- relevant legislation and regulations relating to waste and environment management, livestock health, stock medicines and animal welfare
- relevant work health and safety legislation, regulations and codes of practice

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK204 Carry out regular livestock observation

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out regular livestock observation.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to work with livestock	1.1 Discuss work to be undertaken with supervisor and seek clarification where necessary 1.2 Discuss tasks with other workers who may be affected to ensure continued smooth operation of the process 1.3 Select and check tools and equipment suitable for the work to be undertaken and maintain if necessary 1.4 Select, use and maintain suitable personal protective equipment in line with work health and safety policies 1.5 Identify hazards and report to supervisor
2. Carry out livestock checks	2.1 Check livestock for signs of illness, injuries and abnormalities and report to supervisor 2.2 Use safe handling techniques while handling livestock 2.3 Carry out all husbandry and handling activities in line with enterprise animal welfare policies
3. Deal with livestock emergencies	3.1 Follow enterprise biosecurity policies where required 3.2 Recognise common signs of livestock injury or life threatening conditions and report to supervisor 3.3 Use basic emergency and livestock first aid procedures until professional help arrives 3.4 Report serious cuts and abrasions to livestock to the supervisor or veterinarian
4. Provide veterinary procedure support	4.1 Treat cuts, abrasions and bruises under instruction from the veterinarian or supervisor 4.2 Examine animals for signs of distress, injury, illness and abnormal behaviours after completing procedures and report to supervisor 4.3 Apply appropriate treatment as instructed by a supervisor or veterinarian

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK204A Carry out regular livestock observation

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK204 Carry out regular livestock observation

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and follow safe operating procedures
- check livestock regularly
- handle livestock safely and humanely
- identify signs of ill health, injury and abnormality
- identify symptoms of ill health or injury
- deal efficiently and calmly with livestock emergencies
- complete basic livestock first aid procedures
- record and report serious issues or injuries.
- follow enterprise work health and safety policies
- follow enterprise animal welfare policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- range of ailments that may occur or affect livestock
- application of a range of basic treatments under veterinary supervision
- behaviour of the relevant species
- environmental controls and codes of practice applicable to the enterprise
- organisations livestock production and management plans
- relevant work health and safety legislative requirements
- relevant animal welfare and biosecurity legislation and codes of practice

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK205 Handle livestock using basic techniques

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to safely move, draft and control livestock using basic methods and procedures in an agricultural enterprise.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to handle livestock	1.1 Confirm work plan with supervisor 1.2 Identify, prepare and maintain livestock handling areas, gates and access routes 1.3 Select, check and prepare handling equipment for use and report missing equipment, malfunctions and need for maintenance as required 1.4 Recognise hazards in the workplace and report safety concerns 1.5 Select appropriate personal protective equipment and ensure correct fit
2. Handle livestock	2.1 Locate and identify livestock for handling 2.2 Observe and anticipate behavioural characteristics of livestock and use appropriate handling methods 2.3 Move livestock to designated handling areas and carry out procedures to control, draft and sort livestock with due care and in line with enterprise animal welfare policies 2.4 Carry out restraint procedures safely and with minimum stress and discomfort to livestock and in line with enterprise animal welfare policies 2.5 Monitor and anticipate continually livestock behaviour during moving and drafting processes to ensure wellbeing of livestock and safety of handlers 2.6 Conduct or tally livestock numbers or livestock count of groups/mobs and record or report as required 2.7 Recognise and report environmental implications associated with livestock production
3. Complete handling procedure	3.1 Confirm livestock dispersal plan with supervisor as required 3.2 Prepare gates and access routes for livestock departure 3.3 Move livestock to designated areas safely and with minimal stress 3.4 Ensure adequate clean water and feed at destination as required 3.5 Clean and maintain handling areas and equipment and store surplus materials 3.6 Report handling area maintenance requirements and equipment faults or malfunctions 3.7 Dispose of livestock residues and waste in accordance with environmental practices 3.8 Record and report relevant information

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK205A Handle livestock using basic techniques

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK205 Handle livestock using basic techniques

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare handling areas, gates and access routes for livestock movement
- monitor and anticipate livestock behaviour
- recognise enterprise livestock identification systems
- identify and draft livestock during handling operations
- move and control livestock using low stress livestock handling techniques
- minimise undue stress and risk to livestock and handlers
- recognise livestock abnormalities
- assess, calculate and record livestock numbers
- control the environmental impacts associated with livestock production within the limitations of own responsibility
- follow enterprise work health and safety policies
- follow enterprise animal welfare policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- livestock behavioural characteristics and movement in handling areas
- components and functions of handling equipment
- handling techniques and restraint methods
- enterprise livestock identification systems
- environmental codes of practice with regard to livestock production
- regulatory controls with regard to handling livestock on public roads where required
- common livestock breeds

- basic nutritional and welfare requirements
- range of common livestock abnormalities, illnesses and injuries and associated signs
- relevant work health and safety requirements
- relevant animal welfare and biosecurity legislation and codes of practice

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK206 Identify and mark livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out the identification and marking of livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to identify and mark animals	1.1 Select and check appropriate equipment for correct operation, and maintain or replace as required 1.2 Select appropriate materials and ensure adequate quantities for required task 1.3 Identify, clean and prepare suitable marking sites and facilities 1.4 Prepare and ensure adequate quantities of animal preventative health treatments as instructed 1.5 Identify hazards, control risks as appropriate and report to supervisor 1.6 Select, use and maintain suitable personal protective equipment
2. Identify and mark animals	2.1 Muster animals and identify, draft and move young animals to marking site in readiness for identifying and marking 2.2 Carry out animal identifying and marking operations in line with enterprise animal welfare policies 2.3 Carry out contingency plans as instructed in the event of adverse weather conditions 2.4 Identify environmental implications associated with enterprise operations for identifying and marking animals and report to the supervisor
3. Complete identifying and marking operation	3.1 Keep tally or record animal numbers as required during operations and assist to conduct and record animal counts at completion of tasks 3.2 Prepare animals and move along a planned route without damage to person, livestock, property or environment 3.3 Clean, maintain and store equipment, materials and facilities 3.4 Report equipment faults or malfunctions 3.5 Dispose of animal residues and waste appropriately 3.6 Monitor livestock behaviour and wellbeing post-operations, and mother-up young animals if required 3.7 Apply enterprise biosecurity and environmental policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK206A Identify and mark livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK206 Identify and mark livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards, control risks and implement safe operating procedures
- prepare and maintain appropriate identifying and marking sites and facilities to industry standards
- handle animals in a safe and humane manner in line with enterprise and industry animal welfare policies
- operate and maintain equipment
- determine identifying and marking methods
- carry out identifying and marking operations
- monitor animal's behaviour post-marking for health and well-being, mother-up animals and their young if required
- apply contingency measures in the event of adverse weather conditions
- tally, count, calculate and record animal numbers during marking operations if required
- demonstrate safe and environmentally responsible workplace practices
- follow enterprise work health and safety policies
- follow enterprise biosecurity and environmental policies as required

Knowledge Evidence

The candidate must demonstrate knowledge of:

- components and functions of animal handling equipment
- animal marking methods and identification systems
- animal preventative health requirements and procedures
- relevant livestock behaviour
- basic livestock health and nutritional requirements

- environmental codes of practice with regard to animal production
- relevant work health and safety requirements
- relevant animal welfare and biosecurity legislation and codes of practice

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK207 Load and unload livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to load and unload animals for transport.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Check facilities and equipment for sound working conditions	1.1 Identify facilities and equipment required for the task and confirm with supervisor 1.2 Prepare loading facilities and equipment according to enterprise procedures 1.3 Check the work site, facilities and equipment for hazards and operation, control risks where appropriate and report safety concerns to supervisor 1.4 Carry out or organise repairs and maintenance of facilities and equipment required for loading or unloading livestock where necessary 1.5 Select appropriate personal protective equipment and ensure correct fit
2. Load animals	2.1 Identify, muster, yard or secure animals using safe working methods in line with enterprise animal welfare policies 2.2 Inspect animals for signs of ill health, injury or abnormal behaviours and separate animals unsuitable for transport 2.3 Prepare animals for transport 2.4 Record identification details of animals and fit individual animal tags as required 2.5 Count, record and load livestock safely and with minimal stress to ensure no injury to co-workers or animals in line with enterprise animal welfare policies 2.6 Complete vendor declarations and any other required documentation
3. Unload animals	3.1 Unload livestock in a safe manner to ensure no injury to other workers or animals 3.2 Record numbers and individual identification details of livestock 3.3 Inspect livestock for signs of ill health, injury or abnormal behaviours and report to appropriate persons 3.4 Check documentation and reach agreement on condition of animals with the receiving or dispatching party where required
4. Perform appropriate animal health procedure	4.1 Sort stock, and separate distressed, injured or ill livestock if required 4.2 Undertake animal health treatments off truck if required 4.3 Feed and water animals as instructed 4.4 Apply enterprise biosecurity policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK207A Load and unload livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK207 Load and unload livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- check loading facilities for correct operation and hazards to animals and workers
- sort livestock as required and separate unsuitable animals for transport
- load and unload livestock
- anticipate animal behaviour
- provide and maintain appropriate animal feed and water
- complete relevant documentation and affix individual tags if required
- monitor animal health and welfare
- read and interpret mustering, work and loading plans and maps
- calculate animal numbers to assess and calculate feed and water requirements
- follow relevant work health and safety requirements
- follow relevant biosecurity policies as required
- follow relevant animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- animal handling and movement methods and techniques
- basic animal health and nutritional requirements
- animal herding and flocking behaviour
- techniques and uses of working dogs where appropriate
- types of animal health treatments that may be required
- common diseases and injuries in livestock
- common abnormal livestock behaviours

- causes of livestock being unfit for transport
- legislative documentation requirements for livestock transport
- relevant work health and safety, biosecurity and animal welfare requirements

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK209 Monitor water supplies

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to monitor the supply of potable water for livestock from water storages and sources.

All work must be carried out to comply with workplace procedures, work health and safety, legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Monitor water supplies	1.1 Inspect water supplies routinely 1.2 Recognise high and low water levels and report to supervisor 1.3 Carry out treatment of water quality problems or pathogens according to enterprise procedures 1.4 Record and report information on water supplies
2. Inspect and clear intake and outlet points	2.1 Inspect intakes and outlets 2.2 Report potential blockages and clear actual blockages 2.3 Check and replace water filters as required 2.4 Reposition intake lines as necessary to ensure unobstructed suction 2.5 Clear strainers of debris and sludge
3. Operate water delivery equipment	3.1 Identify hazards and risks and report to supervisor 3.2 Prepare and check water delivery equipment 3.3 Operate water delivery equipment 3.4 Check outflow to ensure water delivery equipment is operating correctly 3.5 Shut down water delivery equipment as required 3.6 Report on activities and water delivery equipment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK209 Monitor water	AHCLSK209 Monitor water supplies Release	Minor edits to clarify PC 1.3 and to correct evidence requirements	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
supplies Release 2	1		

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK209 Monitor water supplies

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and follow safety procedures
- record and report water supply information, activities and system performance
- read and follow manufacturers procedures
- problem solve to identify potential as well as actual blockages
- undertake basic poly pipe repairs
- check outflow rates
- clear blockages using safe working procedures
- check flow rates
- inspect and report on water supplies with only routine supervision
- follow work health and safety requirements.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- water delivery systems and components and their operation
- common water quality problems
- enterprise procedures for carrying out inspections, recording and reporting water information and system performance
- environmental impacts and procedures for water supplies
- relevant work health and safety requirements.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK210 Muster and move livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to muster and move livestock as part of a team.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for muster	1.1 Identify mustering requirements and confirm with supervisor 1.2 Arrange transport requirements and check and confirm for operation 1.3 Identify and access additional information relevant to livestock movements 1.4 Identify hazards and safety concerns and report to the supervisor 1.5 Select and use personal protective equipment
2. Carry out muster	2.1 Locate livestock identified in the muster plan and aggregate in preparation for movement 2.2 Carry out muster processes in line with enterprise animal welfare policies
3. Move livestock	3.1 Carry out livestock movement with minimal stress to livestock and without damage to person, property or environment 3.2 Monitor and maintain livestock welfare during movement with adequate provision of rest, water and feeding points 3.3 Confine and pasture livestock at destination 3.4 Count and record numbers of livestock 3.5 Follow enterprise biosecurity policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK210A Muster and move livestock

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK210 Muster and move livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and follow safe work procedures
- read and interpret muster plans and maps
- prepare equipment and working dogs (when used) for handling livestock
- implement directions for mustering
- monitor livestock behaviour and recognise abnormalities
- muster and move livestock along prepared routes in a calm and controlled manner
- handle livestock safely and humanely, monitor welfare of mustered stock
- monitor and minimise impacts to the environment
- communicate effectively with the muster team
- calculate livestock numbers and assess and calculate feed and water requirements
- follow relevant work health and safety requirements
- follow relevant biosecurity requirements where required
- follow relevant animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- mustering and movement methods and techniques
- livestock basic health and nutritional requirements
- livestock herding/flocking behaviour
- environmental codes of practice with regard to livestock production
- working dogs uses and techniques (where appropriate)
- legislative requirements for stock movement along public roads

- environmental impacts and procedures for livestock movements and musters
- relevant work health and safety requirements
- relevant animal welfare and biosecurity legislation and codes of practice

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK211 Provide feed for livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare and provide feed for livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for feeding	1.1 Check and record condition and health status of livestock 1.2 Confirm feed and feed supplements and prepare in line with feeding plan 1.3 Check and maintain water supply, quality and quantity to meet livestock requirements 1.4 Identify hazards and report to the supervisor 1.5 Select and use suitable personal protective clothing and equipment
2. Feed livestock	2.1 Provide feed and feed supplements in line with feeding plan 2.2 Monitor feeding process to ensure livestock are feeding effectively 2.3 Safely handle livestock in line with enterprise animal welfare policies 2.4 Follow procedures to minimise feed wastage and spillage, and dispose of and recycle feed waste appropriately 2.5 Note variations to individual eating and drinking patterns and report
3. Complete the feeding process	3.1 Record feeding abnormalities and report to the supervisor 3.2 Maintain a clean and safe working area 3.3 Maintain records 3.4 Follow enterprise biosecurity policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK211A Provide feed for livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK211 Provide feed for livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe work procedures
- monitor and record livestock condition
- provide feed and feed supplements in accordance with feeding plan
- monitor livestock health and condition, and recognise abnormalities
- employ safe and environmentally responsible systems and procedures with regard to the handling of livestock and feed
- read and interpret feeding plan, work plan and supervisors instructions
- communicate and report livestock feeding abnormalities and workplace hazards, and maintain livestock records
- assess and calculate herd/flock numbers, measure feed and rate and frequency of feeding
- safely handle livestock in line with enterprise animal welfare policies
- report feeding abnormalities and maintain records
- follow relevant work health and safety requirements
- follow relevant biosecurity requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- nutritional requirements for livestock (including water)
- types of feed and feed supplements (including pastures and grazing)
- types of noxious and toxic plants relevant to feeding areas
- livestock health and behaviour
- livestock scoring and weighing methods

- environmental impact of livestock
- safe livestock handling techniques and procedures
- hazards associated with handling livestock and control measures
- personal protective clothing and equipment
- relevant work health and safety requirements
- relevant animal welfare and biosecurity legislation and codes of practice

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK213 Clean out production sheds

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to clean out sheds used for the production of livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to clean shed	1.1 Confirm work to be undertaken with supervisor

Element	Performance criteria
	1.2 Identify work health and safety hazards and seek advice from supervisor for implementation of suitable risk controls 1.3 Select, maintain and use suitable personal protective equipment 1.4 Identify the potential environmental and biosecurity impacts of cleaning the shed and seek advice from supervisor for managing these impacts 1.5 Raise, dismantle or remove equipment from the shed for cleaning and clean equipment to appropriate industry standards 1.6 Cover or seal electrical switchboards and other equipment to prevent entry of water if appropriate
2. Clean shed and surrounds	2.1 Service and prepare machinery for cleaning operation 2.2 Remove and dispose of litter where these are used 2.3 Remove and dispose of manure appropriately 2.4 Remove dust and cobwebs from all surfaces 2.5 Service filters and flush drinker lines and tanks 2.6 Empty and clean silos where appropriate 2.7 Prepare and use cleaning agents in line with safe working procedures 2.8 Air shed to completely remove traces or vapours of the cleaning agent prior to re-entry of staff and re-installation of equipment 2.9 Handle chemical agents safely and use in accordance with relevant work health and safety and industry practices 2.10 Dry clean electrical equipment 2.11 Ensure run-off from cleaning activity complies with enterprise, industry and regulatory effluent and waste management procedures 2.12 Ensure all cleaning and hygiene processes are completed to industry standards
3. Complete cleaning operation	3.1 Clean and store equipment appropriately at end of operation 3.2 Dispose of containers, leftover fluids, waste and debris from the cleaning operations appropriately 3.3 Complete records and documentation

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK213A Clean out production sheds

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK213 Clean out production sheds

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify work health and safety hazards, follow safe work practices and use personal protective equipment appropriately
- make appropriate preparations for cleaning out shed
- clean shed and surrounds
- complete cleaning operation
- complete records
- follow relevant environmental and biosecurity practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of sheds and equipment found in sheds
- methods to handle and transport equipment found in sheds
- methods of sealing or covering shed equipment to prevent entry of water
- methods for dry cleaning electrical equipment
- environmental and biosecurity impacts of shed cleaning operation, and measures to mitigate these impacts
- equipment and machinery used for shed cleaning operation, and the maintenance, servicing and storage of such equipment and machinery
- environmental and biosecurity impacts and methods of disposal of effluent, bio-waste and waste generated by the cleaning operation
- cleaning, maintenance and servicing of filters, drinker lines, tanks and silos
- types, handling, use and disposal of cleaning agents, work health and safety and environmental practices for these agents

- types of documentation and records that need to be completed after the cleaning operations
- relevant work health and safety requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK214 Maintain production growing environments

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain growing environments for livestock under production.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Maintain environment systems	1.1 Carry out biosecurity procedures, including access to sheds and boot washing 1.2 Carry out maintenance work according to enterprise work health and safety standards for hazards identification, risk assessment and risk control measures 1.3 Carry out shed heating, cooling and ventilation systems maintenance 1.4 Check litter and manure conditions and report changes 1.5 Maintain lighting programs specified for the production unit and report variations 1.6 Clean light globes regularly and report malfunctions 1.7 Check feed program is working according to enterprise procedures and report malfunctions 1.8 Check feeding times and feed rate when restricted feeding is practised and report malfunctions 1.9 Carry out maintenance work as necessary 1.10 Check waterers in sheds and report malfunctions
2. Observe and assess livestock health	2.1 Check livestock regularly 2.2 Recognise and report ill health of livestock 2.3 Carry out disease prevention strategies appropriate to the unit as instructed and in line with biosecurity codes
3. Handle livestock	3.1 Handle livestock in accordance with animal welfare requirements and codes of practice 3.2 Count and identify livestock 3.3 Recognise and identify injured, malformed or non-productive livestock, and report to enterprise or supervisor 3.4 Treat livestock under direction of the unit supervisor, and report the effects of treatment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK214A Maintain production growing environments

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK214 Maintain production growing environments

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify work health and safety hazards and follow safe work practices
- follow relevant biosecurity practices
- maintain environment systems
- observe and assess livestock health
- follow relevant animal welfare practices when handling or treating livestock

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant biosecurity requirements
- relevant animal welfare requirements
- relevant work health and safety requirements and sustainability practices
- shed heating, cooling and ventilations systems, their functions, maintenance and servicing, and impact of changes on livestock
- types of litter, functions and impact of litter changes on livestock
- impact of manure conditions on livestock
- lighting programs and impact of variations in lighting programs on livestock
- types of lighting, functions, maintenance and servicing
- feeding programs and impact of changes and malfunctions on livestock
- restricted feeding and impact of changes and malfunctions on livestock
- watering systems, functions, maintenance and servicing, and the impact of changes and malfunctions on livestock
- types of maintenance work that need to be carried out in a livestock production unit

- signs of health, anatomy, physiology and behaviour of the livestock species
- signs of ill health in the livestock species
- signs of injury, malformation and non-productiveness in livestock
- types of disease prevention strategies and their functions
- methods for handling livestock
- methods for counting and identifying livestock
- types of treatment in livestock and assessment of treatment effectiveness

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK215 Carry out alpaca handling and husbandry operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to move and control alpacas using basic handling methods and procedures.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Prepare to handle alpacas	1.1 Identify, prepare and maintain alpaca handling areas, gates and access routes 1.2 Locate and identify alpacas for handling according to supervisor instructions 1.3 Observe and anticipate behavioural characteristics of alpacas and select appropriate handling methods 1.4 Select, check for soundness and prepare handling equipment 1.5 Identify hazards and report to supervisor 1.6 Recognise hazards to animals and report to supervisor 1.7 Observe site quarantine and other biosecurity protocols 1.8 Select and use suitable personal protective equipment
2. Handle alpacas	2.1 Follow procedures to control and sort alpacas safely and in line with enterprise animal welfare policies 2.2 Classify alpacas according to age, sex and husbandry tasks to be performed 2.3 Carry out restraint procedures with minimum stress and discomfort to alpacas 2.4 Transport alpacas when required according to animal welfare requirements 2.5 Monitor and anticipate alpaca behaviour during moving and handling processes to ensure wellbeing of alpacas and safety of handlers 2.6 Conduct alpaca count record 2.7 Recognise environmental impacts of alpaca handling and husbandry tasks and report to supervisor
3. Carry out alpaca husbandry tasks	3.1 Carry out alpaca husbandry safely and in line with enterprise animal welfare policies 3.2 Identify unhealthy stock and abnormal conditions and behaviour and report 3.3 Provide adequate feed and clean water to stock 3.4 Recognise plants poisonous to alpacas and report to supervisor
4. Complete alpaca handling activities	4.1 Complete alpaca husbandry tasks as instructed, and prepare gates and access routes for alpacas' departure 4.2 Clean and maintain handling areas and equipment and store surplus materials 4.3 Report equipment faults or malfunctions

Element	Performance criteria
	4.4 Dispose of alpaca residues and waste appropriately 4.5 Record and report relevant information about particular animals and the husbandry tasks performed

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK215A Carry out alpaca handling and husbandry operations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK215 Carry out alpaca handling and husbandry operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and apply safe work practices
- assess and calculate alpaca numbers
- prepare handling areas, gates and access routes for alpaca movement
- monitor and anticipate alpaca behaviour in handling operations
- identify, sort, move and control alpacas for handling and husbandry operations
- use correct equipment, and calming and humane methods to minimise undue stress and risk to alpacas or handlers
- carry out typical basic alpaca husbandry tasks
- recognise and report signs of unusual behaviour, unhealthy animals or abnormal conditions
- control environmental impacts associated with alpaca handling and husbandry
- feed and provide adequate clean water to alpacas
- identify a range of plants poisonous to alpacas
- provide due care in the handling of alpacas
- read and comprehend oral and written information and instructions and maintaining alpaca handling records
- use enterprise alpaca identification systems
- follow relevant work health and safety requirements
- follow relevant biosecurity requirements
- follow relevant animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- alpaca behavioural characteristics and movement in handling areas
- classes of alpacas and their basic nutritional and welfare requirements
- components and functions of handling equipment
- enterprise identification systems for alpacas
- environmental codes of practice with regard to alpaca production
- correct handling techniques and restraint methods
- alpaca husbandry procedures and why they are carried out
- regulatory controls relating to the transport of animals on public roads
- relevant work health and safety requirements
- relevant animal welfare and biosecurity legislation and codes of practice

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK216 Clean and maintain livestock pens

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to clean and maintain livestock pens.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to clean pens	1.1 Confirm work to be undertaken with supervisor 1.2 Identify work health and safety hazards and seek advice from supervisor for implementation of suitable risk controls 1.3 Select, maintain and use suitable personal protective equipment 1.4 Identify the potential environmental and biosecurity impacts of cleaning the pens and seek advice from supervisor for managing these impacts 1.5 Raise, dismantle or remove equipment from the pens for cleaning if required and clean equipment to appropriate industry standards
2. Clean pens	2.1 Service and prepare machinery and tools for cleaning operation 2.2 Remove and dispose of manure appropriately 2.3 Clean feeding and watering troughs or equipment appropriately 2.4 Ensure run-off from cleaning activity complies with enterprise, industry and regulatory effluent and waste management procedures 2.5 Ensure all cleaning and hygiene processes are completed to industry standards
3. Maintain pens	3.1 Repack worn and uneven pen surface appropriately 3.2 Repair damaged feed bunks and leaking water troughs as required 3.3 Repair pen fences, gates and shade structures as required
4. Complete cleaning and maintenance operation	4.1 Clean and store equipment appropriately at end of operation 4.2 Dispose of containers, leftover fluids, waste and debris from the cleaning operations appropriately 4.3 Complete records and documentation

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK216 Clean and maintain livestock pens

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify work health and safety hazards, follow safe work practices and use personal protective equipment appropriately
- make appropriate preparations for cleaning livestock pens
- clean and maintain pens
- complete cleaning and maintenance operation
- follow relevant environmental and biosecurity practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- requirements and methods of cleaning livestock pens
- environmental and biosecurity impacts of pen cleaning operation and measures to mitigate these impacts
- types and use of tools, equipment and machinery for pen cleaning operation and the maintenance, servicing and storage of such tools, equipment and machinery
- environmental and biosecurity impacts and methods of disposal of effluent, bio-waste and waste generated by the cleaning operation
- cleaning and maintenance of feeding and watering troughs or similar equipment
- types of documentation and records that need to be completed after the cleaning operations
- relevant work health and safety, biosecurity and environmental management policies

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK217 Apply animal welfare principles to handling and husbandry of livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to apply animal welfare principles to the handling and husbandry of animals to ensure their welfare.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify animal welfare requirements	1.1 Identify legislative, regulatory and industry animal welfare requirements 1.2 Identify the principles of animal welfare
2. Comply with animal welfare requirements	2.1 Follow enterprise work health and safety policies 2.2 Carry out animal handling and husbandry activities in compliance with relevant animal welfare codes of practice and workplace requirements 2.3 Recognise animal welfare issues in the workplace and report to supervisor or management 2.4 Take appropriate corrective action as instructed by supervisor 2.5 Complete appropriate record keeping of workplace animal welfare concerns and actions taken as required
3. Participate in animal welfare process	3.1 Participate in workplace or industry animal welfare induction programs and training 3.2 Participate in workplace or industry animal welfare emergency training

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK217 Apply animal welfare principles to handling and husbandry of livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- follow enterprise work health and safety policies
- identify animal welfare requirements in relevant legislation, regulations, codes of practice and workplace procedures
- apply animal welfare principles to animal handling and husbandry activities in compliance with relevant animal welfare codes of practice and workplace requirements
- recognise and report animal welfare issues to supervisor
- participate in workplace or industry animal welfare emergency training

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant animal welfare legislation, regulations and codes of practice
- basic requirements for ensuring the welfare of animals described in the relevant Codes of Practice
- workplace or industry animal welfare procedures and animal emergency procedures
- workplace or industry procedures for reporting and recording animal welfare concerns, non-conformance and malpractice in the workplace
- relevant work health and safety requirements

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK218 Ride educated horses to carry out basic stock work

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	Initial release with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to handle and ride calm horses educated to muster and move livestock. It addresses the potential risks associated with working with and around horses and livestock.

The unit applies to individuals who have experience in riding horses assessed as calm, consistent and obedient. They work under general supervision, with some accountability for their own work, identifying and providing solutions to a limited range of predictable problems.

No occupational licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) generally have the same meaning in the workplace. In jurisdictions where the national model WHS legislation has not been implemented, RTOs must contextualise the unit of competency by referring to current OHS legislative requirements.

Pre-requisite Unit

The prerequisite units of competency for this unit are:

- ACMEQU202 Handle horses safely
- ACMEQU206 Perform horse riding skills at walk, trot and canter.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour
ACMEQU206 Perform horse riding skills at walk, trot and canter	ACMEQU202 Handle horses safely

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Maintain horse health and condition	<p>1.1 Monitor horses for signs of ill health, injury, or poor condition as part of daily routines</p> <p>1.2 Report horse condition to supervisor</p> <p>1.3 Administer treatments for common ailments safely and humanely under supervision of veterinarian or supervisor</p> <p>1.4 Carry out hoof care and cleaning according to safe workplace practices</p> <p>1.5 Apply workplace biosecurity and sustainability policies and follow workplace procedures</p>
2. Prepare horses for work	<p>2.1 Assess work to be undertaken and confirm with supervisor</p> <p>2.2 Identify hazards, assess risks, and implement control measures for working safely with horses</p> <p>2.3 Select and check equipment suitable for the work to be undertaken</p> <p>2.4 Select and use appropriate personal protective equipment (PPE) during preparation activities</p> <p>2.5 Identify horses by sex, colour, markings, and brands</p> <p>2.6 Safely and humanely catch assigned horse, assess for health and soundness, and promptly report any issues to supervisor</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>2.7 Confirm with supervisor that the assigned horse is suitable for required work and own skill level</p> <p>2.8 Prepare horse for ridden work including a pre-exercise groom</p> <p>2.9 Fit and adjust, for individual horses, the appropriate working gear to manage and control horse for required work</p>
3. Ride horses for stock work	<p>3.1 Select and use equipment (PPE) for riding</p> <p>3.2 Lunge horse safely and humanely to check gear fit and horse behaviour</p> <p>3.3 Mount horse safely</p> <p>3.4 Safely control the horse at walk, trot, and canter prior to beginning stock work</p> <p>3.5 Practise appropriate safety drills and safely perform emergency manoeuvres including one-rein stops</p> <p>3.6 Using safe riding techniques, ride quiet, consistent and obedient horses to carry out basic stock work duties</p> <p>3.7 Work and safely control horse at a walk, trot, and canter as part of stock husbandry routines</p> <p>3.8 Safely dismount horse</p> <p>3.9 Report and record stock work activities</p>
4. Provide post ride care	<p>4.1 Remove gear and groom, wash, or clean horse, according to workplace policy</p> <p>4.2 Water and feed horse in line with workplace policy</p> <p>4.3 Release horse safely to appropriate enclosure, paddock, or yard</p> <p>4.4 Check, clean, maintain, and store working gear and PPE</p> <p>4.5 Report damaged or repair working gear as instructed</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Writing	<ul style="list-style-type: none"> Record data and observations about livestock in workplace forms accurately
Oral communication	<ul style="list-style-type: none"> Use active listening and questioning techniques to clarify and confirm instructions and report information
Navigate the world of work	<ul style="list-style-type: none"> Follow workplace procedures, including safe work and safe horse handling practices and animal welfare principles, in own role and work area
Get the work done	<ul style="list-style-type: none"> Plan and organise tasks and assemble equipment to complete basic livestock activities, taking safety and risk factors into consideration

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK218 Ride educated horses to carry out basic stock work Release 2	AHCLSK218 Ride educated horses to carry out basic stock work Release 1	Minor changes to wording to clarify safety requirements and addition of foundation skills descriptions	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK218 Ride educated horses to carry out basic stock work

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	Initial release with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has safely ridden at least two different calm, consistent and obedient horses educated for stock work to carry out at least three assigned jobs involving riding horses for basic stock work duties. For each job there must be evidence that the individual has:

- prepared for the job by:
 - recognising hazards and implementing required risk control measures
 - identifying relevant work health and safety requirements
 - selecting and using suitable personal protective equipment (PPE)
 - selecting suitable saddlery and equipment
 - identifying the assigned horse by gender, colour markings, and brands
 - catching assigned horse and assessing for health and soundness
 - communicating with supervisor to discuss concerns and suitability of horse for the assigned job
- handled horse safely and humanely during job including:
 - safely and correctly fitting, then checking and adjusting working gear to suit individual horse
 - mounting horse safely
 - riding and controlling horse, at a walk, trot, and canter, to perform basic stock work duties
 - adhering to animal welfare policies when working around horses and livestock
 - minimising stress of livestock when checking, mustering, and moving livestock
 - dismounting horse safely
- completed post-ride activities including:

- cleaning, feeding and watering horse
- checking, cleaning and maintaining tack
- completing records as required by workplace.

In addition, there must be evidence that the individual has monitored the condition of at least one horse (which may be one of the above-mentioned three horses), including:

- identifying signs of ill health, injury, or poor condition, and reporting to supervisor
- safely and humanely administering basic treatments under supervision
- carrying out basic hoof care and cleaning safely and humanely.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- key features of work health and safety, animal welfare codes of practice, biosecurity requirements, and sustainability practices in the context of own job role
- basic pre-activity risk assessment for basic stock work
- common horse gender, colours, markings, and other identifying features
- common basic features of horse behaviour and psychology
- the features of livestock behaviour and how this is utilised to minimise stress for horse and livestock
- relevant workplace procedures, industry standards, and guidelines for horse riding and riding safety, including lungeing or riding in a yard before outside and one-rein stops
- basic care and husbandry, and procedures for horses
- the common signs of disease or injury in horses, basic anatomy and physiology of the horse
- the use of horses for workplace operations
- care and maintenance of working gear.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions, including livestock handling yards and paddocks
- resources, equipment and materials:
 - various live, calm, consistent and obedient horses educated for stock work and assessed as suitable for the experience and skill of the individual
 - livestock to muster, move, and check
 - appropriate tack for individual, horse and activity
 - personal protective equipment (PPE) correctly fitted and applicable to activity for the individual

- specifications:
 - work instructions and procedures for carrying out basic stock work.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK301 Administer medication to livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to apply preventative health treatments and other medications to livestock under professional supervision.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Prepare for treatment of livestock	1.1 Select equipment and materials and check for safe and sound operation and confirmed against work plan 1.2 Prepare livestock treatment site and facilities 1.3 Prepare livestock treatments 1.4 Identify hazards, assess risk and implement risk controls
2. Treat livestock	2.1 Muster livestock and yard, control, inspect and identify for treatment in line with enterprise requirements and animal welfare policies 2.2 Use low risk operating procedures with regard to livestock handling 2.3 Calculate dose rates and calibrate equipment 2.4 Administer treatment 2.5 Identify and minimise environmental impacts 2.6 Minimise risks of resistance to veterinary medicines and chemicals
3. Complete treatment process	3.1 Prepare livestock and move along planned route without damage to person, property or environment 3.2 Clean, maintain and store equipment, materials and facilities used for treatments 3.3 Dispose of livestock residues and waste appropriately
4. Monitor effectiveness of treatment	4.1 Monitor livestock post-treatment for signs of treatment effectiveness 4.2 Recognise abnormalities in livestock health and condition and treat appropriately 4.3 Record livestock treatment process and outcomes including withholding periods 4.4 Apply enterprise biosecurity policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK301A Administer medication to livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK301 Administer medication to livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe work practices
- prepare, clean and maintain treatment site, facilities and equipment to industry standards
- select and utilise equipment and materials appropriate for treating requirements and match to work tasks
- muster, move and handle livestock for health treatments
- administer preventative health treatments in accordance with work plan
- monitor effectiveness of treatments and provide follow up if required
- maintain records of treatments
- assess and calculate herd/flock numbers, measure dosage and quantities
- monitor livestock behaviour and recognise abnormalities
- apply contingency measures for administering treatments in the event of adverse weather conditions
- carry out animal husbandry procedures
- provide due care and handle livestock humanely
- communicate abnormalities, equipment faults and workplace hazards
- read and interpret manufacturers specifications, work and maintenance plans, veterinary chemical labels and Safety Data Sheets (SDS's)
- apply relevant work health and safety requirements
- apply relevant biosecurity requirements
- apply relevant animal welfare practices
- apply relevant environmental sustainability practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- equipment and materials for treating livestock, their components and functions
- livestock health treatments, procedures and methods
- livestock identification methods
- mustering and moving techniques
- withholding periods for residues in meat, milk or wool
- technique of disposing of livestock residues and waste appropriately
- hazards associated with handling livestock and veterinarian medicines and chemicals
- implications and management of veterinary medicine and/or chemical resistance
- personal protective clothing and equipment and when and how it should be used and maintained
- procedures for cleaning and maintaining treatment equipment and materials
- enterprise policies with regard to treating livestock, recording and reporting routines
- relevant State/Territory legislation, regulations and codes of practice with regard to work health and safety, animal welfare, biosecurity and the use and control of hazardous substances

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK303 Carry out feedlot operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out feedlot operations

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to corporate, small scale or opportunity lot feeding of cattle, sheep and goats.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

In addition to legal responsibilities, all units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to work with livestock feed	1.1 Check work to be undertaken from work program and confirm with supervisor where necessary. 1.2 Identify work health and safety hazards, assess risks and apply suitable control measures 1.3 Select, use and maintain suitable personal protective equipment 1.4 Select, check and maintain tools and equipment suitable for the work to be undertaken 1.5 Identify environmental impacts of undertaking work, assess likely outcomes and, if necessary, take responsible action
2. Mix feed	2.1 Calibrate scales and containers to be used for measurements 2.2 Identify ingredients from instructions and obtain from storage locations 2.3 Measure ingredients in the specified ratios and quantities 2.4 Blend ingredients adequately and hygienically in the manner specified using appropriate equipment 2.5 Carry out grinding, where required, in the manner specified and using appropriate equipment
3. Feed livestock	3.1 Store feed appropriately 3.2 Check the physical quality, quantity and type of feed on their arrival to the shed 3.3 Feed livestock at scheduled time, rate and frequency 3.4 Maintain quality and hygiene of feed throughout the feeding process
4. Apply and maintain feedlot hygiene and biosecurity procedures	4.1 Examine livestock entering feedlot, check their documentation and quarantine them for specified period 4.2 Maintain cleanliness and hygiene by selecting and using appropriate cleaning methods 4.3 Maintain thorough personal hygiene practices in all activities associated with handling livestock, including reducing risks from diseases transmissible to humans (zoonotic diseases) 4.4 Dismantle and clean equipment and fittings and replace correctly 4.5 Place and dispose of waste and debris in allocated areas, and ensure run-off is managed according to the Feedlot Code of Practice, environmental legislation and public health standards 4.6 Check and sign in visitors to feedlot according to enterprise and industry procedures

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK303A Carry out feedlot operations.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK303 Carry out feedlot operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply relevant work health and safety requirements, identify hazards and implement safe work procedures
- prepare equipment and machinery mixing feed
- identify a range of grain and feed types and qualities
- mix livestock feed
- feed livestock
- follow relevant procedures for the safe and environmentally responsible disposal of waste
- apply and maintain relevant feedlot hygiene and biosecurity procedures
- apply relevant animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant work health and safety requirements
- relevant biosecurity requirements
- relevant animal welfare practices
- tools and equipment used for working with livestock feed, their functions and maintenance
- environmental impacts of working with livestock feed and mitigation methods
- measurement systems for livestock feed, and calibration and maintenance of measuring equipment
- types of grains and feed ingredients (grains, meals, vitamins, minerals and premix formulations) used for feeding livestock, their functions, characteristics and quality assessment methods

- methods and equipment for blending and grinding of feed
- methods of storage and handling of livestock feed and impact of feed quality changes on livestock
- livestock feeding programs and impact of program changes or variations on livestock
- impact of biosecurity practices on livestock in a feedlot
- cleaning methods, cleaning agents, their proper use and disposal, and relevant Work Health and Safety practices
- common zoonoses and their impacts on human and livestock health
- management and disposal of waste, debris and run-offs according to relevant biosecurity and environmental regulations, codes of practice, industry and enterprise standards
- management of and biosecurity requirements for visitors to the feedlot

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK304 Carry out post-mortem examination of livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out post-mortem examination of livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities, work in a range of known contexts and use discretion and judgement in the selection and use of available resources

Individuals must comply with national and local regulations for disposal of the carcass.

Individuals must comply with regulations for sending of biological samples by post.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to conduct post-mortem / necropsy	1.1 Select site for post-mortem, ensuring compliance with biosecurity and environmental requirements 1.2 Prepare the site to be used for the post-mortem 1.3 Obtain and collate all relevant preliminary information about the carcass to be examined 1.4 Identify work health and safety and biosecurity hazards, assess risks and take appropriate action 1.5 Select and use personal protective equipment 1.6 Obtain and prepare required equipment and resources 1.7 Move the animal to be examined to the post mortem area using appropriate manual lifting techniques and equipment 1.8 Seek expert assistance if required
2. Carry out post-mortem examination	2.1 Carry out external assessment and note outward signs of disease or injury 2.2 Seek expert advice and assistance before proceeding where unusual symptoms are present 2.3 Perform post mortem of the carcass in a systematic and safe manner using appropriate techniques and equipment, without causing artificial damage to organs and tissues 2.4 Examine organs, tissues and joints 2.5 Take samples of organs and tissues where appropriate, and place in properly labelled containers to meet laboratory requirements 2.6 Record relevant data and details of the post mortem examination and suggest the cause of death where possible
3. Carry out post necropsy procedures	3.1 Dispose of carcass and biological materials using appropriate equipment and comply with biosecurity and environmental requirements, and national and local regulations for carcass disposal 3.2 Send labelled and packaged samples to the laboratory for analysis and comply with regulations for sending biological samples by post 3.3 Collate all information about the livestock examined and the records made during the post-mortem, and forward to supervisor or veterinarian for analysis and establishing a diagnosis 3.4 Clean and disinfect all equipment used and store appropriately 3.5 Clean and disinfect site used for the post-mortem 3.6 Disinfect disposable personal protective equipment before disposing them 3.7 Wash hands and exposed body areas thoroughly 3.8 Change clothing and place in appropriate bin for laundering and disinfect boots

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK304A Carry out post-mortem examination of livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK304 Carry out post-mortem examination of livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare for post mortem, ensuring appropriate handling and use of equipment, personal protective equipment and disinfectants
- identify work health and safety and biosecurity hazards and implement risk controls
- handle carcasses safely and appropriately
- perform external examination and post mortem examination of carcass
- dispose of carcass appropriately
- carry out post necropsy procedures of cleaning and disinfection of equipment, post mortem site and personal protective equipment
- prepare biological samples for sending to the laboratory where appropriate
- carry out procedures for personal hygiene
- apply relevant work health safety environmental and biosecurity requirements and practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- sequence of actions in conducting a post mortem examination
- appropriate handling and use of post mortem equipment, personal protective equipment and disinfectants
- requirements for correct preparation, labelling and packaging of biological samples
- anatomy and physical features of the species being examined
- common causes of death for the species being examined
- typical signs of pathology in major organs
- typical symptoms and clinical signs of notifiable diseases in the relevant species

- relevant work health and safety environmental and biosecurity requirements, and carcass disposal regulations

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessments for the following performance evidence must be conducted on a livestock carcass:

- carry out post mortem examination

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK305 Maintain livestock water supplies

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain livestock water supplies.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify maintenance requirements	1.1 Check livestock water supplies for quality and inspect for signs of contamination or deterioration, and low or interrupted supply

Element	Performance criteria
	1.2 Check components of water supply systems for wear, deterioration or malfunctions 1.3 Check and confirm Identified maintenance requirements according to the maintenance plan
2. Prepare for maintenance	2.1 Select tools, equipment and materials appropriate to the job requirements and check for serviceability 2.2 Identify faulty or unsafe tools and segregate for repair or replacement 2.3 Identify hazards, assess risks and implement control measures 2.4 Select and use personal protective equipment
3. Carry out maintenance procedures	3.1 Maintain water systems and equipment to manufacturers specifications, livestock requirements and maintenance plan 3.2 Carry out maintenance and repair of motors where necessary, including fault finding 3.3 Report more complex faults and repair requirements to the supervisor
4. Complete maintenance activities	4.1 Clean worksite, tools and materials, return to operating order and store 4.2 Report malfunctions, faults, and wear or damage to tools for repair or replacement 4.3 Collect, treat and dispose of or recycle unwanted materials and waste from maintenance activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK305A Maintain livestock water supplies

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK305 Maintain livestock water supplies

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe work procedures
- estimate water requirements based on average and peak demand for water
- test and monitor machinery and equipment for correct operation and recognise minor faults and report major faults
- identify the components of a range of water supply systems
- arrange water supply system components and materials
- use hand and power tools safely
- carry out routine servicing and minor repairs on a range of water supply systems and equipment
- work as part of a contract team as required
- demonstrate safe and positive environmental working practices
- test water quality as directed
- read and interpret a water supply plan
- measure and calculate lubrication requirements
- apply relevant work health and safety requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- livestock requirements and average and peak demand for water
- operational principles of various pumps and pumping systems
- functions and components of a range of water supply systems
- operation and maintenance of diesel and petrol engines

- factors which affect water quality, various water contaminants and remedial action
- advantages and disadvantages of different types of water supply systems
- State and Territory work health and safety legislative requirements relevant to the job role
- relevant legislative requirements with regard to property water supply systems
- environmental code of practices associated with maintenance activities.

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK306 Coordinate and monitor production performance

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to coordinate resources and monitor the work of others within an intensive production process.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work, including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for work in the	1.1 Confirm work to be undertaken from work program where

Element	Performance criteria
production area	<p>necessary, and clarify with supervisor if required</p> <p>1.2 Identify hazards, assess risks and implement suitable controls</p> <p>1.3 Select and use suitable personal protective equipment</p> <p>1.4 Select, check and maintain tools and equipment suitable for the work to be undertaken</p> <p>1.5 Communicate the personal protective equipment and other safety requirements to staff and contractors, and obtain confirmation of understanding</p>
2. Coordinate work activities	<p>2.1 Communicate the work required to staff and contractors clearly and unambiguously following the production plan and program</p> <p>2.2 Meet work schedules, plans and priorities according to the needs of the organisation or situation</p> <p>2.3 Ensure the allocation of work optimises resources and the existing competencies of staff</p> <p>2.4 Provide feedback to staff and management on request, or as necessary</p>
3. Monitor daily operations	<p>3.1 Assess manure and litter consistency and treat to prevent deterioration, where appropriate</p> <p>3.2 Implement the designated lighting and internal environment programs for the unit</p> <p>3.3 Check that effluent storage and disposal systems are operated according to the production program and manufacturer's instructions</p> <p>3.4 Ensure that all rubbish and used consumables are removed from production site according to the requirements of the production program</p> <p>3.5 Ensure work, health and safety requirements are being observed and followed</p> <p>3.6 Communicate with operational staff and any contractors regularly to ensure smooth operation and progress</p>
4. Monitor herd/flock health	<p>4.1 Observe herd/flock and shed conditions for signs of ill health, and record and report changes</p> <p>4.2 Examine livestock for evidence of disease through post-mortem techniques in line with individual unit standard and veterinary advice</p> <p>4.3 Identify disease status of unit stock and request serviceman or veterinary assistance when required</p> <p>4.4 Check components of quarantine/ biosecurity procedures for compliance</p> <p>4.5 Comply with enterprise animal welfare policies</p>

Element	Performance criteria
5. Complete records and documentation	5.1 Collate information gathered throughout production operations 5.2 Graph collated information where required, and prepare for presentation to supervisor or manager ensuring easy recognition and extraction of data

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK306A Coordinate and monitor production performance

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK306 Coordinate and monitor production performance

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- maintain biosecurity procedures and report concerns immediately
- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs
- read and interpret production and other information in a manner that is readily accessible for both management and operators
- monitor shed temperature and adjust as required
- read and interpret spreadsheet information using a software package
- discuss production performance, risk and hazard potential, quality of output, and methods of production with both management and operators
- read and interpret the activities contained in livestock production plans
- observe, identify and react appropriately to work health and safety hazards and environment risks
- recognise when performance standards are not met and investigate and report findings in written form
- provide supervision of staff including allocating duties and feedback on performance
- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- apply relevant animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- biosecurity procedures and codes of practice
- common livestock diseases and clinical signs
- relevant industry, environmental and quality standards (including ISO9002:1094)
- animal welfare codes of practice and procedures
- types of sheds and equipment
- raw data to determine issues and problems
- recording and reporting requirements
- fundamentals of quarantine and control methods
- common feed ingredients and additives
- water reticulation systems and quality
- State and Territory work health and safety legislation and codes of practice relevant to the sector

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK307 Euthanase livestock

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to euthanase livestock without distress or suffering prior to cessation of their vital life functions.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities, work in a range of known contexts and use discretion and judgement in the selection and use of available resources.

Individuals must hold firearms licenses if they are using firearms to euthanase livestock.

Individuals must comply with national and local regulations for disposal of the carcass.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for euthanasia	1.1 Confirm criteria for decision to destroy livestock conforms to workplace procedures and approval of supervisor where required 1.2 Confirm the method selected to destroy livestock is suitable for the species and meets animal welfare requirements, as outlined in the relevant codes of practice 1.3 Prepare equipment and materials required to complete the euthanasia 1.4 Identify hazards, assess risks and implement control measures 1.5 Identify environmental and public safety risks associated with the euthanasia 1.6 Obtain licences and permits required to complete euthanasia where necessary 1.7 Check and prepare equipment and materials for euthanasia 1.8 Select and use personal protective equipment
2. Carry out euthanasia of animal	2.1 Handle and transport equipment appropriately and safely 2.2 Restrain animal in a way that minimises pain and distress 2.3 Euthanase animal in a quick and painless way 2.4 Check animal to ensure it is dead 2.5 Destroy animals that have not been euthanased immediately, in a humane manner
3. Carry out post euthanasia procedures	3.1 Handle and prepare carcass to be used for research or commercial according to enterprise requirements 3.2 Dispose of carcass not to be used for research or commercial purposes in line with legislative and enterprise requirements 3.3 Clean and store equipment and materials 3.4 Report and record animal and euthanasia details as required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK307 Euthanase livestock Release 2	AHCLSK307 Euthanase livestock Release 1	Minor edits to clarify knowledge evidence Removed the word 'live' from assessment conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK307 Euthanase livestock

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply relevant animal welfare requirements
- implement relevant work health and safety practices
- implement relevant biosecurity requirements
- prepare for euthanasia
- carry out euthanasia
- confirm signs of death in a euthanased animal
- handle, prepare or dispose of carcass in line with workplace procedures, national and local regulations
- clean and store equipment and materials
- record details of the euthanasia.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- their responsibilities with regard to animal welfare as outlined in the relevant animal welfare codes of practice
- relevant work health and safety and biosecurity requirements, explain the requirements of statutory legislation and codes of practice related to euthanasing livestock
- workplace procedures for euthanasia of livestock as required, describe animal handling, restraint and behaviour for carrying out euthanasia
- signs of death in an animal
- anatomy and physical features of the relevant livestock species

- methods of euthanasia suitable for the livestock species as outlined in the relevant codes of practice.
-

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Competency in this unit can be determined in a single species.

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK308 Identify and draft livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to identify and draft or sort animals for sale, breeding or other enterprise requirements.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Identify animals	1.1 Identify criteria for animal selection clarified from production and marketing information and supervisor or management instructions. 1.2 Implement procedures to control and sort livestock which comply with enterprise animal welfare and work health and safety policies 1.3 Identify and separate animals according to unit selection criteria 1.4 Apply identification devices safely and humanely 1.5 Identify hazards, assess risks and implement controls 1.6 Select and use suitable personal protective equipment
2. Assess and select animals	2.1 Assess animals to comply with industry and enterprise criteria and guidelines 2.2 Rank and select animals selected using performance records, weight, sex or other organisational criteria 2.3 Record and report selection 2.4 Observe accepted guidelines and industry norms for prescribed medication withholding periods when selecting animals 2.5 Complete and maintain records and documentation 2.6 Apply enterprise biosecurity policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK308A Identify and draft livestock

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK308 Identify and draft livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify work health and safety hazards and implement safe work practices
- handle and draft livestock in line enterprise animal welfare practices
- identify criteria for animal selection
- control and sort livestock
- select animals according to selection criteria
- safely and humanely apply identification devices
- appraise and grade animals
- recognise livestock abnormalities
- apply relevant work health and safety requirements
- apply relevant biosecurity and animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- handling techniques and restraint methods
- animal movement and drafting
- animal welfare principles
- livestock behaviour relevant to drafting
- selection criteria for breeding stock
- livestock identification systems and devices
- enterprise animal identification procedures
- State and Territory work health and safety and animal welfare legislative and enterprise requirements.

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK309 Implement animal health control programs

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement animal health control programs.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Assess animal health status and treatment options	1.1 Source information on animal health program from the livestock production plan 1.2 Assess animal health status and identify potential health issues for different mobs and classes of livestock 1.3 Identify prevention and treatment strategies to resolve health issues 1.4 Source information on parasite immunity to different classes of chemicals and plan for rotation of chemical groups
2. Prepare for treatment of animals	2.1 Identify animals affected by infection or parasites or requiring treatment under the animal health plan 2.2 Determine the severity of infection where applicable through approved testing methods or by seeking expert/veterinary advice 2.3 Determine the type and severity of infestation where applicable through faecal egg counts or other tests 2.4 Determine the need for treatment and the type and scope of treatment and prepare according to manufacturer's specifications or veterinary advice 2.5 Prepare equipment and materials and treatment site 2.6 Identify hazards, assess risks and implement control measures 2.7 Select and use personal protective equipment
3. Treat animals	3.1 Handle and restrain animals without causing harm or injury to animal or handler and in line with enterprise animal welfare policies 3.2 Administer treatment hygienically and consistently according to manufacturer's specifications or veterinary advice 3.3 Record withholding periods and other details of treatment 3.4 Identify treated animals to ensure withholding period (WHP) compliance and isolation from non-treated animals where required 3.5 Count animals out, prepare and move along a planned route without damage to person, property or environment
4. Complete treatment process	4.1 Monitor animal health and condition post-treatment and report abnormalities 4.2 Identify the environmental implications associated with the treatment of animals, assess and control appropriately 4.3 Clean equipment and worksite and dispose of waste, including animal residues 4.4 Store health treatments appropriately 4.5 Document relevant information

Element	Performance criteria
	4.6 Apply enterprise biosecurity policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK309A Implement animal health control programs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK309 Implement animal health control programs

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe work practices for animal health treatment
- identify the symptoms of parasite infestation and other diseases
- monitor animal health status and refer to the production plan for intervention strategies
- select livestock prone to infection for culling
- accurately diagnose the type and severity of infection or parasite infestation
- arrange and co-ordinate equipment and resources
- read and interpret chemical and veterinary health labels, manufacturer's specifications and Safety Data Sheets (SDSs)
- calculate animal numbers and measure treatment dosage and rates
- select and administer treatments appropriate to treat infections and infestations and observe withholding periods
- drench and vaccinate livestock
- provide due care and humanely handle animals
- return animals to prepared and clean environments
- monitor animals for treatment effectiveness
- apply relevant work health and safety requirements
- apply relevant biosecurity, animal welfare and environmental sustainability policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of parasite infestation and their symptoms
- parasite resistance of different classes of livestock

- application procedures and effects of veterinary chemicals
- types of health preparation treatments
- enterprise vaccination program and procedures
- identification of and prescribed treatments for infections and infestations
- grazing management strategies used in internal parasite control
- drenching equipment, drenches and their efficiency
- relevant codes of practice with regard to the safe use and handling of hazardous substances
- withholding periods for treated animals
- animal handling and restraint techniques
- animal welfare principles
- relevant work health and safety and animal welfare legislative and enterprise requirements

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK310 Implement feeding plans for intensive production

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement feeding plans

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to intensive animal production systems.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare for feeding	1.1 Identify work health and safety hazards, assess risks and implement suitable controls 1.2 Assess and record livestock welfare and condition 1.3 Identify livestock production status or stage of production 1.4 Identify environmental impacts of undertaking work, assess likely outcomes and, if necessary, take responsible action 1.5 Check and maintain feed distribution system and feeders 1.6 Follow enterprise animal welfare policies
2. Carry out feeding and watering	2.1 Check automatic and computerised feeders for blockages and correct functioning 2.2 Rectify abnormalities or irregularities with feed stocks 2.3 Monitor feed consumption and wastage and make adjustments 2.4 Feed and water livestock as required 2.5 Adjust watering systems for height or position 2.6 Check water flow and make appropriate adjustments 2.7 Empty watering containers or lines and clean where necessary
3. Conduct hygiene and administration activities	3.1 Clean feeding equipment appropriately to maintain hygiene standards 3.2 Collate gathered information and present the information 3.3 Complete required records and documentation

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK310A Implement feeding plans for intensive production

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK310 Implement feeding plans for intensive production

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply relevant work health and safety requirements, identify hazards and implement safe work procedures and suitable risk controls
- assess livestock according to enterprise requirements
- prepare for feeding livestock
- carry out feeding and watering
- clean feeding equipment
- complete records and documentation
- follow relevant biosecurity requirements and animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant work health and safety requirements
- relevant animal welfare practices and biosecurity requirements
- environmental impacts of intensive livestock feeding
- methods of assessing livestock condition
- systems and stages of intensive livestock production
- feed distribution systems and feeders, their functions, maintenance and servicing
- methods of storage and handling of intensive livestock feed and impact of feed quality changes on livestock
- intensive livestock feeding programs and impact of program changes or variations on livestock
- watering systems and equipment, their functions, maintenance, servicing and impact of changes or variations on livestock

- methods of cleaning feed equipment, cleaning agents, their proper use and disposal, and relevant work health and safety practices
- type of information to be gathered, documentation and records which must be maintained

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK311 Implement feeding plans for livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor available pasture for grazing and implementing a feeding plan.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Determine livestock condition and nutritional requirements	1.1 Monitor and report livestock condition 1.2 Identify livestock production status 1.3 Source livestock nutritional requirements and the nutritional value of feedstuffs from the feeding plan 1.4 Use feeding plans to determine adjustment in response to the monitoring of livestock condition and pasture growth 1.5 Report and separate animals that are in atypical condition, injured or diseased in line with enterprise biosecurity policies 1.6 Apply enterprise animal welfare policies to livestock handling and husbandry activities
2. Assess pasture feed	2.1 Assess quantity and quality of available pasture 2.2 Implement grazing management plans and monitor to ensure the sustainable stocking capacity of pasture 2.3 Monitor grazing behaviour of livestock and identify shy or problem feeders 2.4 Determine livestock feeding methods and level of supplementary feeding if required
3. Manage the feeding of livestock	3.1 Graze livestock on pasture according to the guidelines described in the feeding plan 3.2 Obtain required supplementary feed 3.3 Provide supplementary feed to livestock in the appropriate manner and times 3.4 Identify and assess indications of any negative environmental impacts and make amendments to the feeding method as required 3.5 Monitor and report condition and live weight response to feeding

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK311A Implement feeding plans for livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK311 Implement feeding plans for livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- monitor pasture health and condition
- assess herd/flock health and condition and live weight
- identify livestock nutritional requirements
- order feed if requested in line with feeding plan
- identify feeding problems and animals that require individual treatment
- handle livestock humanely and monitor animal welfare
- respond to or report negative environmental impacts of feeding
- apply relevant biosecurity, animal welfare and environmental sustainability policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- nutrient and feeding requirements of a range of livestock
- different types of agricultural feeds
- factors that affect feed supply and demand for a grazing operation
- grazing practices which maximise pasture growth and quality to best match herd/flock feed requirements
- purpose of feed conservation in relation to enterprise feed supply and livestock requirements
- different types of pasture grazing systems, including rotation, strip and set stocked grazing
- ways of determining a feed surplus
- role of spelling subdivision in effective pasture and animal management
- different supplementary feeding options for livestock

- environmental controls and codes of practice applicable to the enterprise
- nutrient values of pasture and supplementary feedstuffs
- codes of practice with regard to animal welfare and environmental protection
-

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK313 Monitor livestock production growing environments

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor livestock production growing environments.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor livestock health and welfare	1.1 Confirm workplace information and clarify with supervisor 1.2 Identify work health and safety hazards assess risks implement

Element	Performance criteria
	suitable controls according to enterprise guidelines 1.3 Identify and report non-productive and slow growing livestock 1.4 Assess animals for overall health and welfare
2. Monitor the production environment	2.1 Monitor environmental parameters according to the production plan and make adjustments as required 2.2 Monitor hygiene and welfare procedures and adjust as required 2.3 Monitor disposal of waste and debris
3. Monitor feed	3.1 Monitor feed to ensure the correct diet is offered to livestock for optimum growing conditions 3.2 Monitor feed to ensure fresh palatable feed is available to livestock
4. Perform routine maintenance checks	4.1 Check all buildings, structures and production areas for wear and tear 4.2 Check equipment for delivering water and feed 4.3 Check equipment controlling the housing environment
5. Complete monitoring activities	5.1 Report significant problems to the enterprise 5.2 Record checks

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK313A Monitor livestock production growing environments

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK313 Monitor livestock production growing environments

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe work practices
- monitor livestock health and welfare
- monitor the production environment
- monitor feed systems and water supplies
- perform routine maintenance checks
- complete monitoring activities
- follow relevant biosecurity and animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- production parameters and production assessment systems of the livestock industry
- signs of health and methods of assessing livestock health
- relevant animal welfare requirements of the livestock industry and their impact on the enterprise
- housing, production and management systems of the livestock industry and equipment used in these systems
- relevant hygiene and biosecurity requirements of the livestock industry and their impact on the enterprise
- relevant waste disposal requirements of the livestock industry and their impact on the enterprise
- feed management and feeding programs of the livestock industry and their impact on the enterprise

- monitoring, maintenance and servicing of housing structures, production structures, environmental control equipment, watering equipment and feed delivery equipment
- type of information to be gathered, documentation and records which must be maintained
- relevant work health and safety requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK316 Prepare livestock for competition

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare and train livestock for competitive showing.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Follow instructions to prepare livestock for showing	1.1 Identify and prepare livestock for showing 1.2 Monitor feed and water supplies and replenish as required 1.3 Maintain feed records 1.4 Monitor health and welfare status of livestock and report abnormalities 1.5 Monitor and maintain facilities 1.6 Identify hazards, assess risks and report to the supervisor
2. Handle and groom livestock prior to competition	2.1 Select, check and use appropriate handling and grooming equipment 2.2 Condition livestock to human handling and train to the standard required for show handling and performance 2.3 Groom livestock for showing to competition standard 2.4 Carry out handling procedures with minimum stress and discomfort to livestock, and maximum safety for livestock, handlers and other parties and in line with animal welfare requirements
3. Present livestock	3.1 Check equipment to be used in showing for correct operation and prepare for presentation requirements 3.2 Present livestock using handling techniques to exhibit livestock to best advantage according to competition requirements 3.3 Comply with instructions and requests from competition officials 3.4 Report and record relevant information in compliance with legislation and enterprise requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK316A Prepare livestock for competition

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK316 Prepare livestock for competition

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards, assess risks and implement safe work procedures
- plan for and provide livestock feed and water requirements
- maintain livestock facilities and handling equipment
- restrain, handle and groom livestock using safe and humane methods and procedures
- train livestock for showing
- comply with animal welfare requirements
- prepare livestock to competition standards
- parade and present livestock for show
- read and interpret written information, receive, comprehend and communicate oral information, write basic statements and maintain livestock records
- apply relevant work health and safety requirements
- apply relevant biosecurity and animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- competition requirements for grooming, handling and presentation
- components and functions of handling equipment
- handling techniques, restraint methods and when to use them
- livestock grooming and training techniques (to lead and stand correctly)
- livestock health and nutritional requirements
- preparation and maintenance requirements for livestock facilities and equipment
- livestock movement and behavioural characteristics in handling and confined areas

- work health and safety , animal welfare and livestock movement legislative requirements

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK317 Plan to exhibit livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan to exhibit livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Select potential exhibits	1.1 Determine selection criteria 1.2 Choose potential exhibits against selection criteria and according to industry exhibit expectations 1.3 Identify faults in potential exhibits and take remedial action
2. Determine preparation requirements	2.1 Identify preparation requirements 2.2 Identify and organise resources and facilities to allow for adequate preparation prior to exhibition 2.3 Communicate preparation requirements, including work health and safety animal welfare requirements to staff 2.4 Make arrangements to ensure necessary resources and facilities at the exhibition are available and will be ready
3. Supervise preparation	3.1 Check potential exhibits and monitor progress 3.2 Monitor staff in line with established preparation procedures and realistic time-lines 3.3 Implement contingency plans to meet preparation shortfalls as required 3.4 Advise staff of any changes in preparation procedures and instruct accordingly
4. Present exhibition	4.1 Check transport arrangements to ensure that transport is suitable and that exhibits will arrive in time 4.2 Ensure livestock movement documentation is completed 4.3 Confirm entries meet exhibition schedule requirements and procedural rules 4.4 Display exhibits to their best advantage and according to exhibition guidelines 4.5 Optimise promotional and sales opportunities and pursue as required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK317A Plan to exhibit livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK317 Plan to exhibit livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- select livestock for exhibition
- prepare animals for exhibition
- present livestock to best advantage
- promote the product to clients and pursue sales opportunities
- communicate with staff during preparations, exhibit officials and potential customers
- identify potential exhibits against selection criteria to accurately select livestock/fleeces
- train animals to be led and presented in competition
- organise entries, resources and facilities for showing
- arrange and prepare for transport
- apply relevant work health and safety requirements
- apply relevant biosecurity and animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- criteria for competition judging
- preparation procedures
- requirements for entry of competitors
- transportation requirements
- feeding and nutrition requirements
- communication and supervision techniques
- observation methods

- relevant legislative work health and safety requirements, especially as they relate to livestock and fleece exhibitions, and animal transportation, animal welfare and safe livestock handling techniques
- enterprise and industry policies and codes of practice with regard to livestock exhibitions, sales, livestock transportation, and recording and reporting requirements

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK318 Rear newborn and young livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to rear newborn and young livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Prepare for care of newborn and young	1.1 Identify, select and prepare facilities, equipment and supplies needed to provide care 1.2 Assess and prepare for the needs of newborn and young animals 1.3 Implement and observe feeding routines 1.4 Identify and maintain hygiene, health and environmental requirements 1.5 Handle newborn and young animals humanely in line with enterprise animal welfare policies
2. Provide care for newborn and young	2.1 Provide feed and feed supplements as required 2.2 Monitor relationship between mother and young and implement strategies to address any problems where appropriate 2.3 Maintain and monitor feeding, water and shelter areas for correct operation, cleanliness and hygiene 2.4 Treat routine health and feeding problems, including digestive upsets and infections
3. Monitor health of newborn and young	3.1 Monitor newborn and young against benchmarks for growth, health and development 3.2 Take appropriate action for sick, weak, orphaned and injured, newborn and young 3.3 Seek assistance for more complex health and feeding problems 3.4 Separate newborn and young requiring routine husbandry and health procedures treat and return 3.5 Carry out treatments and checks appropriately
4. Meet ongoing requirements	4.1 Identify young animals ready for weaning and wean according to weaning programs 4.2 Identify and meet feeding requirements 4.3 Handle animals regularly as required 4.4 Keep and maintain records 4.5 Ensure all work is conducted safely and in accordance with enterprise requirements, work health and safety and animal welfare legislation and regulations

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK318A Rear newborn and young livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK318 Rear newborn and young livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe work procedures
- weigh and assess condition of newborn and young animals
- work within animal welfare legislative requirements and enterprise and industry guidelines
- identify abnormal conditions and report or react promptly
- safely and humanely handle and care for newborn and young animals
- recognise signs of stress or ill health in newborn and young animals
- communicate with other personnel
- provide support as needed to veterinarians attending to sick newborn and young animals
- collect samples
- identify the young and their parent
- use feed, shelter and ventilation equipment
- calculate feed and dose rates
- apply relevant work health and safety requirements
- apply relevant biosecurity and animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- newborn and young animals development and growth
- newborn and young animals feed, shelter and environmental requirements
- common deformities
- infection controls and treatment programs

- significance of colostrum to livestock
- feeding systems and weaning strategies
- husbandry procedures
- hygiene and cleanliness requirements
- enterprise requirements for rearing of newborn and young animals and recording and reporting requirements
- relevant legislative animal welfare health and work health and safety requirements especially as they relate to safe animal handling techniques, feeding, animal treatments, and rearing and caring for newborn and young animals

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK319 Slaughter livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to slaughter livestock humanely.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They work in a range of known contexts, use discretion and judgement in the selection and use of available resources and complete routine activities.

Individuals must hold firearms licences if they are using firearms to slaughter livestock.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for slaughter	1.1 Identify reasons for slaughter 1.2 Identify and prepare slaughter site

Element	Performance criteria
	1.3 Prepare equipment and transport equipment to slaughter site where required 1.4 Select and prepare livestock to be slaughtered in compliance with animal welfare requirements 1.5 Determine the slaughter method
2. Slaughter animal	2.1 Conduct slaughter humanely in compliance with work health and safety and animal welfare requirements 2.2 Bleed animal by severing the major blood vessels safely and hygienically 2.3 Dress, hang and protect carcase where appropriate 2.4 Comply with all relevant work health and safety, public health, hygiene, animal welfare, biosecurity and environmental sustainability requirements
3. Complete slaughter operations	3.1 Dispose of, or destroy offal and waste products in an environmentally responsible manner and according to State/Territory and local authority health standards 3.2 Clean and store equipment safely and appropriately 3.3 Clean slaughter site appropriately 3.4 Prepare meat for intended use where appropriate

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK319A Slaughter livestock

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK319 Slaughter livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare site, equipment and livestock for slaughter safely and appropriately
- conduct the slaughter of livestock in compliance with relevant requirements and regulations
- complete slaughter operations
- dispose of, or destroy offal and waste products in an environmentally responsible manner and according to State/Territory and local authority health standards
- comply with all relevant work health and safety, public health, hygiene, animal welfare, biosecurity and environmental sustainability requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant work health and safety, public health, hygiene, animal welfare, biosecurity and environmental sustainability requirements
- preparation, selection and use of the site, equipment and livestock for the slaughter
- methods and procedures for the humane slaughter of livestock
- preparation, processing and disposal of the carcass and its parts after slaughter
- post-slaughter procedures for the site and equipment
- anatomy and physical features of the species being slaughtered
- typical signs of pathology in major organs
- typical symptoms and clinical signs of notifiable diseases in the relevant species
- codes of practice for the welfare and husbandry of relevant livestock species

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessments for the following performance evidence must be conducted on a live animal:

- prepare for slaughter
- slaughter animal
- complete slaughter operations

Competency in this unit can be determined in a single species.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK320 Coordinate and monitor livestock transport

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to safely and efficiently transport livestock to a destination within specified timeframes.

Animal welfare and low stress stock handling principles and practices are to be observed at all times.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for the transport of livestock	1.1 Check the transport directions and calculate load 1.2 Determine transport requirements and engage a suitable carrier 1.3 Identify required equipment and resources and move livestock to loading facility 1.4 Assemble and prepare livestock for transport 1.5 Identify existing and potential hazards and report to supervisor
2. Load livestock	2.1 Observe industry and enterprise work health and safety policies and procedures 2.2 Ensure documentation is signed by the relevant person and check that the required animal identification is in place 2.3 Obtain relevant permits and comply with movement restrictions where required 2.4 Record animal details and identification as required using technology where applicable 2.5 Load and secure prepared livestock in accordance with industry and enterprise animal welfare and work health and safety procedures and requirements
3. Monitor transport and unload livestock	3.1 Communicate with the carrier to ensure livestock are transported with minimal stress and discomfort according to animal welfare requirements 3.2 Ensure livestock are checked regularly throughout the journey and unloaded for feeding and watering appropriately 3.3 Unload livestock using appropriate equipment and facilities, such as National Livestock Identification System (NLIS) readers where applicable 3.4 Monitor livestock condition and welfare post transport and provide feed and water appropriately
4. Complete transportation operations	4.1 Clean, maintain and secure vehicle, equipment and facilities appropriately 4.2 Complete required records according to legislative and enterprise requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK320A Coordinate and monitor livestock transport

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK320 Coordinate and monitor livestock transport

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards, assess risks and implement safe work procedures
- interpret transport plan requirements
- coordinate the transport of livestock
- safely, load livestock while maintaining load within specifications
- distribute animals on transport to prevent overcrowding and minimise risk of injury
- obtain relevant permits and comply with movement restrictions
- ensure documentation and livestock identification is in place
- ensure appropriate recording including use of technology where applicable
- safely unload livestock
- review health and condition of livestock after transit
- demonstrate safe and humane handling of livestock according to animal welfare codes of practice
- demonstrate safe and environmentally responsible workplace practices
- read and comprehend manufacturers specifications, work and maintenance plans, and Safety Data Sheets (SDSs)
- apply relevant work health and safety requirements
- apply relevant biosecurity and animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- industry and legislative requirements for the transport of livestock
- model codes of practice for the welfare of animals Land transport (various species)

- animal welfare, biosecurity and work health and safety legislative requirements
- environmental codes of practice with regard to vehicle operation and livestock transport
- market requirements in relation to the quality and condition of livestock
- process of sourcing and costing transportation alternatives
- livestock transport recording and documentation requirements
- enterprise policies with regard to the use of vehicles and equipment
- relevant documentation requirements and procedures

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK321 Service and repair bores and windmills

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to service and repair bores and windmills. This includes activities such as replacing parts, checking equipment for wear and tear, determining lime deposits, stripping, dismantling or reassembling bores and windmills.

These activities carry risk of falls due to working at heights, injury due to working with moving parts and machinery.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes of practice and manufacturer's specifications

This unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Establish bore history and enterprise policy	1.1 Review enterprise records and confirm bore history 1.2 Confirm enterprise bore and windmill service and repair policy with supervisor 1.3 Obtain any required specialist instructions and assistance as appropriate
2. Prepare to carry out service and repairs	2.1 Select and inspect tools, equipment and materials appropriate to job requirements 2.2 Carry out dismantling and stripping of windmill and bore installations appropriately 2.3 Identify hazards in the workplace, assess and control risks appropriately
3. Carry out service and repairs	3.1 Select, use and maintain personal protective equipment appropriately 3.2 Carry out service and repairs to bores, windmills, motors and pumps appropriately 3.3 Report complex faults and repairs and refer for specialist advice and remedial action appropriately 3.4 Retrieve lost equipment appropriately
4. Complete service and repair activities	4.1 Reassemble and test bore and windmill components appropriately for full function and flow 4.2 Clean work site, tools and equipment, return to operating order and store appropriately 4.3 Collect, treat, dispose of or recycle waste from service and repair activities appropriately 4.4 Document information appropriately

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK321A Service and repair bores and windmills

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK321 Service and repair bores and windmills

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards, assess risks and implement safe work procedures
- apply basic diagnostic techniques
- recognise faults and deterioration of components and carry out repairs to bore, mill heads and pumps to ensure the full function and flow of water supplies
- select and match tools and equipment with work requirements
- apply safe workplace and positive environmental procedures
- read and interpret enterprise policy, maintenance plans, manufacturer specifications and Safety Data Sheets (SDSs)
- effectively communicate with contractors and supervisor, record and report maintenance details and outcomes
- calculate volumes, and measure speed, flow rates and distance
- maintain all components of bores and windmills
- carry out testing procedures to determine correct operation
- refer to bore histories for troubleshooting
- apply relevant work health and safety requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- construction of bores and windmills and maintenance requirements
- diesel engine components, maintenance requirements and repair procedures
- working principles of diesel engines
- drive systems and components
- types and uses of lubricants and other servicing materials

- servicing characteristics of bores and windmills
- types, characteristics, uses and limitations of hand and power tools
- basic diagnostic processes and techniques
- environmental codes of practice with regard to maintenance activities
- work health and safety legislative requirements

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK322 Transport farm produce or bulk materials

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to transport farm produce or bulk materials.

All work must be carried out to comply with workplace procedures, work health and safety, biosecurity legislation and codes of practice.

This unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

Note: relevant vehicles licences are required when farm produce or bulk materials are transported on public roads.

This unit does not apply to livestock transport

Relevant vehicles licences are required when farm produce or bulk materials are transported on public roads.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Organise for the transport of farm produce	1.1 Receive, interpret and clarify briefing, hand-over details, authorisation and clearances appropriately 1.2 Confirm the transportation schedule and organise appropriate equipment and authorised personnel 1.3 Adhere to schedule specifications 1.4 Identify and manage hazards and risks 1.5 Conduct equipment pre-operational checks 1.6 Observe site environmental practices
2. Load, transport and unload farm produce	2.1 Conduct start-up, park and shutdown procedures for plant and equipment 2.2 Determine load appropriately and prevent damage to equipment or loss of load 2.3 Load and secure farm produce 2.4 Transport farm produce 2.5 Ensure vehicles follow approved transport routes and speed limits 2.6 Conduct transport of farm produce 2.7 Unload farm produce or bulk materials 2.8 Coordinate transport of farm produce with harvesting machinery, if required 2.9 Complete transport of farm produce to plan and within the operating capacity of the equipment 2.10 Dispatch produce retain documentation, including weigh bills
3. Protect farm produce quality and integrity	3.1 Maintain hygiene of all surfaces in contact with farm produce 3.2 Protect farm produce from loss, contamination, moisture and pests during transport 3.3 Store farm produce according to enterprise procedures 3.4 Clean and maintain storage and holding areas, keeping potentially hazardous substances at a safe distance 3.5 Monitor the transport environment using temperature data loggers, if applicable 3.6 Check quality of farm produce at unloading 3.7 Monitor batches of farm produce for isolation and product integrity, where applicable

Element	Performance criteria
4. Carry out equipment maintenance	4.1 Conduct visual inspection and fault finding 4.2 Conduct routine operational servicing

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK322A Transport farm produce or bulk materials

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK322 Transport farm produce or bulk materials

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe work procedures
- manoeuvre transport machinery or truck in difficult sites and conditions
- drive truck safely using all available controls
- clean and store vehicles and equipment
- identify operational faults
- complete time sheets and other maintenance records as required
- use communication methods to advise and anticipate conditions
- interpret plans, reports, maps, specifications
- maintain and store records, reports, and log books
- select, fit, and use personal and protective equipment
- operate and load a truck in accordance with Road Traffic Regulations
- plan, load, unload and move a range of loads over a full range of road conditions in accordance with Road Traffic Regulations
- conduct pre-start and post-operational checks
- maintain the quality and integrity of transported produce
- apply relevant work health and safety requirements
- apply relevant biosecurity practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- manufacturers and work site requirements including property conditions, and hazards on the property and on the open road

- road traffic laws and licensing requirements
- organisational procedures for use of vehicles and equipment
- relevant work health and safety requirements for storage of materials and equipment
- work health and safety legislation, codes of practice, procedures, and principles, including manual handling
- emergency procedures
- site safety requirements
- equipment safety requirements
- operational, start up, and shutdown procedures and checks
- hauling and towing procedures
- receipt and document requirements at both ends of the transport operation
- differences in handling and operation with bagged and bulk loads
- relevant biosecurity requirements

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs to the Assessment Conditions.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK323 Maintain and monitor feed stocks

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain and monitor livestock feed stocks.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine quantities of stockfeed required	1.1 Undertake stocktake of stockfeed and update inventory 1.2 Check livestock feed plans and compare required quantities with

Element	Performance criteria
	quantities in stock
2. Place orders with suppliers	2.1 Place orders for stockfeed with suppliers 2.2 Ensure orders specify quantity, quality, delivery date, delivery site and any special instructions
3. Receive feed into store	3.1 Check delivery manifest and report discrepancies to supplier and supervisor 3.2 Check quality of stockfeed and report problems to supplier and supervisor 3.3 Transfer stockfeed into appropriate storage containers 3.4 Update and file records and labels
4. Prepare and maintain feed storage area and containers	4.1 Identify work health and safety hazards and take action to minimise risk 4.2 Clean feed storage area and containers according to enterprise cleaning schedule 4.3 Organise stocks of stockfeed according to enterprise inventory management policy 4.4 Label stockfeed correctly 4.5 Clean feed storage containers before refilling 4.6 Check feed storage area and containers regularly for signs of pest infestation 4.7 Identify problems with feed storage facilities and resolve or report to supervisor for resolution 4.8 Dispose of stockfeed that does not meet quality standards

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK323A Maintain and monitor feed stocks

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK323 Maintain and monitor feed stocks

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- undertake feed stocktake and update inventory
- determine quantities of stockfeed required
- place stockfeed orders with suppliers
- receive feed into feed store
- prepare and maintain feed storage areas and containers
- dispose of spoiled feeds
- implement relevant work health and safety and biosecurity requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- stocktaking and inventory for stockfeeds
- enterprise livestock feeding plans and determination of stockfeed quantities and qualities
- procedures for ordering stockfeeds
- procedures for taking, checking and handling stockfeeds during delivery
- post-delivery handling and storage of stockfeeds
- quality parameters of stockfeeds and feed ingredients
- documentation and record keeping requirements for stockfeeds
- procedures for cleaning feed storage areas and containers
- pest management of feed storage areas and containers
- monitoring, maintenance and servicing of feed storage facilities
- feed disposal methods and management
- relevant work health and safety and biosecurity requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK324 Care for and train working dogs

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to select, train and care for working dogs in the rural industry.

This unit applies to farm workers who use dogs to handle livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication. Individuals must be aware of state/territory regulations and licensing requirements for keeping working dogs.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify workplace requirement and select working dog	1.1 Identify and confirm working dog requirements for the workplace 1.2 Research suitable working dog breeds and determine availability 1.3 Inspect dogs for suitability and make selection according to workplace criteria
2. Develop and implement training program for working dog	2.1 Teach commands for working tasks 2.2 Introduce the dog to a small flock in a confined area 2.3 Train the dog to handle larger numbers in more open areas 2.4 Train the dog on specialist skills such as backing and forcing 2.5 Assess existing and potential hazards associated with handling livestock in the workplace and implement measures to control risks 2.6 Comply with animal welfare codes of practice
3. Maintain health and welfare of working dog	3.1 Monitor and maintain health and condition of the working dogs 3.2 Provide an adequate and balanced diet to meet nutritional requirements of the working dogs taking into account work load/training program 3.3 Seek veterinary advice and arrange for or administer preventative health treatments 3.4 Provide and maintain appropriate housing facilities and equipment in line with animal welfare requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK324A Care for and train working dogs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK324 Care for and train working dogs

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify the workplace need for working dogs
- select working dog to meet workplace requirements
- develop working dog training programs and apply effective training methods
- maintain health and welfare of the working dog
- follow relevant work health and safety and animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- working dog breeds and behaviour
- use of working dogs in the workplace
- effective working dog training systems and procedures
- livestock handling methods and techniques
- care, husbandry and management procedures for working dogs
- signs of health, anatomy and physiology of working dogs
- common illnesses of working dogs and preventative health strategies
- relevant State/Territory legislative and regulatory requirements with regard to work health and safety, animal welfare, biosecurity and the registration and care of domestic dogs

Assessment Conditions

Competency is to be assessed in the workplace OR workplace and a simulated environment that accurately reflects performance in a real workplace setting.

Assessments for the following performance evidence must be conducted on live animals:

- develop and implement training program for working dog

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK325 Castrate livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to castrate young animals.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Prepare for animal castration	<p>1.1 Interpret work to be undertaken from work program where necessary, and confirm with management</p> <p>1.2 Hold discussions with other workers who may be affected by the activities to ensure continued smooth operation of the production process</p> <p>1.3 Identify work health and safety hazards, assess risks, and implement suitable controls</p> <p>1.4 Select, use and maintain suitable personal protective equipment</p> <p>1.5 Hygienically clean castration area to minimise the risk of infection</p> <p>1.6 Select and assemble equipment, instruments and resources needed for castration operations, ensuring adequate supplies of consumables</p> <p>1.7 Separate male animals as required to facilitate ease of handling and to minimise stress and in compliance with animal welfare codes</p>
2. Castrate animals	<p>2.1 Select, catch and restrain individual animals using industry standard techniques</p> <p>2.2 Check animals for health and soundness according to organisation guidelines</p> <p>2.3 Castrate restrained animals in a humane and hygienic manner according to organisational guidelines, industry standards, and the relevant of animal welfare codes of practice</p> <p>2.4 Complete records as instructed by organisational guidelines</p>
3. Complete hygiene and administration activities	<p>3.1 Remove all debris, waste material and animal residues from the site and dispose of in an environmentally aware and safe manner according to organisation work procedures</p> <p>3.2 Hygienically clean, maintain and store instruments and equipment according to organisation work procedures</p> <p>3.3 Maintain a clean and safe area throughout and on completion of work</p> <p>3.4 Document work outcomes and report to the supervisor where appropriate according to organisation work procedures</p>
4. Monitor castrates	<p>4.1 Move animals from yard to pasture as soon as practical with minimal stress to reduce risk of infection</p> <p>4.2 Monitor animals to identify post-castration complications</p> <p>4.3 Identify and treat animals exhibiting signs of ill health or infection</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK325A Castrate livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK325 Castrate livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards, assess risks and implement safe operating procedures
- handle animals humanely and with minimal stress in line with animal welfare legislation codes of practice
- perform a recommended method of castration with attention to hygiene
- administer pre or post operative treatments
- monitor castrated animals
- carry out animal husbandry tasks in hygienic manner
- record the number and health of animals post castration
- work effectively as a part of a team and communicate with supervisors
- apply relevant work health and safety requirements
- apply relevant animal welfare and environmental sustainability practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- male anatomy as it relates to castration
- castration methods for various species of livestock
- organisation castration, hygiene and animal welfare procedures and policies
- industry standards for the care and husbandry of animals
- industry and enterprise requirements for debris, waste material and animal residues disposal
- relevant work health and safety legislation, codes of practice and industry and enterprise requirements
- relevant animal welfare legislation, codes of practice and industry and enterprise requirements

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK326 Mix and mill standard stockfeed

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to mix and mill feed for intensive livestock production.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to work with livestock feed	1.1 Interpret work to be undertaken from the work program, where necessary, and confirm with supervisor

Element	Performance criteria
	1.2 Identify work health and safety hazards, assess risks and implement suitable controls 1.3 Select, use and maintain suitable personal protective equipment (PPE) 1.4 Select, check and maintain tools and equipment suitable for the work to be undertaken 1.5 Identify environmental impacts of undertaking work, assess likely outcomes and, if necessary, take responsive action
2. Order and store feed and ingredients	2.1 Order previously selected ingredients from the supplier 2.2 Store ingredients and feed safely in the location and manner determined by the supervisor 2.3 Rotate stock and order replacements to arrive at the appropriate time to ensure optimum freshness
3. Mix feed	3.1 Calibrate scales and containers to be used for measurements according to manufacturer instructions 3.2 Identify feed ingredients and obtain from storage locations 3.3 Measure ingredients in the specified ratios and quantities 3.4 Blend ingredients adequately and hygienically in the manner specified and using the appropriate equipment 3.5 Perform milling in the manner specified and using the appropriate equipment, if required
4. Conduct post-procedural hygiene and administration activities	4.1 Clean equipment to maintain hygiene standards 4.2 Complete all required records and documentation accurately and promptly

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK326A Mix and mill standard stockfeed

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK326 Mix and mill standard stockfeed

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify work health and safety hazards, assess risks and implement suitable control measures
- follow enterprise mill and mix stockfeed work program
- order and store feeds and ingredients
- identify feed ingredients and obtain from storage locations
- measure ingredients in the specified ratios and quantities
- mix feeds and ingredients in line with industry quality standards and requirements
- recognise and rectify minor operational faults and perform routine maintenance
- complete records and documentation of feed use and volumes for the shed
- conduct post-procedural hygiene and administration activities
- implement relevant biosecurity requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- enterprise requirements for mixing and milling feeds
- relevant work health and safety requirements
- tools and equipment machinery used for mixing and milling feeds, and the cleaning, maintenance, servicing and storage of such tools and equipment
- environmental impacts of mixing and milling feeds and strategies to mitigate such impacts
- type of feed ingredients and procedures for ordering, handling and storage of feed ingredients

- the impact of seed, chemical, insect and fungal contamination of grain. This includes an awareness of the industry process in place to monitor these contaminants - the National Residue Survey (NRS), the National Antibiotic Residue Minimisation (NARM) and programmed basket surveys
- measurement equipment for feed ingredients, and their calibration and maintenance
- procedures for mixing, blending and milling feed ingredients and feeds
- documentation and record keeping requirements for mixing and milling feed
- relevant biosecurity requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK327 Collect, store and administer colostrum

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to collect colostrum from lactating animals and processing the colostrum to support newborn animals.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Obtain colostrum	1.1 Obtain, check and sterilise required equipment 1.2 Select suitable donor animals and collect colostrum 1.3 Check frozen colostrum stored and select suitable ones for use 1.4 Select, use and maintain appropriate Personal Protective Equipment (PPE)
2. Administer colostrum to newborn animals	2.1 Identify newborn animals requiring supplementary colostrum 2.2 Obtain and prepare feeding equipment 2.3 Thaw frozen colostrum at room temperature 2.4 Warm thawed colostrum to body temperature 2.5 Administer warmed colostrum to newborn animals according to individual animal requirements and workplace procedures 2.6 Check newborn animals regularly after administration of colostrum and repeat colostrum feeds as required 2.7 Follow enterprise animal welfare policies
3. Store colostrum	3.1 Filter colostrum according to workplace procedures and place in appropriate container 3.2 Freeze surplus colostrum for future use and label container with details of donor animal and date of collection

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK327A Collect, store and administer colostrum

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK327 Collect, store and administer colostrum

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- obtain colostrum from suitable donor animals and select suitable frozen colostrum
- handle and feed new born animals appropriately
- handle frozen colostrum according to enterprise and health and safety procedures
- store colostrum for future use
- follow relevant work health and safety and animal welfare requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- nutritional needs of newborn animals and the need for feeding colostrum to newborn animals
- selection of suitable donor animals
- methods and equipment used to collect colostrum
- care, husbandry and management of newborn animals
- handling of frozen colostrum
- administration of colostrum to newborn animals and their post-administration care
- storage procedures of colostrum
- relevant work health and safety and animal welfare requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessments for the following performance evidence must be conducted on live animals:

- obtain colostrum
- administer colostrum to newborn animals

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK328 Remove and facilitate reuse of effluent and manure from an intensive production system

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to remove and facilitate reuse of effluent and manure from an intensive livestock production system.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

The production enterprise may be required to comply with local council, State or Commonwealth licensing requirements for operations involving effluent and manure.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to work with effluent disposal equipment	1.1 Interpret work to be undertaken from work program where necessary, and confirm with management 1.2 Hold discussions with other workers who may be affected by the maintenance activities to ensure continued smooth operation of the production process 1.3 Identify work health and safety hazards, assess risks and implement suitable controls 1.4 Select, use and maintain suitable personal protective equipment (PPE) 1.5 Select, check and maintain tools and equipment suitable for the work to be undertaken
2. Maintain and operate effluent storage and disposal system	2.1 Observe and follow regulatory and industry requirements and standards for effluent operations 2.2 Service and maintain effluent removal and disposal equipment 2.3 Use effluent disposal systems according to system design in compliance with approval granted by local government and state environment protection authority 2.4 Carry out techniques for irrigation compliance with relevant regulatory and industry standards when using liquid effluent storages 2.5 Flush and drain in-shed effluent pits as required 2.6 Turn composted effluent in compliance with relevant regulatory and industry standards
3. Monitor effluent disposal system	3.1 Check flow rates, pit levels, compost temperatures and equipment regularly to maintain effective operation of the system 3.2 Carry out cleaning procedures and hygiene practices 3.3 Identify environmental impacts of effluent disposal and reuse, assess likely outcomes and if necessary, take responsive action
4. Conduct hygiene and administration activities	4.1 Clean equipment according to manufacturer specifications 4.2 Clean and store attachments and other ancillary equipment according to manufacturer specifications 4.3 Dispose of all containers, leftover fluids, waste and debris from the operations safely and appropriately 4.4 Complete all required records and documentation accurately and promptly

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK328A Remove and facilitate reuse of effluent and manure from an intensive production system

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK328 Remove and facilitate reuse of effluent and manure from an intensive production system

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify work health and safety hazards, assess risks and implement suitable controls
- make preparations to work with effluent disposal equipment
- maintain and operate effluent storage and disposal system in compliance with approval granted by local government and state environment protection authority
- monitor effluent disposal system
- conduct cleaning and hygiene practices associated with effluent operations
- implement relevant environmental practices
- complete organisational records

Knowledge Evidence

The candidate must demonstrate knowledge of:

- an enterprise work program and program requirements for effluent operations
- relevant work health and safety requirements
- tools, equipment and systems used for effluent operations (effluent handling, removal and disposal) and their functions, cleaning, maintenance, servicing and storage of such tools, equipment and systems
- relevant local government, State and Commonwealth regulations and industry requirements for effluent operations
- environmental impacts of effluent operations and liquid effluent irrigation, and strategies to mitigate such impacts
- irrigation techniques for liquid effluent
- functions, maintenance and service of effluent pits
- methods and maintenance of effluent composting

- methods for safe and appropriate disposal of containers, leftover fluids, waste and debris from effluent operations
- documentation and type of records that need to be completed for effluent operations
- relevant biosecurity requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK331 Comply with industry animal welfare requirements

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to comply with industry animal welfare requirements in the production of livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities, work in a range of known contexts, and use discretion and judgement in the selection and use of available resources. They provide and communicate solutions to a range of predictable problems.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine and identify animal welfare requirements	1.1 Determine legislative, regulatory and industry and enterprise animal welfare requirements 1.2 Identify workplace animal welfare concerns 1.3 Propose actions that can be taken to address identified workplace animal welfare concerns
2. Comply with animal welfare requirements	2.1 Carry out workplace animal welfare procedures and requirements consistently 2.2 Report non-conformance to supervisor 2.3 Take appropriate corrective action as advised by supervisor and in compliance with workplace procedures 2.4 Complete appropriate record keeping of workplace animal welfare concerns and actions taken
3. Participate in animal welfare process	3.1 Recognise animal welfare issues in the workplace, report to supervisor or management and take appropriate corrective action as required 3.2 Participate in workplace and/or industry animal welfare induction, training and programs 3.3 Participate in workplace and/or industry animal welfare emergency training

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK331A Comply with industry animal welfare requirements

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK331 Comply with industry animal welfare requirements

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine and identify animal welfare requirements of relevant legislations, regulations, codes of practice and industry and workplace procedures
- comply with animal welfare requirements by carrying out workplace procedures, reporting non-conformance, taking appropriate corrective actions and completing record keeping
- participate in workplace animal welfare processes by reporting animal welfare issues and taking part in animal welfare induction, training and programs
- participate in workplace and/or industry animal emergency training

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant animal welfare legislation, regulations and codes of practice
- basic requirements for ensuring the welfare of livestock described in the relevant Codes of Practice
- workplace and/or industry animal welfare procedures and animal emergency procedures
- workplace and/or industry procedures for reporting and recording animal welfare concerns, non-conformance and malpractice in the workplace

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK332 Monitor animals in intensive production systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor livestock in an intensive production system.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to beef cattle, dairy cattle, sheep, goats and pigs.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor animal health status	1.1 Source information on animal health programs from the livestock production plans 1.2 Assess animal health status by routinely inspecting each animal from induction to despatch by having unimpeded access and opportunity to observe behavioural characteristics, signs of ill-health and freedom of movement 1.3 Source information on past treatment(s) from the individual animal's identification tag or identification marking and enterprise records 1.4 Identify husbandry practices appropriate for the health status of the individual animal: follow-up observation, isolation from other livestock and/ or treatment
2. Identify animals requiring treatment	2.1 Identify individual animals with potential health issues or in ill health 2.2 Determine the type and severity of infection or injury and identify and/or isolate affected animals requiring treatment
3. Determine the type and scope of treatment	3.1 Determine the need for, type and scope of treatment by seeking expert or veterinary advice 3.2 Prepare equipment, materials and treatment site 3.4 Identify work health and safety hazards, assess risks and implement control measures in relation to the treatment 3.5 Record withholding periods and other details of treatment
4. Administer treatment	4.1 Check, select and use suitable personal protective equipment (PPE) 4.1 Handle and restrain animals safely and humanely 4.2 Administer treatment appropriately according to chemical label or veterinary advice 4.3 Identify treated animals from non-treated animals to ensure compliance with the required Withholding Period (WHP) 4.4 Prepare and move treated animals as planned
5. Carry out post-treatment procedures	5.1 Monitor animal health and condition post-treatment and report on animal's progress 5.2 Identify, environmental impacts associated with the administration of treatment, assess likely outcomes and take responsive action 5.3 Clean equipment and worksite, and dispose of organic and

Element	Performance criteria
	non-organic waste appropriately 5.4 Store unused medications appropriately 5.5 Complete documentation and records accurately and promptly 5.6 Comply with enterprise biosecurity policies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK332A Monitor animals in intensive production systems

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK332 Monitor animals in intensive production systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- monitor animal health status
- identify animals requiring treatment
- determine the type and scope of treatment
- identify work health and safety hazards, assess risks and implement control measures associated with administering treatments to animals
- handle, restrain and treat animals without compromising animal welfare
- monitor animals post treatment and complete workplace recording requirements
- implement relevant animal welfare and biosecurity policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- type of information to be gathered from livestock production plans, animal health plans and individual animal records
- signs of health, signs of ill health and methods of assessing livestock health
- biosecurity requirements, husbandry and management strategies and procedures for ill or injured animals
- methods for humane and safe handling and restrain of animals
- common diseases of the livestock species, and strategies for treatment and management of such diseases
- typical and common medications, vaccines, the routes of administration in animals and keeping/storage of such medications
- work health and safety requirements associated with administering treatments to animals

- principles and regulations for veterinary medicines treatment and Withholding Periods in animals
- environmental impacts of administering treatments to animals and strategies to mitigate these impacts
- enterprise heat load management plans
- types of and disposal methods for organic and non-organic waste
- documentation and type of records that need to be completed for animal treatments

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK333 Monitor pen condition and ration suitability

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor the suitability of rations and pen conditions for livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Monitor ration and water levels	<p>1.1 Source information on ration ingredients and composition from enterprise livestock production and/or feed plans</p> <p>1.2 Assess ration levels, composition and consistency and identify potential production and health issues for different pens and classes of livestock</p> <p>1.3 Identify strategies for removing wet, mouldy and fouled ration from bunks, and preventing livestock from access to unsuitable rations</p> <p>1.4 Assess water quantity and quality to meet requirements of livestock</p>
2. Inspect pen status and condition	<p>2.1 Source information on pen group status from enterprise livestock production plan</p> <p>2.2 Assess pen infrastructure, feed bunks, feed apron and water troughs together with animal feeding behaviour and identify performance and potential issues</p> <p>2.3 Identify strategies to control leaking troughs, and prevent livestock from access to damaged pen or feeding areas</p> <p>2.4 Assess pen surface conditions and behaviours of livestock in consideration of prevailing weather conditions</p> <p>2.5 Identify strategies for adjusting stocking density, providing access to shade, modifying pen drainage, cleaning pen and modifying the ration</p>
3. Assess manure condition	<p>3.1 Assess manure consistency and colour as indicators of individual animal and herd health</p> <p>3.2 Identify strategies for increasing roughage in ration, courser processing of grains and adjusting rations for sick animals</p>
4. Check pen hygiene	<p>4.1 Assess feed bunks, feed aprons and water troughs for fouling and unhygienic build-ups of waste</p> <p>4.2 Identify strategies for resolving animal production and health issues, work health and safety concerns, and cleaning of pens to prevent odour and insect problems</p>
5. Report and record incidents as required	<p>5.1 Report incidents and problems to supervisor as required</p> <p>5.2 Record and monitor effectiveness of strategies adopted</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK333A Monitor pen condition and ration suitability

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK333 Monitor pen condition and ration suitability

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- monitor ration and water levels and respond to issues as required
- inspect pen status and condition and respond to issues as required
- assess manure condition and respond as required
- check pen hygiene and respond to issues as required
- report and record incidents
- communicate with work team and supervisors
- implement relevant work health and safety, biosecurity, animal welfare and environmental protection requirements and practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- type of information on rations, water, housing infrastructure and feeding infrastructure that can be gathered from livestock production and feeding plans
- principles and elements of nutrition and the impact of nutrition on livestock production
- nutritional requirements of different livestock species, classes and life stages
- impacts of poor nutrition and unsuitable rations on livestock production, and strategies to mitigate these impacts
- how rations can be adjusted or modified to benefit sick animals
- housing requirements and housing management of different livestock species, classes and life stages
- feeding and water requirements, and feeding and water management of different livestock species, classes and life stages

- impacts of unsuitable housing, feeding and watering infrastructure on livestock and strategies to mitigate these impacts
- effects of weather on housing and feeding infrastructure and strategies to mitigate such effects
- methods for using manure as assessment of livestock health
- methods for maintaining, cleaning and removing waste from housing and feeding infrastructure
- documentation, record keeping and methods for monitoring effectiveness of adopted strategies
- relevant work health and safety, biosecurity, animal welfare and environmental protection requirements and practices

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK334 Plan, prepare and conduct mulesing procedures

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to conduct the most efficient and humane mulesing procedure in circumstances where all alternative methods of breech flystrike prevention have been evaluated and mulesing is considered the most appropriate of these for the long-term welfare of the sheep.

This unit applies to sheep farmers and contractors in the livestock industry who normally operate under limited supervision.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication. However, candidates should confirm the regulatory requirements that apply in their relevant State or Territory before undertaking this unit.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Conduct pre-mulesing evaluations	1.1 Identify and comply with relevant State/Territory legislation, regulations and animal welfare standards and guidelines 1.2 Identify industry standards and guidelines 1.3 Seek expert advice and discuss alternative strategies to manage flystrike susceptibility prior to undertaking mulesing procedures 1.4 Confirm workplace requirements for use of mulesing 1.5 Conduct pre-operative evaluation of sheep 1.6 Assess risks associated with mulesing procedure and implement measures to control the risks such as using appropriate Personal Protective Equipment
2. Prepare for mulesing operations	2.1 Identify and order all required supplies and equipment in advance 2.2 Monitor weather conditions to determine optimal conditions for operation and recovery of sheep from the procedure 2.3 Select suitable time of day for operation to minimise the separation time of lambs and ewes 2.4 Engage adequate number of skilled workers 2.5 Select appropriate yards, paddocks and pastures for each mob and each day to allow adequate time for mothering up of lambs after separation from the ewes 2.6 Use appropriate procedures for mustering, movement and handling so that stress to sheep is kept to a minimum 2.7 Allow lambs to settle and cool after yarding
3. Select, maintain and use appropriate equipment	3.1 Maintain all equipment in clean, hygienic and working conditions to reduce the risk of infection and cross-infection in sheep 3.2 Maintain cradles to be used for mulesing in good working condition and can be operated to ensure minimal risk to the operator or lamb, especially when loading and unloading 3.3 Set, grind and sharpen mulesing shears to working standards 3.4 Disinfect mulesing shears after sharpening, before use and between each animal 3.5 Prepare wash-down, soaking and disinfecting containers for use 3.6 Prepare and test chemical application equipment to check for operational efficiency 3.7 Clean and disinfect all equipment at the end of operation and store appropriately to minimise contamination

Element	Performance criteria
4. Conduct mulesing procedures	4.1 Conduct all procedures in accordance with work health and safety, animal welfare and biosecurity requirements 4.2 Maintain a high standard of hygiene throughout the operation in relation to facilities, operators' hands, handling and equipment 4.3 Handle lambs calmly and use appropriate restraints such as cradles 4.4 Perform mulesing procedure in accordance with model code of practice and industry standards 4.5 Apply pain relief to the wound immediately after the procedure in accordance with industry standards and legislative requirements, and following label and Safety Data Sheet (SDS) instructions 4.6 Apply insecticide dressing to the surrounding intact wool bearing skin (not the wound) immediately after the procedure in accordance with industry standards and following label and SDS instructions 4.7 Continually evaluate wound symmetry, size and position, and breaks in selvage (muscle fascia) 4.8 Remove lambs from cradles so they land gently on all four feet
5. Conduct post-mulesing management procedures	5.1 Allow lambs, following release, to 'mother-up' to ewes as soon as possible 5.2 Provide immediate treatment for lambs that are abandoned or unable to stand or walk 5.3 Monitor lambs for abnormal signs such as infection and septicaemia 5.4 Maintain and update required documentation and records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK334A Plan, prepare and conduct mulesing procedures

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK334 Plan, prepare and conduct mulesing procedures

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess alternative strategies and confirm key indicators for the use of mulesing
- identify optimal conditions for carrying out mulesing procedures
- conduct pre-operative evaluation of lambs submitted for mulesing procedures and risk assessment in consultation with sheep manager
- prepare appropriate sites, facilities and equipment in line with infection control, work health and safety and animal welfare standards including pain management in accordance with industry best standards and legislative requirements
- follow low stress stock mustering, movement and handling procedures
- carry out mulesing operations in accordance with industry recognised best practice mulesing techniques and hygiene standards
- follow appropriate procedures and label directions to provide pain relief plus insecticide dressing as required
- monitor animals' behaviour post-mulesing for health and well-being including the ability to recognise signs of post-mulesing complications
- communicate post-mulesing management requirements to sheep manager
- accurately document and maintain appropriate records
- follow relevant work health and safety, animal welfare and biosecurity requirements and practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant work health and safety, animal welfare and biosecurity requirements
- relevant codes of practice and industry standards for mulesing

- reasons and requirements for mulesing in sheep
- body condition scoring (BCS), breech wrinkle scoring (BRWR) and breech cover scoring (BCOV) in lambs and adult sheep
- methods and strategies of flystrike control
- effects of weather, environmental, facility, flock, individual animal and human factors on mulesing operations
- use and maintenance of materials and equipment for mulesing
- principles and maintenance of hygiene in mulesing operations
- methods and techniques for handling and restraint of adult sheep and lambs
- use of pain relief and insecticide treatment in mulesing procedures
- anatomy and external features of sheep
- health and animal welfare implications of post mulesing complications in sheep
- signs of ill health and related management strategies in sheep
- use of and regulatory considerations for the use of disinfectants
- relevant care, husbandry and management strategies for sheep flocks
- relevant legislation, regulations and codes of practice, including those relating to work health and safety, animal welfare, veterinary practitioner/surgeons' Acts, stock diseases and waste disposal, agricultural and veterinary chemical use

Assessment Conditions

Competency is to be assessed in the workplace OR workplace and a simulated environment that accurately reflects performance in a real workplace setting.

Assessments for the following performance evidence must be conducted on live animals:

- conduct mulesing procedures

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK337 Train, care for and ride horses for stock work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0

Application

This unit of competency describes the skills and knowledge required to handle, ride and train horses to muster, move and separate livestock. It covers caring for horses and equipment, and addresses the potential risks associated with working with and around horses and livestock.

This unit applies to individuals who have experience working in the livestock industry and in riding educated, compliant and manageable horses to muster and check stock on grazing properties. Work is normally carried out independently, under broad direction according to workplace procedures.

No occupational licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) generally have the same meaning in the workplace. In jurisdictions where the national model WHS legislation has not been implemented, RTOs must contextualise the unit of competency by referring to current OHS legislative requirements.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- AHCLSK218 Ride educated horses to carry out basic stock work

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
AHCLSK218 Ride educated horses to carry out basic	ACMEQU202 Handle horses safely

stock work	ACMEQU206 Perform horse riding skills at walk, trot and canter
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour
ACMEQU206 Perform horse riding skills at walk, trot and canter	ACMEQU202 Handle horses safely

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare horses for work	1.1 Select, use and maintain appropriate personal protective equipment (PPE) 1.2 Select, muster, or bring from paddock, and assess the suitability of the horse for the task 1.3 Catch and handle horses safely and humanely 1.4 Check horse health, soundness, and fitness level to ensure it is capable to complete the work required 1.5 Select, check, and maintain working equipment, according to instructions 1.6 Groom horse prior to exercise or work 1.7 Fit working gear to individual horse
2. Train horses for stock work	2.1 Identify and assess risks, and implement risk controls associated with horse riding and horse training 2.2 Assess current level of education of the horse 2.3 Train horse to calmly carry out required movements for working stock, including stops, turns and rollbacks 2.4 Train horse to work and control a mob of livestock as a whole 2.5 Train horse to safely handle a single beast and to return it to the

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	mob safely according to industry practices 2.6 Train horse to separate a beast from a mob as instructed and according to industry practices 2.7 Train horse to calmly accept a stock whip being used by the rider, if required by the workplace, according to industry practices 2.8 Train horse to work with working dogs where required by workplace 2.9 Utilise agreed emergency procedures when training horses in required safety movements, including one-rein stops
3. Ride horses to carry out stock work	3.1 Interpret work program to determine work to be undertaken, and confirm with management 3.2 Select horses for the task, taking into consideration task requirements and own skill level 3.3 Catch and handle horses safely and humanely 3.4 Practise and reinforce training of horse while carrying out routine stock work 3.5 Take corrective action to re-train horse where necessary
4. Provide post ride care and maintain saddlery and equipment	4.1 Remove gear, and groom, wash and/or clean horse according to industry practices 4.2 Water and feed horse in line with workplace procedures and safe work practices 4.3 Release horse safely to appropriate enclosure, paddock or yard 4.4 Check, clean, maintain and store working gear 4.5 Repair working gear according to industry practices 4.6 Apply the workplace's biosecurity and sustainability policies
5. Maintain horse health and condition	5.1 Monitor horses as a part of daily routines to identify signs of ill health, injury and poor condition 5.2 Muster or catch horses in need of attention, and report and record condition in line with workplace procedures 5.3 Administer prescribed treatments for common ailments, under supervision of the veterinarian or manager 5.4 Safely check horse legs and feet, safely clean out feet, and correctly identify lameness and potential causes for lameness

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.5 Organise shoeing according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information in workplace documentation
Writing	<ul style="list-style-type: none"> Record data and observations about horses in workplace forms accurately
Navigate the world of work	<ul style="list-style-type: none"> Follow industry guidelines and workplace procedures, including safe work and safe horse handling practices and animal welfare principles, relevant to own role
Interact with others	<ul style="list-style-type: none"> Follow accepted communication practices and protocols for reporting issues to management using accurate industry terminology
Get the work done	<ul style="list-style-type: none"> Plan, sequence and prioritise multiple tasks, and assemble equipment to complete activities, taking safety and risk factors into consideration

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK337 Train, care for and ride horses for stock work	AHCLSK336 Educate, care for and ride horses for stock work	Unit and assessment requirement content changed to clarify safety requirements and intent of unit Addition of foundation skills descriptions	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK337 Train, care for and ride horses for stock work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has cared for, ridden and trained at least two different horses for stock work. The following points must be demonstrated for each horse:

- identifying work health and safety hazards and implementing safe work procedures
- selecting and maintaining saddlery and equipment
- handling and preparing horses for riding and livestock work
- using calm and humane handling methods to minimise undue stress and risk to horses, handlers, and livestock according to animal welfare requirements
- developing a working relationship with the horse or horses in own care
- monitoring health and condition of horses, including carrying out basic hoof care and cleaning
- identifying signs of ill health, injury, or poor condition and administering basic treatments
- training horses to:
 - calmly carry out required movements for working stock, including safety movements, stops, turns and rollbacks
 - work and control a mob of livestock as a whole
- riding, controlling and stopping the horse to carry out checking, mustering and moving livestock as part of property operations
- assessing and monitoring horse behaviour during riding activities and taking corrective action if required
- completing post-ride activities including:
 - cleaning, feeding and watering horse
 - checking and maintaining tack
 - completing records as required by workplace.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- common horse colours and markings, gender and other identifying features
- horse movement and behavioural characteristics, and learning theories relevant to stock work
- livestock behaviour and how this is utilised to minimise stress for horse and livestock
- relevant industry standards and practices, and workplace procedures and guidelines for horse riding and riding safety, including lungeing, riding in a yard before riding outside, and one-rein stops
- approaches to horse education for stock work and associated learning theories
- basic care husbandry and management procedures for horses
- common signs of unsoundness, including injury, disease, work stress or other disorders in horses
- basic anatomy and physiology of the horse
- use of horses for workplace operations
- care and maintenance of working gear
- horse conformation and work readiness or level of education
- horse handling and riding techniques
- key requirements of work health and safety and animal welfare regulations, and codes of practice relevant to working and interacting with horses.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions containing livestock handling facilities
- resources, equipment and materials:
 - various live, suitably educated, compliant and manageable horses to be trained for stock work and assessed as suitable for the experience and skill of the individual
 - livestock to use in training horses
 - appropriate tack for individual, horse and stock work activity
 - personal protective equipment (PPE) correctly fitted and applicable to activity for the individual
- specifications:
 - work instructions and workplace procedures for training, caring for and riding horses for stock work.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK401 Develop feeding plans for a production system

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to develop feeding plans for a production system.

This unit applies to supervisors and unit managers who are responsible for nutrition and feeding in an intensive livestock production facility.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select ingredients for feed	<p>1.1 Identify nutritional needs of livestock from information available and class of livestock</p> <p>1.2 Source nutritional advice from the appropriate industry or organisational sources</p> <p>1.3 Select ingredients that provide for the identified nutritional need of livestock</p> <p>1.4 Select suppliers of ingredients on the basis of quality and cost of feed</p> <p>1.5 Determine quantities of individual ingredients required, in conjunction with advice from other available information and expert/supplier advice</p>
2. Determine feed rations and schedules	<p>2.1 Determine quantities of total feeds required for livestock from the production program, in conjunction with advice from other available information and expert advice</p> <p>2.2 Take into consideration the results of any available laboratory testing when determining the quantities of each ingredient used</p> <p>2.3 Schedule feeding and allocate responsibility for feeding in line with the production program and other operations occurring within the site</p> <p>2.4 Identify the method(s) of providing feed to livestock identified in the production plan and confirm with supplier of ingredients and other expert advice</p>
3. Supervise mixing and storage of feed	<p>3.1 Organise secure and hygienic storage of feed and ingredients to eliminate contamination and infestation</p> <p>3.2 Select storage location to ensure safe access</p> <p>3.3 Organise rotation of feedstocks and replacements to arrive at the appropriate time to ensure optimum freshness</p> <p>3.4 Organise mixing of feed to suit the needs of the livestock, the identified nutritional requirements and the equipment available within the organisation</p> <p>3.5 Add medications to feeds according to enterprise procedures if required</p> <p>3.6 Take, package and label samples of feed and forward them to the laboratory for testing according to the schedules described in the production program</p> <p>3.7 Check calibration of measuring equipment and calculation of quantities at regular intervals</p>

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.8 Identify work health and safety hazards, assess risks, and implement, monitor and review risk controls for feed preparation and feeding operations</p> <p>3.9 Comply with enterprise biosecurity policies</p>
4. Supervise feeding	<p>4.1 Supply rations to the livestock according to the production program and schedules devised</p> <p>4.2 Make potable water available continuously to the livestock</p> <p>4.3 Monitor the health and wellbeing of the livestock in line with enterprise requirements and animal welfare policies</p> <p>4.4 Monitor and report any change in production levels as a direct result of changes to feed types, ingredients or schedules</p> <p>4.5 Give advice to operational staff during the feeding operation when requested, or when the need is observed</p> <p>4.6 Remove all waste materials and substances from the site and store, or disposed of, according to legislation, environmental policies and enterprise procedures</p> <p>4.7 Collate and store documentation according to the requirements of the organisation</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK401 Develop feeding plans for a production	AHCLSK401 Develop feeding plans for a production system	Minor typographical errors corrected	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
system Release 2	Release 1		

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK401 Develop feeding plans for a production system

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe work practices
- discuss feed and nutritional content with nutritionist and managers
- identify a range of raw ingredients
- operate a range of feeding equipment
- perform basic trouble shooting of the feeding operation
- monitor animal intake and performance
- read and interpret manufacturers' specifications, work and maintenance plans, and Safety Data Sheets (SDSs)
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents
- accurately measure and calculate volumes, consumption and storage requirements
- complete the required records of feed use and livestock performance
- comply with enterprise biosecurity, environmental and animal welfare procedures and policies.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- control of common livestock diseases and preventative measures including the placement of medications in feed
- growth and development in livestock
- milling systems

- dietary needs and analysis of feed samples
- organisations sampling requirements and techniques
- where to access appropriate legislative requirements, manufacturer's instructions and enterprise procedures/instructions
- silo operations and configuration, machinery and operating practices
- codes of practice and enterprise policies with regard to work health and safety, biosecurity, environment and animal welfare
- cleaning and storage of machinery, equipment and materials
- enterprise recording and reporting procedures.

Assessment Conditions

Competency is to be assessed in the workplace, OR workplace and a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK402 Develop livestock feeding plans

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop livestock feeding plans.

This unit applies to managers of grazing operations who design and develop feeding plans for livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine nutritional requirements for livestock	1.1 Determine nutritional value of pasture and feedstuffs 1.2 Identify and assess livestock production status according to enterprise requirements 1.3 Determine essential requirements for livestock nutrition according to assessed livestock condition
2. Assess pasture feed	2.1 Determine grazing management strategy to ensure the sustainable stocking capacity of pasture 2.2 Monitor pasture for quantity and quality to ensure continual and consistent supply of nutrients to livestock 2.3 Monitor and assess pasture intake according to identified nutritional requirements of livestock
3. Determine supplementary feeding program	3.1 Determine economic basis to supplementary feeding according to enterprise requirements 3.2 Identify and determine types of supplementary feed for all classes of livestock 3.3 Determine supplementary feeding program to fill the pasture shortfall for predicted pasture growth
4. Develop livestock feeding plan	4.1 Develop and review feeding plan to ensure it remains responsive to changing conditions 4.2 Identify and carry out suitable feed conservation methods or fodder sources in preparation for abnormal conditions 4.3 Select a system of feeding that supplies the appropriate amount of feed to the herd/flock to meet condition and growth needs, and that meets production requirements of the business 4.4 Prepare a feed budget according to the selected system of feeding 4.5 Document data for continual assessment and effective management planning

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK402A Develop livestock feeding plans

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK402 Develop livestock feeding plans

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research predicted seasonal pasture production for the area
- estimate the feed value of a standing pasture at different times of the year
- calculate the feed demand for different types of livestock and production phases
- match feed supply and demand
- assess feeding plan alternatives
- develop and document a feeding plan

Knowledge Evidence

The candidate must demonstrate knowledge of:

- nutritional and daily energy requirements of livestock
- water quality and livestock tolerances
- nutritional value of different feedstuffs
- assessment procedures to ascertain livestock condition
- methods of assessing pastures quality and quantity
- pasture livestock carrying capacity
- supplementary feeding strategies
- change in nutritional requirements during late pregnancy and lactation

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK404 Implement and monitor animal welfare programs

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement and monitor animal welfare programs.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They may provide direction to others, and use discretion and judgement in the selection, allocation and use of available resources. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Provide information about animal welfare to the team	1.1 Explain the relevant provisions of animal welfare regulations and codes of practice to the work group 1.2 Provide information on workplace animal welfare policies, procedures and programs in a readily accessible manner 1.3 Provide information about identified animal welfare requirements to the group and individuals in a broad workplace context and in the context of the individuals' job roles
2. Facilitate the participation of workers in animal welfare compliance	2.1 Implement and monitor workplace procedures for compliance with animal welfare procedures 2.2 Explain procedures for reporting animal welfare concerns, grievances and complaints to workers, and action that will be taken to address these concerns, grievances and complaints 2.3 Manage and resolve animal welfare concerns, grievances and complaints according to workplace procedures, or refer to the appropriate personnel where necessary
3. Implement and monitor workplace animal welfare procedures	3.1 Report existing and potential animal welfare concerns, and take action to address these concerns according to workplace procedures 3.2 Maintain detailed records of animal welfare concerns, grievances and complaints, and actions taken 3.3 Monitor implementation of workplace animal welfare procedures to ensure ongoing adherence to and effectiveness of these procedures
4. Implement workplace procedures for dealing with animal welfare emergencies	4.1 Implement workplace procedures for dealing with animal welfare emergencies 4.2 Record and report animal welfare emergencies to workplace management or relevant authorities 4.3 Implement measures to prevent recurrence and minimise risk of animal welfare emergencies
5. Implement and monitor workplace procedures for providing animal welfare training	5.1 Identify animal welfare induction and training needs 5.2 Implement both on and off-the-job animal welfare induction and training for work group

Element	Performance criteria
6. Implement and monitor workplace procedures for maintaining animal welfare records	6.1 Implement and monitor procedures to maintain animal welfare records 6.2 Use aggregate information from animal welfare records to implement animal welfare programs

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK404A Implement and monitor animal welfare programs

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK404 Implement and monitor animal welfare programs

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- provide information about animal welfare to the work group and individuals in the workplace
- facilitate the participation of workers in animal welfare compliance
- implement and monitor workplace procedures for animal welfare
- implement workplace procedures for animal welfare emergencies
- implement and monitor staff training in animal welfare
- maintain animal welfare records
- implement relevant work health safety animal welfare and biosecurity requirements and practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant animal welfare legislation, regulations, codes of practice and guidelines including:
 - Australian Animal Welfare Strategy
 - Animal Welfare Act or Prevention of Cruelty to Animals Act or equivalent specific to the State or Territory
 - Australian Standards and Model Codes of Practice specific to the livestock or industry sector
 - industry requirements and standards for animal welfare for the animal species
- animal welfare emergencies procedures for:
 - animal disease or injury
 - damage to facilities where animals are housed

- animals which have escaped from the normal control of the workplace
- road accidents when moving and transporting animals
- inclement weather - flooding, strong wind, lightning, storm, extreme temperatures
- fire
- power failure
- water or feed failure or contamination
- need for animal welfare in the workplace
- requirements for ensuring the welfare of livestock described in the relevant codes of practice
- workplace policies, procedures, guidelines and standard operating procedures relating to animal welfare
- relevant work health safety animal welfare and biosecurity requirements and practices in the context of animal welfare

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK405 Implement intensive production systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement intensive production systems.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for production	1.1 Identify and obtain documents within the enterprise that detail the

Element	Performance criteria
operations	<p>requirements of the production program</p> <p>1.2 Assess and calculate the resources required for the production operations from the product to be produced, the available timelines, the available resources, and the types of housing and feeding infrastructure</p> <p>1.3 Determine measurable indicators, specifications and targets based on the production program and type of housing and feeding infrastructure</p> <p>1.4 Hold discussions with operational personnel and immediate management to discuss the production program</p> <p>1.5 Identify, seek and obtain approvals that are required for the production operations</p>
2. Communicate production program and complete administration activities	<p>2.1 Co-ordinate, schedule and communicate regularly with people, materials and equipment required for the operations according to the prepared plan to ensure smooth operation and progress</p> <p>2.2 Identify work health and safety hazards, assess risks and take responsive action throughout the production operations</p> <p>2.3 Communicate clearly to operational personnel the procedures and tools to be used, personal protective equipment to be used/worn, types of records to be kept, work health and safety hazards that have been identified, and actions to be taken to mitigate the work health and safety risks, and seek confirmation of the communication from the operational personnel</p> <p>2.4 Promptly and accurately complete documentation and records</p> <p>2.5 Provide advice to operational staff and contractors during the production operations when requested, or when the need arises</p>
3. Manage livestock and production environment	<p>3.1 Monitor herd/flock regularly for signs of ill health or injuries and record and report observations</p> <p>3.2 Monitor housing and feeding infrastructure regularly for signs of damage, wear and tear, and record and report observations</p> <p>3.3 Supervise examination of dead livestock for evidence of disease through correct post-mortem techniques and seek veterinary advice if required</p> <p>3.4 Assess and evaluate disease status of livestock, notify or report to appropriate personnel and seek veterinary assistance if required</p> <p>3.5 Monitor components of quarantine procedures regularly to ensure compliance with regulatory and industry standards</p> <p>3.6 Monitor and adjust aspects of the production system environment in line with the production program</p>
4. Manage effluent and waste	<p>4.1 Monitor effluent storage and disposal systems according to production program and manufacturer instructions</p>

Element	Performance criteria
	4.2 Calculate, monitor and document volume and type of effluent 4.3 Monitor the removal of all waste and debris from the production environment 4.4 Carry out ongoing production environment maintenance program throughout all seasons 4.5 Monitor and report on the regulatory and legislative requirements associated with the production program
5. Monitor and adjust production operations	5.1 Ensure monitoring of components specified in the production plan is adhered to 5.2 Make checks to ensure that work health and safety requirements are being observed and followed 5.3 Make checks to ensure that environment regulatory requirements are being observed and followed 5.4 Communicate with operational staff and contractors regularly to ensure smooth operation and progress 5.5 Make checks to ensure that all documentation and records required by regulatory agencies, industry and enterprise are completed clearly, promptly and accurately 5.6 Take corrective action promptly when required 5.7 Collate and store documentation and records appropriately 5.8 Prepare recommendations for future production programs based on the conduct of the operations, the data collected and the discussions with enterprise staff and contractors 5.9 Report on the progress and key aspects of the production operations and throughput to enterprise

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK405A Implement intensive production systems

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK405 Implement intensive production systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine measurable indicators, specifications and targets for the intensive enterprise assess the resources required for unit operations
- establish processes/strategies, procedure and controls to meet quality assurance requirements and production targets
- communicate production program to relevant personnel and complete administration activities
- manage livestock and the production environment
- implement quarantine procedures and monitor disease status of stock
- manage effluent and waste generated by production operations
- monitor and adjust production system for output, QA compliance, costs and profitability.
- prepare recommendations for future production programs based on the conduct of the operations, the data collected and the discussions with enterprise staff and contractors
- implement relevant work health and safety, biosecurity, animal welfare and environmental requirements and practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- type and use of information that can be gathered from enterprise programs, documents and records
- types of resources required, types of products, methods for assessing and calculating resources and products by using information from enterprise programs, documents and records

- type of measurable indicators, specifications and targets for the production system using information from enterprise programs, documents and records
- functions, parameters and scope of enterprise production programs and production plans
- relevant regulatory, industry and enterprise approvals, licences, authorities, documentation, records and reporting requirements for enterprise production operations
- manpower, materials and equipment requirements for carrying out effective and efficient enterprise production operations
- relevant work health and safety requirements
- signs of health, signs of ill health and methods of assessing livestock health
- types and functions of housing and feeding infrastructure relevant to the enterprise production operations and methods for assessing damage, wear and tear to infrastructure
- techniques, procedures and requirements for post-mortem examination of livestock carcasses
- common diseases of livestock, and methods for assessing and evaluating disease status
- relevant biosecurity requirements, quarantine requirements, functions, components and facilities required of an enterprise quarantine system
- regulatory and industry requirements for effluent storage and disposal, types and functions of effluent storage and disposal systems, and methods for assessing and calculating effluent production
- regulatory and industry requirements, methods and systems for waste and debris storage and disposal
- relevant environment requirements and sustainability practices
- functions and aspects of production environment maintenance programs
- relevant animal welfare requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK406 Oversee animal marking operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to oversee animal marking operations.

This unit applies to livestock producers and those with supervisory responsibilities within livestock production enterprises.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare marking plan	1.1 Obtain and clarify information and instructions with regard to marking operations 1.2 Ensure timing of marking and calendar of operations fit so that growth checks are minimised 1.3 Determine animal groupings, marking operations and sequencing 1.4 Assess and determine resource requirements within enterprise budgetary constraints 1.5 Prepare marking plan and ensure sufficient flexibility to adapt to changes during marking operations
2. Co-ordinate and arrange resources	2.1 Locate and arrange suitable locations for undertaking marking operations and facilities to meet requirements of marking schedules 2.2 Arrange and provide appropriate and adequate equipment, materials and health treatments on site 2.3 Confirm staff and provide them with safety, task and operational briefings 2.4 Identify work health and safety hazards, assess risks, and implement, monitor and review risk controls in line with enterprise policies 2.5 Time and supervise marking operations to ensure mistothering is minimised and animal welfare requirements are met
3. Monitor marking operation	3.1 Monitor implementation of marking plan for efficiency and effectiveness in terms of achieving enterprise objectives 3.2 Monitor condition and health status of animals, take appropriate action to rectify risks to animal welfare, and report abnormalities where necessary 3.3 Maintain effective worksite communication to ensure efficient workflow and address immediate problems 3.4 Document data with regard to operational processes and outcomes for continual assessment and management planning

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK406A Oversee animal marking operations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK406 Oversee animal marking operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards, assess risks and implement and monitor of safe operating procedures
- plan, cost and schedule resource requirements
- prepare and implement a work plan for marking
- prioritise and schedule marking operations
- determine and allocate staff roles and responsibilities
- monitor the health and well-being of animals during and after marking
- manage staff and operations and establish and monitor performance targets
- document and prepare plans and reports for the understanding of staff and management
- implement and monitor relevant animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- management processes and procedures
- cost analysis techniques
- procedures for planning and developing marking plans
- marking and production plans
- codes of practice with regard to animal marking and animal health and welfare
- use of veterinary medicines and their administration
- animal marking methods and procedures
- work health and safety and animal welfare legislation, codes of practice and enterprise requirements
- animal behaviour and nutritional requirements

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK407 Plan and monitor intensive production systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan and monitor intensive production systems.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Source information for	1.1 Consult livestock production plan for details of current period

Element	Performance criteria
input to production system planning	planning, enterprise requirements and market expectations 1.2 Analyse key production data to establish unit performance 1.3 Access and analyse information regarding the characteristics of the herd/flock under production 1.4 Access and analyse regulatory, industry and enterprise requirements that impact on the production system 1.5 Access and analyse market information regarding quality, standards and trends for input to the planning process
2. Plan for production	2.1 Determine target unit performance through a comparison with industry and enterprise standards 2.2 Establish and confirm production targets using data and information from unit's livestock production 2.3 Determine resources required to achieve production targets in terms of personnel, equipment and materials 2.4 Organise and engage staff and contractors to suit the production plan and its targets 2.5 Select and order other resources according to enterprise guidelines
3. Plan for animals' needs, environmental and effluent management to ensure welfare of animals and achieve production targets	3.1 Assess and calculate housing, effluent management, environmental management and biosecurity requirements from livestock numbers, market requirements and regulatory requirements 3.2 Evaluate construction and equipment system options and select the best option 3.3 Select materials chosen for construction according to animal welfare needs, cost and efficiency 3.4 Determine aspects of the production environment according to animals' welfare needs, efficiency of systems and market expectations 3.5 Select animal feed based on animal production, the size of the herd/flock, and the suitability of available feed products
4. Determine scheduling and key responsibilities	4.1 Determine scheduling for the production plan taking the range of seasonal, geographic and resourcing factors into consideration 4.2 Determine key responsibilities for specific implementation processes 4.3 Determine documentation and record keeping requirements and put procedures in place to ensure compliance with the range of applicable regulations 4.4 Ensure the production plan, including scheduling and key responsibilities, is clearly documented 4.5 Ensure the production plan includes the type, format, frequency

Element	Performance criteria
	and detail of all reporting requirements by managers and operators
5. Monitor and adjust production plan strategies	5.1 Evaluate the effectiveness of the production plan at key points and make adjustments as necessary 5.2 Identify, monitor and assess environmental impacts and work health and safety hazards relating to the production plan throughout the implementation process 5.3 Make modifications to the production plan as and when necessary

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK407A Plan and monitor intensive production systems

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK407 Plan and monitor intensive production systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- analyse key production data, herd/flock information and market requirements
- set production targets and identify resources needed to achieve them
- plan accommodation that meets animal welfare and production requirements
- develop feeding plans and evaluate alternatives for feed purchasing, milling and distribution
- determine work responsibilities and staffing requirements
- handle waste and effluent in line with environmental requirements and legislation
- monitor, review and adjust intensive production plans
- implement relevant work health and safety requirements
- implement relevant biosecurity, animal welfare and environmental management requirements and practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- functions, parameters and scope of production plans
- type and use of information from enterprise production plans and enterprise production data that can be used to formulate production system planning and production unit performance targets
- type and use of information on herd/flock characteristics; regulatory, industry and enterprise requirements; industry and enterprise standards and benchmarks; market specifications for product qualities, product standards and market trends; production unit's history and data, for the formulation of the production system plan and performance targets

- types, quantities, assessment and calculation, procurement and selection of manpower, material, equipment and other resources required for the production plan
- types and functions of, and methods for assessing and calculating requirements of, housing, effluent management and environmental management infrastructure
- efficiency and cost benefit ratios of different types of housing, effluent management and environmental effluent infrastructure and systems, taking into account animal welfare requirements and enterprise production targets
- types, functions and cost benefit ratios of livestock feeds
- relevant aspects and impacts of production cycles and staff job roles on production planning
- relevant regulatory, industry and enterprise documentation, records and reporting requirements for implementation of production plans
- methods for assessing and evaluating production plans
- relevant work health and safety requirements
- relevant environmental requirements and sustainability practices
- relevant biosecurity requirements
- relevant animal welfare practices

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK409 Supervise animal health programs

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to supervise animal health programs.

This unit applies to managers of animal production enterprises and covers the process of implementing and monitoring animal health programs.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor and assess animal health	1.1 Conduct regular observations to assess animals' health 1.2 Recognise and report symptoms of ill health and common diseases or parasite infestations 1.3 Carry out sampling and arrange testing for internal parasites or diseases where required 1.4 Refer unusual or suspected exotic disease outbreaks for veterinary advice in line with biosecurity legislation and enterprise policies 1.5 Report notifiable diseases and comply with all restrictions and treatment requirements 1.6 Record animal health status 1.7 Identify work health and safety hazards, assess risks and implement and monitor suitable controls 1.8 Select, use and maintain appropriate hygiene measures and suitable personal protective equipment (PPE) 1.9 Monitor and record animal welfare status in line with enterprise and legislative requirements 1.10 Dispose of deceased animals according to environmental policies
2. Implement preventative health strategies	2.1 Identify risks to animal health, and source strategies, from the production plan, relevant expert or specialist consultant where applicable 2.2 Develop and implement a vaccination program to control clostridial and other diseases 2.3 Identify livestock prone to internal parasite build up and plan out the timing of treatments 2.4 Implement or research pest and disease control strategies based around pasture spelling and rotations of different classes of livestock 2.5 Plan the health treatments for animals using an integrated approach 2.6 Use drenches, vaccines and other stock medications according to manufacturer instructions and comply with withholding periods 2.7 Rotate drench groups to minimise the risk of parasite resistance
3. Record and review the animal health program	3.1 Record all treatments and maintain an inventory of stock medicines 3.2 Record health issues and record the results of tissue, organ and blood samples if applicable

Element	Performance criteria
	3.3 Use records of health tests and animal health treatments, including animal production records, to review the animal health plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK409A Supervise animal health programs

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK409 Supervise animal health programs

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards, assess risks and implement and monitor safe work practices and appropriate hygiene procedures
- monitor the health and wellbeing of animals
- detect possibility of disease through parameters such as loss of bodyweight behaviour or length of time required to eat food
- recognise clinical symptoms (normal vs. abnormal)
- recognise abnormal physiological and behavioural signs in livestock
- collect samples for testing for internal parasites and diseases
- implement preventative health strategies
- administer vaccines and medications to animals
- maintain records associated with animal health programs
- implement relevant biosecurity and animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- symptoms of common livestock diseases and parasite infestations
- storage conditions for a range of chemicals, including veterinary chemicals
- types of vaccines and how they work
- zoonotic diseases and their mode of transmission
- animal anatomy and physiology relevant to the collection of tissue, organ, blood and other biological samples in live and dead animals and the conduct of post-mortems
- relevant biosecurity requirements

- management practices and processes to minimise noise, odours, and debris from the livestock operations
- relevant legislation, regulations and codes of practice relating to the use of veterinary medicines, animal diseases, animal welfare and waste and environmental management,
- relevant work health and safety legislation, regulations and codes of practice

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK410 Supervise feedlot operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to supervise feedlot operations.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Select feedlot livestock	1.1 Consult enterprise plans and management regarding the breeds, classes and numbers of livestock to be obtained for feedlotting 1.2 Select and purchase livestock for feedlotting 1.3 Inspect purchased livestock on delivery for satisfactory health and condition 1.4 Complete required documentation and records accurately and promptly, and store these appropriately
2. Oversee the preparation of rations for feedlot livestock	2.1 Identify nutritional needs of livestock from information available and enterprise production targets 2.2 Gather expert advice on livestock nutrition from the appropriate government, industry or enterprise sources 2.3 Select feed ingredients that meet the identified nutritional needs of livestock 2.4 Select suppliers of feed ingredients based on quality and cost benefit ratios 2.5 Determine quantities of feed ingredients required based on available information and advice 2.6 Formulate feeding schedule and allocate responsibility for feeding livestock to appropriate personnel 2.7 Assess and identify method(s) of feeding livestock based on available information and advice
3. Supervise feeding of feedlot livestock	3.1 Organise mixing of feed to suit the needs of the livestock, the identified nutritional requirements, and the equipment available within the enterprise 3.2 Supervise calibration of measuring equipment and calculation of feed ingredient quantities 3.3 Supervise the selection, maintenance and use of suitable personal protective equipment 3.4 Identify work health and safety hazards, assess risks and implement control measures 3.5 Supervise the feeding of livestock according to production program
4. Monitor performance of feedlot livestock	4.1 Monitor the health and condition of livestock and their production levels; record and report any reaction or change to a change in feed types, ingredients or schedules 4.2 Provide advice to enterprise staff on the feeding of livestock when requested, or when the need arises 4.3 Supervise the storage, removal and disposal of all feed wastes and debris from the production environment 4.4 Supervise the dispatch of livestock for slaughter with required identification and documentation

Element	Performance criteria
	4.5 Collate and analyse feedback from slaughter point and downstream customers 4.6 Maintain and store documentation and records appropriately

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK410A Supervise feedlot operations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK410 Supervise feedlot operations

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- select, purchase and induct livestock for feedlotting according to enterprise requirements
- source advice on feed and feeding regime with nutritionist and managers
- oversee the preparation of rations for feedlot livestock
- supervise feeding of feedlot livestock and provide advice to staff where required
- monitor livestock performance on weight gains and meeting carcass criteria and diagnose feeding problems and remove animals for treatment
- review procedures in response to feedback from slaughter point and customers
- complete the required records of feed use and livestock performance
- implement relevant work health and safety, animal welfare, biosecurity and environmental management requirements and practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types and use of information to be gathered from enterprise plans and management for the determination of suitable feedlot livestock to be procured
- breeds, classes and characteristics of feedlot livestock
- criteria for assessment and selection of feedlot livestock
- regulatory, industry and enterprise requirements and procedures for purchase, delivery and movement of feedlot livestock.
- principles of nutrition, feeding strategies and feeding management of feedlot livestock
- types, characteristics and quality assessments of feed ingredients, and the methods for assessing their nutritional value in meeting the needs of feedlot livestock
- types, forms and characteristics of livestock feeds

- process and requirements of a cost benefit analysis
- procedures and resource requirements for mixing, blending and milling feed ingredients and feeds
- relevant work health and safety requirements
- signs of health, ill health, good condition and poor condition in livestock, and methods for assessing livestock health and condition in relation to nutrition and feeding
- possible production changes in relation to changes in nutrition, feeds and feeding strategies
- types of and disposal methods for organic and non-organic waste
- relevant environmental requirements and sustainability practices
- regulatory, industry and enterprise requirements for selection, movement and dispatch of livestock for slaughter
- types and use of information that can be gathered from slaughter facilities and downstream customers to formulate, improve or adjust nutritional and feeding strategies for feedlot livestock
- relevant animal welfare and biosecurity requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK412 Arrange livestock purchases

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to arrange livestock purchases.

This unit applies to livestock producers.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Identify purchasing opportunities	1.1 Identify and confirm number, type and breed of livestock to be purchased 1.2 Research and review agents and sellers of livestock to determine appropriate sources 1.3 Monitor and identify sales schedules for livestock types 1.4 Research and evaluate purchasing prices to identify comparative values between sellers and agents
2. Inspect livestock condition	2.1 Check health status of livestock using accepted methods 2.2 Obtain and verify records and documents relating to livestock histories 2.3 Assess suitability of livestock for purchasing purposes 2.4 Assess prices against livestock condition and enterprise requirements to identify appropriate purchasing values
3. Complete documentation	3.1 Source and complete insurance requirements for livestock 3.2 Confirm purchases at current market price levels according to estimated livestock values 3.3 Ensure accuracy of documentation details and exchange promptly with seller
4. Organise transportation	4.1 Identify carriers appropriate to livestock type and quantity and engage them on suitable terms 4.2 Identify work health and safety hazards associated with livestock handling and transport assess risks, and implement, risk controls in line with enterprise policies 4.3 Arrange timing and dates of transportation and delivery with transporter, vendors and agents 4.4 Assess special needs of livestock and prepare facilities to ensure timely pick up 4.5 Undertake animal health and welfare checks on arrival according to enterprise and legislative requirements 4.6 Where required quarantine animals in line with enterprise policies 4.7 Complete records associated with livestock movements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK412A Arrange livestock purchases

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK412 Arrange livestock purchases

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research livestock price trends and budgeted returns
- organise transport
- negotiate on price and terms
- assess livestock and condition
- arrange transport and insurance
- check on health status and condition of livestock
- complete records associated with livestock transport
- implement relevant quarantine/biosecurity practices where required
- implement relevant work health and safety requirements
- implement relevant animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- livestock assessment for relevant features / traits
- livestock selling procedures
- matching livestock to feed available
- livestock transportation
- animal health procedures
- livestock insurance
- relevant legislative work health and safety requirements especially as they relate to livestock sales, livestock products, animal welfare, animal transportation for local and export markets, and safe livestock handling techniques

- enterprise and industry policies and codes of practice with regard to livestock sales, livestock transportation, and recording and reporting requirements (NLIS)

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK413 Design livestock handling facilities

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design livestock handling facilities.

This unit applies to those whose job role includes planning and designing handling and/or accommodation facilities for livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupation licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine requirements	1.1 Assess and clarify requirements for livestock handling facilities 1.2 Negotiate and confirm cost structures and timelines within enterprise budgetary constraints 1.3 Obtain and assess plans for livestock handling facilities from a variety of sources
2. Undertake a site analysis	2.1 Inspect location of new or existing site and record physical elements and features of the site for assessment of suitability 2.2 Specify surveys to be undertaken and determine tolerances according to enterprise requirements 2.3 Assess and determine site preparation requirements according to enterprise policies and site parameters
3. Prepare a design brief	3.1 Modify plans appropriate to the individual site and enterprise objectives 3.2 Assess options to modify existing facilities or establish alternative handling operations and obtain quotes 3.3 Identify relevant work health and safety, animal welfare, biosecurity and environment sustainability requirements, codes of practice, enterprise quality assurance requirements and incorporate them into the plan 3.4 Identify legal requirements and constraints on development processes 3.5 Prepare design brief and undertake consultation to establish agreement on options and approaches for development
4. Develop a final plan	4.1 Prepare recommendations based on the analysis of data and enterprise instructions 4.2 Obtain authorisations and approvals required for implementation of the plan 4.3 Produce detailed plan with considerations for work health and safety, animal welfare, biosecurity and environmental implications and enterprise objectives

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK413A Design livestock handling facilities

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK413 Design livestock handling facilities

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess the need for livestock handling facilities
- evaluate and recommend alternative options
- determine the site and design the handling facility for the site
- incorporate work health and safety and animal welfare requirements, potential environmental impacts and enterprise operational principles for livestock handling and movement into design
- estimate cost of building the designed facilities
- develop a detailed plan for livestock handling facility

Knowledge Evidence

The candidate must demonstrate knowledge of:

- livestock behaviour and design interactions
- enterprise livestock handling facility requirements
- requirements of transportation vehicles and loading areas
- costing methodologies
- livestock handling options and accommodation facilities and their uses
- site constraints in relation to livestock handling facilities
- industry and legislative requirements for the planning and establishment of livestock handling facilities
- relevant work health and safety legislative requirements
- codes of practice with regard to environmental protection and animal welfare

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK414 Arrange transport for farm produce or livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to arrange transport for farm produce or livestock.

This unit applies to those whose job roles include arranging and coordinating the transport of farm produce, fodder or livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Confirm transport requirements	<p>1.1 Confirm transport requirements according to enterprise marketing and production plans</p> <p>1.2 Confirm the amount and type of farm produce and number of livestock to be transported, the pick up or delivery requirements, and the route to be taken according to enterprise instructions</p> <p>1.3 Identify and comply with legislative requirements associated with the transport farm of produce or livestock</p>
2. Prepare transport plan	<p>2.1 Determine equipment, vehicles and resources required to transport farm produce or livestock and arrange according to enterprise requirements</p> <p>2.2 Identify, seek and obtain relevant authorisations, permits or animal identification requirements according to legislative requirements</p> <p>2.3 Document transport arrangements including pickup and delivery details, and any requirement to unload livestock to allow for spelling</p> <p>2.4 Document conditions to be maintained for produce, including separation for product integrity</p> <p>2.5 Negotiate compensation or penalties for damage to produce or livestock, or obtain transport insurance</p> <p>2.6 Ensure plan complies with enterprise and legislative requirements for work health and safety, animal welfare and biosecurity</p>
3. Source and select carrier	<p>3.1 Source carriers to ascertain availability, terms and conditions in relation to transport and enterprise requirements</p> <p>3.2 Contact carriers who satisfy the transport requirements to negotiate suitable costs, terms and cartage conditions</p> <p>3.3 Select carrier and confirm negotiations with an agreement and insurance arrangements prepared accordingly</p>
4. Co-ordinate transport arrangement	<p>4.1 Ensure completion and accuracy of relevant documentation according to industry and legislative requirements</p> <p>4.2 Communicate regularly with operational staff and contractors to confirm clarity and understanding of arrangements</p> <p>4.3 Check and confirm scheduling arrangements and preparation of farm produce or livestock in readiness for transportation with enterprise personnel</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK414A Arrange transport for farm produce or livestock

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK414 Arrange transport for farm produce or livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- organise quotes and negotiate effective transport contracts/agreements
- document a transport plan
- ensure transport plan meets relevant work health and safety, animal welfare and biosecurity requirements
- obtain permits and clearances
- co-ordinate transport operations
- ensure the accurate and timely completion of relevant documentation

Knowledge Evidence

The candidate must demonstrate knowledge of:

- industry and legislative requirements for the transport of grain and livestock
- safety requirements for livestock and personnel
- transportation methods availability and costing alternatives
- relevant animal welfare, biosecurity and work health and safety legislative requirements

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK418 Escort livestock during export

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to escort livestock during export.

This unit applies to animal attendants who escort livestock on sea voyages.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They may provide direction to others, and use discretion and judgement in the selection, allocation and use of available resources. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

All units of competency dealing with animals in the AHC Training Package have the requirements for animals to be handled humanely to minimise stress and discomfort.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

AHCLSK331 Comply with industry animal welfare requirements

AHCLSK307 Euthanase livestock

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Carry out administration requirements	1.1 Obtain and clarify details of the livestock to be exported from the exporter or producer 1.2 Establish effective communication links between all parties to the consignment and any relevant organisations or agencies 1.3 Investigate and verify specific details of the vessel/plane to facilitate loading and transit operations 1.4 Complete required certification, permit and invoicing arrangements according to exporter requirements and relevant legislation 1.5 Estimate nutritional and veterinary requirements and order required quantities according to exporter directions, established industry standards and load specifications
2. Prepare for livestock to be loaded	2.1 Comply with work health and safety policies and procedures, including selection of appropriate Personal Protective Equipment (PPE) 2.2 Ensure that animal welfare and biosecurity requirements are met 2.3 Establish communication lines with all shipboard personnel for the voyage 2.4 Review exporter instructions according to loading criteria 2.5 Identify appropriate infrastructure for loading 2.6 Perform basic risk analysis for loading and recommend preventative measures 2.7 Identify appropriate on-board loading resources including personnel requirements 2.8 Check and ensure all on-board equipment is in working condition, including the veterinary kit and euthanasia equipment
3. Load and accompany livestock on transport	3.1 Observe and follow work health and safety policies and procedures, animal welfare, biosecurity and environmental requirements 3.2 Load and secure prepared livestock safely and humanely according to animal welfare, biosecurity, work health and safety and exporter requirements 3.3 Check and verify loading densities and conditions in accordance with the loading plan and regulatory requirements 3.4 Monitor and record water and feed provision to livestock and report any abnormalities or variance from feed budgets to the appropriate party

Element	Performance criteria
	<p>3.5 Carry out regular observation of all livestock to ensure timely and appropriate responses to changes in condition, feed and water intake, or incidence of disease</p> <p>3.6 Deal humanely with injured or diseased livestock in accordance with relevant animal welfare, biosecurity, health and environmental considerations and in consideration of customer requirements</p> <p>3.7 Complete reports according to shipping company policy and in accurate observation of shipping conditions</p>
4. Complete post-shipment procedures	<p>4.1 Establish unloading strategies including timing, health checks and documentation in consultation with the carrier's Chief Officer or Master</p> <p>4.2 Complete pen cleaning and other established pre-unloading procedures prior to entering port</p> <p>4.3 Unload animals safely and humanely using appropriate equipment and facilities in line with work health and safety, animal welfare, biosecurity and exporter requirements</p> <p>4.4 Identify specific animal requirements at unloading and obtain supplies to meet consignment needs</p> <p>4.5 Complete end of voyage reports and required documentation in accordance with exporter requirements, shipping company policy, government legislation, and customer requirements</p> <p>4.6 Undertake post-transport checks according to exporter and customer requirements, and shipping company policy</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK418A Escort livestock during export

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK418 Escort livestock during export

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- carry out pre-shipping and consignment administration procedures
- make preparations for loading of livestock
- load livestock onto the carrier
- handle, treat and feed livestock in accordance with relevant animal welfare, biosecurity, health and environmental legislation and codes of practice and in consideration of customer requirements
- identify signs of ill health and injury, or signs of abnormal or depressed appetite
- handle and restrain livestock for observation and treatment as required
- oversee the care of livestock in transit
- communicate effectively with exporting agents and related agencies, as well as the Master/Captain, officers and seamen on board
- complete export documentation including daily records of animal observations and conditions
- communicate effectively with exporting agents and related agencies, as well as transportation officers and staff
- implement relevant work health and safety, animal welfare, biosecurity and environmental requirements and practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant work health and safety, animal welfare, biosecurity and quarantine, and environmental legislation and codes of practice

- regulatory requirements and industry standards for the transport of livestock using sea carriers
- typical exporter and shipping company requirements, policies and procedures
- how conflicts should be handled between regulatory requirements and requirements of exporters or shipping companies
- working culture and specifications for imported livestock of common importing countries
- care, husbandry and management procedures for health and welfare of all classes of livestock - including pregnant livestock - in transit
- methods and techniques for handling and restraint of all classes of livestock
- methods and techniques for loading and unloading of livestock
- signs of health, anatomy and physiology of the livestock species
- zoonoses of livestock and preventative health strategies for humans and livestock
- common diseases of the livestock species and preventative health strategies
- signs of ill health and related management strategies in the livestock species
- methods and techniques of euthanasia
- disposal of animal carcasses on-board sea carriers
- on-board procedures and responsibilities
- use and maintenance of personal protective equipment, veterinary, euthanasia and disinfectant materials and equipment
- invoice, receipt and document requirements at both ends of the transport operation
- strategies for effective communication between all parties to the consignment, relevant organisations and agencies, and on-board carrier personnel

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessments for the following performance evidence must be conducted on live animals:

- load and transport livestock

Competency for the unit can be determined in a single species.

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK419 Manage horses for stock work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0

Application

This unit of competency describes the skills and knowledge required to manage horses for stock work, including coordinating specialist services from veterinarians and farriers.

The unit applies to individuals, experienced in riding horses for stock work, who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgement in the selection, allocation and use of available resources, and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- ACMEQU406 Manage selection of horse for new or inexperienced handler, rider or driver

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Manage horse condition and health	<p>1.1 Develop and implement workplace procedures for maintaining health and welfare of horses in consultation with workplace staff</p> <p>1.2 Assess, report and document soundness and working condition of horses in the workplace</p> <p>1.3 Ensure proper selection, use and maintenance of appropriate personal protective equipment (PPE)</p> <p>1.4 Identify unsound or unhealthy horses and diagnose or establish reasons for their condition, such as seeking veterinary advice where required</p> <p>1.5 Administer treatment and implement management plan for unsound or unhealthy horses under supervisor or veterinary supervision, according to plan</p> <p>1.6 Keep accurate records of horse identification, treatments administered and management plans</p>
2. Manage nutritional requirements of horses	<p>2.1 Develop and implement feeding plans for horses in the workplace, taking into account daily and seasonal factors affecting nutritional requirements</p> <p>2.2 Provide supplementary feeding programs to workplace horses to ensure they are in optimum physical condition and health for stock work</p> <p>2.3 Identify potential nutritional problems and take preventative or corrective action through the use or withdrawal of supplementary feeding</p> <p>2.4 Develop and implement work programs for horses according to their condition and nutritional status</p>
3. Supervise activities and tasks requiring the use of horses for workplace personnel	<p>3.1 Conduct risk assessments for activities and tasks requiring the use of horses, and implement and monitor the measures to control these risks</p> <p>3.2 Match horses in workplace to personnel by rider ability and suitability for tasks</p> <p>3.3 Schedule tasks requiring the use of horses, and communicate details to appropriate staff</p> <p>3.4 Coordinate tasks requiring the use of horses, and provide supervision to ensure that horses and personnel work within industry and workplace requirements</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.5 Coordinate breaking-in of horses by contractors or staff, and provide supervision to ensure that horses and personnel work within industry and workplace requirements</p> <p>3.6 Provide inexperienced horses with stock training by experienced riders</p> <p>3.7 Maintain regular communication with workplace staff and contractors to ensure smooth operation</p> <p>3.8 Monitor outcomes of activities and tasks requiring the use of horses, and record in line with workplace requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret and check accuracy of textual and numerical information from a range of sources to determine and confirm work requirements
Writing	<ul style="list-style-type: none"> Record and report specific information using workplace formats, and revise and update documentation based on outcomes of action
Numeracy	<ul style="list-style-type: none"> Calculate quantities of resources and costs associated with horse health and feed programs
Oral communication	<ul style="list-style-type: none"> Provide clear, sequenced instructions and respond to queries using terminology and concepts appropriate for the audience
Navigate the world of work	<ul style="list-style-type: none"> Work independently and collectively within broad parameters, taking responsibility for plans, decisions and outcomes relating to work area Know own obligations and responsibilities relating to regulatory and industry requirements for due diligence and safety of staff and horses
Interact with others	<ul style="list-style-type: none"> Follow accepted industry practices and protocols for working collaboratively with management and organising specialist services from veterinarians and farriers

Skill	Description
Get the work done	<ul style="list-style-type: none"> Plan, implement and coordinate multiple work tasks to achieve effective and efficient management of horses for stock work

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK419 Manage horses for stock work	AHCLSK417 Manage horses for stock work	Changes and additions to clarify safety requirement Addition of foundation skills descriptions Addition of prerequisite unit Additions to performance evidence requirements	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK419 Manage horses for stock work

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has demonstrated management of at least two horses and two workers undertaking stock work on a property, including:

- developing and implementing management plans for the condition and health of horses in the workplace
- monitoring and managing the health and welfare of horses and developing feeding plans for horses in the workplace
- developing work programs for horses in the workplace
- matching horse type and experience to rider and task
- supervising and coordinating activities and tasks requiring the use of horses in the workplace, and monitoring the outcomes
- managing the provision of training for inexperienced horses
- identifying and treating ill or injured horses and consulting with veterinarians
- coordinating the horse work of other property personnel such as horse breakers, veterinarians, farriers and other farm staff
- communicating task requirements to staff and arrangements for breaking-in of horses to staff and contractors
- observing, identifying and reacting appropriately to environmental implications and work health and safety hazards
- applying relevant animal welfare and biosecurity requirements to managing horses.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- key requirements of work health and safety and animal welfare regulations and codes of practice relevant to working and interacting with horses

- key requirements of biosecurity and environment sustainability requirements relevant to working and managing horses
- industry and workplace policies, procedures and guidelines relevant to the job role
- feeding plan and work program for individual horses in the workplace
- care, husbandry and management procedures for horses
- signs of health, anatomy, physiology and behaviour of the horse
- signs of ill health in horses and management strategies for common illnesses
- strategies for and management of breaking in of horses and training inexperienced horses
- use of horses for workplace operations
- strategies for effective communication in the workplace
- strategies for effective supervision and management of staff in the workplace.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - various horses used in livestock work assessed as suitable for the experience and skill of the individual
 - appropriate tack for individual, horse and stock work activity
 - personal protective equipment (PPE) correctly fitted and applicable to activity for individual
- specifications:
 - work instructions and workplace procedures relating to managing horses
 - access to legislation and industry information related to managing horses
- relationships with others:
 - management and specialists to interact with regarding the management of horses
 - staff to coordinate and match to horse suitability.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK501 Manage livestock production

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan for livestock production and manage the implementation of such a plan.

This unit applies to farm managers with extensive or intensive livestock production enterprises.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They analyse design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Plan for production	<p>1.1 Assess the capability of land resources for grazing and determine stock, pasture and land management strategies for each land capability class</p> <p>1.2 Assess the suitability and sustainability of water resources</p> <p>1.3 Establish livestock production targets for each enterprise for the short and long term according to the farms marketing and business plans</p> <p>1.4 Establish production targets, taking into consideration enterprise short and long term livestock production goals, herd/flock breeding improvements and relevant risk control strategies</p> <p>1.5 Select genetics and breeding programs based on the production targets and the marketing requirements for the enterprise</p> <p>1.6 Select and design production facilities in a way that deals sensitively with identified waste products</p> <p>1.7 Establish and specifically include environmental controls in the production plan</p> <p>1.8 Identify work health and safety hazards, assess risks and incorporate suitable controls into the production plan</p> <p>1.9 Prepare a plan that documents the decisions taken, the assessments made, the targets established, and any specific issues that relate to work health and safety, animal welfare, biosecurity and environmental risks</p> <p>1.10 Ensure plan includes the type, format, frequency and detail of any reporting required by both manager(s) and operators</p>
2. Plan for livestock needs	<p>2.1 Determine feed requirements for each age/sex category of herds and/or flocks</p> <p>2.2 Determine most appropriate feeding plan for each livestock category based on a cost benefit analysis</p> <p>2.3 Research and implement most appropriate health strategies to prevent and control disease in each herd and/or flock on the basis of a cost benefit analysis</p> <p>2.4 Prepare schedules for purchasing and using the products and services used in livestock production</p> <p>2.5 Research and implement most appropriate livestock production, harvesting, handling and transportation methods and animal welfare requirements from a cost benefit analysis</p> <p>2.6 Prepare a livestock production plan that incorporates the calendar of operations for each enterprise production cycle, and the management of any specific animal welfare issues</p> <p>2.7 Ensure plan includes the type, format, frequency and detail of any</p>

Element	Performance criteria
	reporting required by both manager(s) and operators
3. Seek information on innovations for existing or potential enterprises and farm activities	<p>3.1 Identify and access sources of information on innovations relevant to the enterprise and livestock species</p> <p>3.2 Assess information on innovations to determine whether or not such innovations could be used in the present enterprise, or in a potential future enterprise</p> <p>3.3 Amend prepared production plans to include innovations deemed suitable for use in the enterprise</p>
4. Test and adopt relevant innovations	<p>4.1 Consult any people who may be involved in implementing the innovation or in planning for it and discuss the change with them</p> <p>4.2 Test innovations on the farm to determine whether or not they are suitable, and whether they may be readily adapted to suit the circumstances of the business</p> <p>4.3 Identify any work health and safety hazards, animal welfare, biosecurity or environmental risks that present during the trial phase, assess them and take responsible action</p> <p>4.4 Make a decision about whether or not to adopt the innovation, based on its costs and benefits and any implementation issues, including work health and safety, animal welfare, biosecurity and environmental considerations</p>
5. Implement, monitor and evaluate livestock production plans	<p>5.1 Implement and monitor production plans according to the calendar of operations</p> <p>5.2 Site, erect or install production facilities in a way that deals sensitively with identified waste products</p> <p>5.3 Evaluate livestock growth/maturity or production according to the planned targets and the marketing requirements</p> <p>5.4 Monitor flock/herd health, and control and prevent parasite and disease outbreaks quickly and effectively</p> <p>5.5 Assess feed supplies, monitor pasture or landscape condition and species composition, and vary stocking rates to maintain optimum pasture and livestock health</p> <p>5.6 Identify, monitor and manage work health and safety hazards, animal welfare, biosecurity or environmental impacts relating to livestock production in the business to promote optimum pasture, livestock, and employee health</p> <p>5.7 Analyse physical and financial records and extractions taken from them to assess production performance, and to provide information for business and taxation purposes</p> <p>5.8 Evaluate the production performance of each enterprise to determine whether or not they are sustainable and profitable, and to use in reviewing and revising production plans</p>
6. Comply with legal	6.1 Obtain information about the legal requirements and regulations

Element	Performance criteria
requirements and regulations	<p>that affect farm land ownership/possession and livestock production</p> <p>6.2 Determine record keeping requirements, and put in place procedures to ensure compliance with the range of applicable regulations including taxation legislation</p> <p>6.3 Obtain permits from the relevant authorities for the transport and movement of livestock and equipment</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK501A Manage livestock production

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK501 Manage livestock production

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop livestock production plans
- manage all resources for a grazing enterprise
- implement grazing strategies that match livestock needs and optimise pasture growth
- maintain the farm natural resource base through sustainable practice
- plan and monitor the finances of the production unit
- observe, identify and react appropriately to animal welfare, biosecurity and environmental implications and work health and safety hazards
- monitor and manage animal health, welfare and nutrition
- supervise livestock husbandry operations
- analyse and assess the economic impact of specific situations
- establish processes/strategies, procedures and controls for livestock production
- assess land capability
- comply with legal and taxation requirements
- maintain records of production.
- assess, and then adopt profitable innovations
- implement and monitor relevant work health and safety, animal welfare, biosecurity and environmental requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- livestock nutrition
- health and welfare of animals within the production system.

- key considerations in a livestock breeding operation
- livestock husbandry and management practices
- land capability and its relevance to planning livestock production in the context of the whole farm
- sustainable land use principles and practices applicable in the region
- environmental controls and codes of practice applicable to the enterprise
- budgeting and financing for an enterprise
- cost benefit analysis,
- management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant legislation and regulations relating to soil and water degradation issues, animal health and welfare, biosecurity and chemical use
- relevant work health and safety legislation and codes of practice

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK502 Arrange marketing of livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to arrange for the marketing of livestock and associated products.

This unit applies to livestock production managers whose job role includes livestock marketing.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They analyse design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Determine sales characteristics and demand	1.1 Identify potential purchasers and their purchasing requirements from available market information 1.2 Observe current and recent sales to monitor market trends and patterns 1.3 Monitor and review regulatory requirements for market entry to ensure quality assurance and fitness for sale 1.4 Determine ability to deliver product to meet market demand and requirements
2. Sell product and arrange transport	2.1 Research sale logistics and incorporate into marketing strategy 2.2 Consult sale outlets about market prospects and inform them of preferred sale method 2.3 Complete transport arrangements in time for sale, and prepare and organise facilities and product and documentation 2.4 Complete negotiations with agents, brokers and buyers 2.5 Arrange and process payments
3. Assess sales performance	3.1 Obtain and analyse sales data to facilitate monitoring of performance against marketing plan and enterprise requirements 3.2 Analyse strengths and weaknesses of performance 3.3 Review sales strategies to maximise future returns 3.4 Record data for future reference according to enterprise, industry and legislative requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK502A Arrange marketing of livestock

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK502 Arrange marketing of livestock

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify appropriate markets and sales opportunities
- calculate cost of production and target sale price
- select sales outlets
- select selling method and negotiate with brokers, sellers and agents
- prepare and implement marketing plan
- ensure that the product meets legislative and industry requirements for fitness for sale
- coordinate sales and transport logistics for livestock products
- analyse sales data and trends to maximise future profit margins

Knowledge Evidence

The candidate must demonstrate knowledge of:

- market specifications for the products produced
- quality assurance procedures and their implementation
- sales outlets
- current and alternate sale methods
- preparation of livestock and transportation systems
- price risk and sales strategies
- sales analysis
- enterprise and industry policies and codes of practice with regard to livestock sales transportation, recording and reporting requirements
- market access requirements -Minimum Residue Levels (MRLs) and the variance between countries, withholding periods after treatment

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK504 Develop livestock health and welfare strategies

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop and implement preventative health treatment and welfare strategies for animals.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They analyse design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop health and welfare strategies for	1.1 Monitor livestock condition and identify risks to health and

Element	Performance criteria
livestock	welfare relevant to the workplace and local environment 1.2 Develop and document a livestock health and welfare strategy 1.3 Identify and arrange facilities and equipment required to implement health and welfare strategy 1.4 Inform staff details of health and welfare strategy, treatment schedules, work health and safety issues
2. Implement health strategy	2.1 Plan and administer treatment according to veterinary guidelines, legislative requirements, and animal welfare codes of practice 2.2 Refer complex problems or signs of disease for specialist advice and treatment 2.3 Carry out control measures as required to prevent the spread of communicable diseases 2.4 Implement procedures for reporting notifiable diseases according to legislative requirements
3. Manage livestock health and welfare	3.1 Integrate requirements of the regulations and animal welfare code of practice into the health and welfare strategy and workplace procedures 3.2 Analyse and evaluate health and welfare records 3.3 Ensure compliance with withholding periods for treatments 3.4 Evaluate livestock post-treatment for evidence of treatment effectiveness and any further health problems 3.5 Review treatment outcomes and evaluate processes for effective management planning and best practice 3.6 Evaluate animal health, biosecurity and emergency procedures in a review of the animal health and welfare strategy 3.7 Maintain records for health and welfare strategy

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK504A Develop livestock health and welfare strategies

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK504 Develop livestock health and welfare strategies

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify livestock diseases relevant to the workplace and local environment
- develop prevention and treatment strategies for diseases
- implement a proactive risk management approach to managing animal health and welfare
- implement health and welfare strategies appropriate to the livestock species
- calculate dose rates and schedule treatments
- implement and monitor relevant work health and safety requirements
- implement and monitor relevant biosecurity and animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- livestock health and abnormalities
- preventative health strategies
- principles of genetic resistance and immunity
- contingency and operational planning
- relevant animal welfare legislation, regulations and codes of practice
- relevant environmental protection legislation and codes of practice
- treatment applications, handling and consequences of their use
- relevant quarantine, biosecurity and emergency legislation, codes of practices and procedures
- relevant work health and safety legislative requirements

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCLSK506 Design livestock effluent systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design and plan livestock effluent systems.

This unit applies to livestock production managers or specialists who design effluent and disposal systems.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They analyse design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Livestock (LSK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Determine the feasibility of an effluent management system	1.1 Assess and determine planning parameters that affect the design of effluent management systems 1.2 Assess and determine statutory, local government and environment authority requirements for effluent disposal 1.3 Assess and determine the environmental impacts of livestock effluent disposal 1.4 Evaluate effluent recycling options in conjunction with the enterprise plan 1.5 Analyse effluent processing options on the basis of their merits and suitability for the environment 1.6 Obtain information from effluent management specialists on all relevant aspects of effluent management 1.7 Assess and determine an effluent management system on the basis of a cost benefit analysis
2. Design an effluent management system	2.1 Calculate the volume of livestock effluent using information collected from enterprise plans, industry and enterprise production data and other sources 2.2 Calculate the volume of water flowing into the effluent management system 2.3 Calculate storage requirements 2.4 Obtain professional advice appropriate to the complexity of the task and the financial risk involved 2.5 Ensure plan and layout include provision of access, availability and the incorporation of technological innovations 2.6 Assess and evaluate work health and safety hazards and risks, establish safe systems, and maintain records 2.7 Ensure effluent management system design reflects the requirements of the enterprise business plan, production plan and management plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCLSK506A Design livestock effluent systems

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSK506 Design livestock effluent systems

Modification History

Release Number	TP Version	Comments
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess the effectiveness of a range of effluent management systems to meet the requirements of statutory, local government and environment authorities for effluent disposal
- conduct cost benefit analysis of livestock effluent management systems to select a suitable effluent management system
- design and plan the layout of an effluent system that meets environmental standards and enterprise requirements
- design an effluent management system
- incorporate the enterprise work health and safety and environmental management policies into the plan

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types, functions, characteristics, disadvantages and advantages of effluent management systems (including storage, recycling, processing and disposal)
- regulatory requirements, including environmental, sustainability work health and safety and biosecurity requirements, industry standards, industry and enterprise production parameters, data and information for the design and planning of effluent management systems
- uses and processes for cost benefit analyses, and their applications in relation to livestock production and effluent management
- types and use of information required, and methods for the assessment and determination of effluent production, output and volume for livestock enterprises

- effects and impacts of different livestock production systems on the design and planning of effluent management systems
- types and use of information and advice from other professions or industry sectors that are relevant to livestock enterprises in the design of effluent management systems, including engineering and financial professions

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current conditions for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMER301 Process customer complaints

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to handle formal and informal feedback and complaints from customers.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Merchandising and Sales (MER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Respond to customer complaints	1.1 Process complaints as per organisational policies and procedures 1.2 Obtain, document and review reports relating to the complaints

Element	Performance criteria
	1.3 Make decisions taking into account applicable law, company policies and codes 1.4 Negotiate resolution of the complaint and seek agreement where possible 1.5 Maintain a register of complaints and disputes 1.6 Inform customer of outcome of investigation
2. Refer complaints	2.1 Identify complaints that require referral to other personnel or external bodies 2.2 Make referrals to appropriate personnel for follow up 2.3 Forward all documents and investigation reports 2.4 Ensure appropriate personnel are followed up to gain prompt decisions

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMER301A Process customer complaints.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMER301 Process customer complaints

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply organisational or industry procedures for customer complaints
- investigate the details of and background to the complaint and refer to other parties if required
- negotiate an outcome with the customer if appropriate
- process the complaint according to enterprise policy
- recommend appropriate action arising from the complaint

Knowledge Evidence

The candidate must demonstrate knowledge of:

- State/Territory/Commonwealth legislation, regulations, industry codes of practice, standards and guidelines
- organisational policy and procedures for dealing with complaints
- strategies for dealing with customer complaints
- negotiation and communication strategies
- the individual's role in processing customer complaints

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMKH401 Carry out cleaning-time tests of milking machines

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out cleaning time tests of milking machines.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Milk Harvesting (MKH)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for cleaning-time testing	1.1 Implement enterprise work health and safety policies 1.2 Establish protocols for the conduct of cleaning-time tests based

Element	Performance criteria
	<p>on previous testing outcomes</p> <p>1.3 Assess and record quality of water used for the cleaning process from on-site, facility or laboratory tests</p> <p>1.4 Determine the suitability and recommended concentrations of cleaning chemicals in line with prevailing water quality, facility requirements and equipment manufacturer recommendations</p> <p>1.5 Establish bacteriology of the specific facility from relevant records</p>
2. Carry out cleaning-time tests of milking equipment	<p>2.1 Identify and record details of normal cleaning routines and procedures while testing is carried out</p> <p>2.2 Install testing equipment to measure water or airflow velocities</p> <p>2.3 Carry out cleaning-time tests before or during the cleaning of the milking machines or bulk milk tank</p>
3. Report on cleaning-time test result	<p>3.1 Record and collate test results</p> <p>3.2 Interpret test report results in line with industry standards and manufacturer recommendations</p> <p>3.3 Report test results to the enterprise</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMKH401A Carry out cleaning-time tests of milking machines.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMKH401 Carry out cleaning-time tests of milking machines

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- make preparations for cleaning-time testing
- carry out cleaning-time tests of milking equipment
- report on cleaning-time test result
- implement enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types, functions, cleaning, monitoring and maintenance of milking machines and all components
- criteria and methods for assessing optimal performance of milking machines and their components
- requirements, procedures and assessment criteria for mechanical testing of milking machines and all components
- requirements, criteria and assessment methods for determining water quality and the impacts of water quality on maintenance and performance of milking machines
- requirements, criteria and assessment methods for determining bacteriology and the impacts of bacteriology on maintenance and performance of milking machines
- possible faults, problems and poor performance with milking machines and their components, impacts on milking operations and corrective actions for these faults and problems
- requirements, criteria, procedures, routines and assessment methods for optimal cleaning and hygiene of milking machines and their components

- types, handling, use and disposal of detergents and cleaning agents, work health and safety and environmental practices for these agents
- requirements, procedures and assessment criteria of cleaning-time tests and the impacts of cleaning-times on maintenance and performance of milking machines
- key aspects and components of collating, interpreting and reporting on test results to an enterprise
- relevant work health and safety requirements

Assessment Conditions

Competency is to be assessed in the workplace OR workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMKH402 Design and fabricate milking equipment installations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design and fabricate milking equipment installations.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Milk Harvesting (MKH)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare design and	1.1 Determine facility design and installation estimates to suit the

Element	Performance criteria
installation estimates	application 1.2 Document financial and physical resources that impact on the proposed works 1.3 Identify work health and safety issues that impact on the design and construction of the facility and installation, and incorporate risk controls in the design and construction planning 1.4 Determine manpower and other resources required and submit the tender
2. Plan installation	2.1 Complete contract for work including verification of material estimates and costings 2.2 Obtain relevant building and planning permits 2.3 Ensure site planning includes consideration of environmental issues, service connections and alternative power supplies 2.4 Plan required components to match the proposed installation and source from the original equipment manufacturer 2.5 Plan the installation to eliminate hazards to people and animals during milking, cleaning or service operations
3. Facilitate the completion of the installation	3.1 Carry out job scheduling with all relevant parties 3.2 Order and take delivery of physical and material resources 3.3 Coordinate the implementation of the milking machine installation 3.4 Establish areas of responsibility for all the project participants and provide full notification

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMKH402A Design and fabricate milking equipment installations.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMKH402 Design and fabricate milking equipment installations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare design and installation estimates
- plan installation
- facilitate the completion of the installation
- implement work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types, functions, cleaning, monitoring and maintenance of milking facilities and milking machine/equipment installations
- requirements, resources, components and financial aspects of planning milking equipment installations for milking facilities and enterprises
- requirements, resources, components and manpower for implementing installation of milking machine/equipment
- relevant enterprise considerations for milking facilities and milking equipment installations
- keys aspects and components of tender submissions and contracts for work
- types of relevant approvals, authorities and permits required, and procedures to obtain these approvals, authorities and permits
- relevant work health and safety requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMKH403 Design and install enterprise milk cooling and storage

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design and install on-farm milk cooling and storage systems.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Milk Harvesting (MKH)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine cooling and	1.1 Determine available cooling water supply quantity and test the

Element	Performance criteria
storage system requirements	quality of the water supply 1.2 Ensure the planned milk cooling and storage systems meet industry standards and match enterprise and herd needs 1.3 Determine and record design considerations including appropriate siting of components 1.4 Determine work health and safety hazards, assess risks, implement controls and report as required
2. Determine milk pre-cooling requirements	2.1 Measure and record maximum peak flow of milk delivery 2.2 Check cooling water temperatures and quality against design specifications 2.3 Compare available milk cooling equipment with design requirements and select suitable equipment 2.4 Determine work health and safety and human health regulatory requirements and establish compliance targets 2.5 Determine water cooling system requirements in line with planned equipment and available resources
3. Determine milk storage requirements	3.1 Determine enterprise milk production levels and projected production increases 3.2 Establish milk entry temperature and other critical design considerations in consultation with the enterprise and from available data 3.3 Select a suitable milk vat to meet shed production requirements and bulk milk collection routines
4. Install milk cooling and storage equipment	4.1 Install plate cooler and other components of the pre-cooling system in line with established system design and industry standards 4.2 Install vat and refrigeration equipment to meet design specifications 4.3 Complete commissioning tests to ensure the operation of all elements of the cooling and storage systems comply with performance targets and milk supply quality standards
5. Operate and maintain milk cooling and storage equipment	5.1 Complete routine maintenance program requirements in line with manufacturers' recommendations 5.2 Determine repair and service requirements, including rectification of operational faults, as part of maintenance routines

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMKH403A Design and install on-farm milk cooling and storage.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMKH403 Design and install enterprise milk cooling and storage

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine cooling and storage system requirements
- determine milk pre-cooling requirements
- determine milk storage requirements
- install milk cooling and storage equipment
- operate and maintain milk cooling and storage equipment
- implement enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant requirements and industry standards for design, planning, installing and operating milk cooling and milk storage systems
- types, functions, cleaning, operating, monitoring and maintenance of milk cooling and milk storage systems and all components
- requirements, components and considerations for designing, planning, siting and installing milk cooling and milk storage systems and their components, and to meet the needs of the enterprise
- requirements, criteria and assessment methods for determining water quality and the impacts of water quality on maintenance and performance of milk cooling and milk storage systems
- possible faults, problems and poor performance with milk cooling and milk storage systems and their components, impacts on enterprise operations and corrective actions for these faults and problems

- criteria and methods for assessing performance of milk cooling and milk storage systems and their components
- requirements and assessment methods for determining enterprise milk production levels
- relevant work health and safety requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMKH404 Install milking equipment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to install milking equipment.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Milk Harvesting (MKH)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Order installation components	1.1 Complete contract for work with customer 1.2 Order specified tinware as per planned installation

Element	Performance criteria
	1.3 Ensure bending and rolling of pipe work meet specifications 1.4 Assemble components in transportable sections for transfer to site 1.5 Seek specialist advice for non-standard installations
2. Inspect and prepare installation site	2.1 Check site location, dimensions and levels 2.2 Determine work health and safety hazards, assess risks, implement controls and complete records 2.3 Report non-compliance and make alterations and corrections in consultation with the appropriate authorities 2.4 Measure installation and mark layout as per contract plans
3. Manufacture components in the workshop	3.1 Ensure vacuum pump guards and stands are made according to specifications 3.2 Ensure pipelines and vessels are manufactured and assembled according to installation design 3.3 Pre-wire electrical components 3.4 Complete non-milking systems as per dairy plan 3.5 Determine work health and safety hazards, assess risks and implement safe systems of manufacture
4. Install machine/equipment	4.1 Prepare machine/equipment components for sequential installation 4.2 Install machine/ equipment as per specifications and in co-operation with the enterprise and trade and building personnel 4.3 Carry out all work as per regulatory requirements and in compliance with the Australian Standards for Milking Equipment Installation and Performance 4.4 Determine work health and safety hazards, assess risks and implement safe systems of installation 4.5 Make modifications to standard operating procedures as required 4.6 Level, align, couple and connect machine/ equipment as per specifications, excluding electrical components
5. Commission test installed machine/equipment	5.1 Complete mechanical testing of machine/ equipment to ensure conformance to specifications, performance standards and other requirements such as work health and safety 5.2 Take corrective actions for machine/equipment performing below standards and manufacturer's specifications 5.3 Ensure final work quality and finish comply with established industry standards 5.4 Clean site, remove all leftover materials and waste, and ensure that site is safe 5.5 Record and report all alterations/modifications to machine/equipment to the appropriate authority

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMKH404A Install milking equipment.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMKH404 Install milking equipment

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- order installation components
- inspect and prepare installation site
- manufacture components in the workshop
- install machine/equipment
- commission test installed machine/equipment
- implement work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types, functions, cleaning, operation, monitoring and maintenance of milking facilities and milking machine/equipment
- requirements, resources, components, manpower and procedures for installation of milking machine/equipment
- requirements, criteria and procedures for making alterations/modifications to milking machine/equipment
- Australian Standards for Milking Equipment Installation and Performance, regulatory requirements and procedures for reporting non-compliance
- implications and impacts of non-compliance of milking machine/equipment
- relevant requirements and considerations for installing milking machine/equipment
- key aspects and components of contracts for work
- types of relevant approvals, authorities and permits required, and procedures to obtain these approvals, authorities and permits
- criteria and methods for assessing performance of milking machine/equipment

- requirements, procedures and assessment criteria for mechanical testing of milking machine/equipment
- possible faults, problems and poor performance with milking machine/equipment and corrective actions for these faults, problems and poor performance
- requirements, methods and procedures for site cleaning, waste and debris disposal
- relevant work health and safety requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMKH405 Performance test milking machines

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to performance test milking machines.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit may apply to partnerships between milking machine technicians, veterinarians, dairy factory field officers, herd test personnel, detergent and chemical company representatives, original equipment manufacturer representatives, regulatory authority personnel and enterprise.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Milk Harvesting (MKH)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Wet test milking machine/equipment	1.1 Apply enterprise work health and safety policies 1.2 Collate relevant mechanical testing reports and outcomes as the basis for additional tests 1.3 Establish protocols for wet testing to suit individual installation requirements 1.4 Install test equipment at specific locations to complete tests 1.5 Measure and record vacuum levels and vacuum drop and identify abnormalities
2. Carry out milking-time tests of milking machine/equipment	2.1 Establish protocols for milking-time tests based on consideration of previous dry or wet testing outcomes 2.2 Install testing equipment to complete agreed tests during milking 2.3 Complete milking-time tests and record results 2.4 Submit written assessment and recommendations to the enterprise

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCMKH405A Performance test milking machines.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMKH405 Performance test milking machines

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- wet test milking machine/equipment with live animals
- carry out milking-time tests of milking machine/equipment with live animals
- apply enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- requirements, equipment, procedures and assessment criteria for mechanical testing, wet testing and milking time testing of milking machine/equipment
- criteria, methods and procedures for assessing performance of milking machine/equipment
- key aspects and components of collating, interpreting and reporting on test results to an enterprise
- relevant work health and safety requirements

Assessment Conditions

Competency is to be assessed in the workplace and/or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM101 Assist with routine maintenance of machinery and equipment

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to assist with routine maintenance tasks for small engine machinery and associated equipment.

The unit applies to individuals who assist with routine maintenance tasks while working alongside a supervisor exercising limited autonomy within established and well known parameters. They identify and seek help with simple problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for basic routine maintenance	<p>1.1 Read or listen to work instructions from supervisor and clarify where necessary</p> <p>1.2 Select tools and supplies required to carry out basic routine maintenance tasks according to job requirements</p> <p>1.3 Select, fit and use personal protective equipment applicable to job requirements</p> <p>1.4 Carry out routine pre-operational checks of machinery and equipment according to operation and maintenance manual and make adjustments where required</p> <p>1.5 Identify and segregate faulty or unsafe machinery and equipment for repair or replacement</p> <p>1.6 Identify health and safety hazards in the workplace and report safety concerns to supervisor</p>
2. Carry out basic routine maintenance	<p>2.1 Carry out greasing, lubrication and other basic servicing of machinery and equipment</p> <p>2.2 Make routine adjustments and repairs to machinery and equipment</p> <p>2.3 Use safe workplace practices and methods when undertaking basic routine maintenance tasks</p>
3. Complete basic routine maintenance activities	<p>3.1 Clean and store tools according to workplace procedures</p> <p>3.2 Clean and maintain work areas and return to operating condition</p> <p>3.3 Collect, treat and dispose or recycle waste from maintenance activities according to workplace procedures</p> <p>3.4 Report malfunctions, faults, wear or damage of tools to supervisor</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> • Use clear language to report malfunctions, faults, wear or damage to tools • Participate in verbal exchanges to respond to questions and clarify

Skill	Description
	information
Numeracy	<ul style="list-style-type: none"> Interpret machinery and equipment fluid levels including grease, oil and fuel
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> machinery and equipment damage and serviceability checking for missing parts fluid leaks and levels fuel level.
Machinery and equipment must include at least two of the following:	<ul style="list-style-type: none"> hydraulic equipment hydroplats stationary engines pumps irrigation equipment seeders harvesters balers spraying equipment hedging machines solar and wind powered equipment.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM101 Assist with routine maintenance of	AHCMOM101 Assist with routine maintenance of machinery and	Minor changes to performance criteria and range of conditions	Equivalent unit

machinery and equipment Release 3	equipment Release 2		
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Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM101 Assist with routine maintenance of machinery and equipment

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assisted with routine maintenance tasks for at least two different types of small engine machinery and associated equipment and has:

- identified hazards and reported to supervisor
- tested machinery and equipment to identify maintenance requirements
- carried out routine repairs and adjustments required for maintenance of machinery and equipment
- cleaned and maintained work area and returned to operating condition
- applied safe and environmentally responsible workplace practices
- used oral communication skills and language competence to communicate effectively with others
- followed workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types, characteristics and functions of machinery and equipment
- types, characteristics and functions of tools used in maintenance of machinery and equipment
- machinery and equipment operation and maintenance manual

- environmental impacts of machinery servicing and disposal methods for fuels, oils and other wastes
- workplace procedures applicable to health and safety in the workplace and machinery maintenance.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - machinery and equipment
 - maintenance tools and equipment
 - personal protective equipment applicable to the task being undertaken
- specifications:
 - machinery operation and maintenance manual
 - workplace procedures applicable to health and safety in the workplace and machinery maintenance
- relationships:
 - supervisors
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM201 Operate two wheel motorbikes

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to undertake pre-start checks, operate and shut down two wheel motorbikes.

The unit applies to individuals who operate two wheel motorbikes to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare a two wheel motorbike for operation	1.1 Confirm with supervisor activity to be undertaken and that the vehicle is fit for purpose 1.2 Identify potential hazards and risks to self and implement safe

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>working practices to manage risks</p> <p>1.3 Conduct routine pre-operational checks on two wheel motorbike according to operators manual and report faults or malfunctions to supervisor for repair</p> <p>1.4 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.5 Use and fit personal protective equipment, including helmet that is fit for purpose</p> <p>1.6 Select two wheel motorbike according to rider's size, skill level and task to be completed</p> <p>1.7 Ensure any items that are to be transported on the two wheel motorbike are safely secured</p> <p>1.8 Identify and confirm areas and applications excluded to two wheel motorbike operation on the workplace safety plan</p>
2. Operate a two wheel motorbike	<p>2.1 Start up, steer, manoeuvre, position and stop two wheel motorbike in a controlled manner</p> <p>2.2 Comply with legislation and workplace safety plan in regard to carrying passengers</p> <p>2.3 Identify environmental and biosecurity implications associated with two wheel motorbike operation and minimise impact</p> <p>2.4 Identify situations where two wheel motorbike good riding techniques are required</p> <p>2.5 Apply two wheel motorbike good riding techniques to pre-position the body to assist bike stability</p> <p>2.6 Identify and avoid riding surfaces, terrain and slopes that are dangerous to safe operation</p> <p>2.7 Operate and manoeuvre over a variety of surfaces, slopes and terrain to minimise risk to safety</p> <p>2.8 Modify two wheel motorbike operation according to local weather conditions</p>
3. Conduct shut down procedures	<p>3.1 Shut down two wheel motorbike</p> <p>3.2 Identify and report malfunctions, faults, irregular performance or damage to supervisor</p> <p>3.3 Store and secure two wheel motorbike</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.4 Remove and store keys in the required location 3.5 Unload, load and secure motorbike safely

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults and irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including oil and fuel Identify correct tyre pressures
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> vehicle damage and serviceability engine oil fuel brakes tyres, including pressure and condition vehicle controls.
Biosecurity implications	<ul style="list-style-type: none"> control of cross site contamination.

must include:	
Two wheel motorbike good riding techniques must include:	<ul style="list-style-type: none"> • pre-positioning and adjustment of body weight when going uphill, including standing up and body forward • pre-positioning and adjustment of body weight when going downhill, including standing up and body rearward • leaning the two wheel motorbike towards the slope and pressing hard on the outside (downhill) footrest, keeping the body weight on top of the tyre tread when riding across slopes • standing up to improve situational awareness, when operating in restricted visibility situations, rough terrains and crossing obstacles.
Unload, load and secure motorbike must include at least one of the following:	<ul style="list-style-type: none"> • trailer • transportation device • on site vehicle storage.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM201 Operate two wheel motorbikes Release 2	AHCMOM201 Operate two wheel motorbikes Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM201 Operate two wheel motorbikes

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has safely operated a two wheel motorbike on at least two different riding surface conditions and on an even, uneven and sloping terrain and has:

- operated a two wheel motorbike without a passenger
- identified hazards and risks associated with two wheel motorbike areas of operation
- identified and avoided riding surfaces, terrains and slopes that are dangerous to safe operation of two wheel motorbikes
- complied with legislation and workplace safety plan in regard to carrying passengers
- selected and worn two wheel motorbike helmet that was fit for purpose
- selected, correctly fitted, used and maintained personal protective equipment
- started, steered, manoeuvred, positioned and stopped a two wheel motorbike in a controlled manner
- applied two wheel motorbike good riding techniques to pre-position the body to assist bike stability
- unloaded, loaded and secured two wheel motorbike safely.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with two wheel motorbike areas of operation
- components, controls and features of two wheel motorbikes and their functions
- two wheel motorbike functional applications
- operating principles and operating methods of two wheel motorbikes

- two wheel motorbike good riding techniques, including requirements to pre-position and adjust body weight for riding uphill, downhill and on uneven terrain
- workplace safety plan and operators manual
- impacts and consequences of substandard environmental and biosecurity practices
- load limits and two wheel motorbike capabilities and the effects to dynamic stability on the two wheel motorbike including:
 - passengers
 - weight distribution
 - load security
 - liquid or shifting loads
 - effect of load when operating on uneven or sloping terrain
- loading and unloading safely from a trailer, transportation device and site storage, including use of:
 - tie down devices
 - vehicle ramps
 - loading surfaces and angle
- effects of different riding surfaces and terrain conditions on the operation of two wheel motorbikes
- variations in state/territory regulations, legislation and licensing requirements in regard to two wheel motorbike use.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - no riders under 16 years of age on adult sized two wheel motorbikes
 - no towing
 - helmets must be worn whilst operating two wheel motorbikes
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
- resources, equipment and materials:
 - two wheel motorbike
 - vehicle fuel
 - two wheel motorbike helmet
 - enclosed shoes
- specifications:
 - two wheel motorbike manufacturer specifications and operator manuals
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM202 Operate tractors

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, operate and complete tractor operations under general supervision in the agriculture, horticulture and land management sectors.

Working with tractors is an inherently dangerous activity. Individuals who work at this level must be thoroughly instructed in all health and safety in the workplace aspects of operating tractors. The tractor must also comply with relevant Australian standards for tractors.

The unit applies to individuals who operate tractors to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare tractor for operation	1.1 Confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Source and interpret machinery operation and maintenance manual and manufacturer instructions for tractor operation 1.3 Select and maintain personal protective equipment and safety equipment according to workplace safety requirements 1.4 Fit and use personal protective equipment according to job requirements and task to be undertaken 1.5 Select and attach equipment as directed by supervisor 1.6 Conduct tractor routine pre-operational checks according to operation and maintenance manual and report faults or malfunctions to supervisor
2. Operate tractor	2.1 Carry out pre-start and start up procedures required for tractor operation 2.2 Drive and operate tractor in a smooth and controlled manner 2.3 Apply workplace environmental and biosecurity procedures associated with tractor operation and minimise impact 2.4 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment 2.5 Complete work according to agreed plan as directed by supervisor 2.6 Report abnormal monitoring system indicators and alarms to supervisor
3. Complete tractor operation	3.1 Park tractor and conduct shut down procedures 3.2 Perform routine operational servicing according to the operation and maintenance manual 3.3 Report malfunctions, faults, irregular performance or damage to supervisor 3.4 Clean, decontaminate, secure and store tractor and attached equipment 3.5 Remove and store keys in the required location 3.6 Maintain tractor and equipment use records in required format

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document tractor and equipment use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage Participate in verbal exchanges to respond to questions and clarify instructions
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure or track tension
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machine damage and serviceability guards are in place and undamaged checking for missing parts fluid leaks and levels fuel level brakes and clutch operation condition of tyres or tracks machine controls.
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM202 Operate tractors Release 3	AHCMOM202 Operate tractors Release 2	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM202 Operate tractors

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared for, safely operated and completed tractor operations under general supervision at least once and has:

- identified and reported hazards and implemented safe operating procedures
- carried out tractor pre-operational checks and reported faults to supervisor
- driven and operated a tractor safely, in a smooth and controlled manner
- operated tractors in even and uneven terrain conditions
- carried out tractor shut down procedures
- maintained tractor use records and reported faults or malfunctions
- minimised environmental impacts associated with tractor operation
- followed workplace health and safety procedures for safe tractor operation
- followed industry and workplace biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- tractor components, controls and features and operational functions
- tractor operation and maintenance manuals
- tractor steering systems and features
- features, operational functions and procedures for attached equipment
- load limits and the principles of weight distribution with regard to load shifting and tractor movement
- distinguishing characteristics of individual tractors including rated performance capacities

- effects of various surface and difficult terrain conditions on tractor operation
- duty of care to self, others and the environment
- relevant legislation with regard to tractor operation and licensing requirements
- environmental impacts relevant to operation of vehicles
- health and safety in the workplace requirements to operate a tractor safely
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating the machinery
- resources, equipment and materials:
 - tractors
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - tractor operation and maintenance manual
 - industry and workplace biosecurity procedures applicable to tractor operation
 - legislation relevant to tractor operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM203 Operate basic machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to undertake pre start checks, operate, maintain and shut down basic machinery and equipment used in the agriculture, horticulture and land management sectors.

This unit does not apply to chainsaws, tractors, vehicles, and earth moving equipment.

The unit applies to individuals who operate basic machinery and equipment to undertake routine work under general supervision with limited autonomy and accountability.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare basic machinery and equipment for use	1.1 Confirm with supervisor activity to be undertaken, including identifying and reporting potential hazards and risks and implementing safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Source and interpret relevant basic machinery and equipment operation and maintenance manual and manufacturer instructions</p> <p>1.3 Assess the work site and confirm the suitability of the machinery and equipment for the task</p> <p>1.4 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.5 Fit and use personal protective equipment applicable to type of machinery and equipment to be operated and job requirements</p> <p>1.6 Conduct routine pre-operational checks according to operation and maintenance manual</p> <p>1.7 Replace and report damaged or worn components</p> <p>1.8 Observe safety rules and regulations, including site rules and site specific instructions</p>
2. Operate basic machinery and equipment	<p>2.1 Operate machinery and equipment safely</p> <p>2.2 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p> <p>2.3 Complete work to supervisor satisfaction</p>
3. Check, clean and store basic machinery and equipment	<p>3.1 Conduct shut down according to workplace procedures</p> <p>3.2 Perform routine operational servicing and minor maintenance according to operation and maintenance manual</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage to supervisor</p> <p>3.4 Clean, secure and store machinery and equipment</p> <p>3.5 Maintain machinery and equipment use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations

Skill	Description
Writing	<ul style="list-style-type: none"> Document machinery and equipment use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of machinery fluids including oil and fuel
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Basic machinery and equipment must include at least two of the following:	<ul style="list-style-type: none"> conveyors and pumps used in agriculture, horticulture and land management hedge trimmers lawn edgers line cutters mechanised horticultural tillage equipment motorised machinery used in landscape and turf construction projects motorised machinery used in nursery production pneumatic pruners and cutters power tools.
Pre operational checks must include:	<ul style="list-style-type: none"> machinery and equipment damage and serviceability engine oil fuel machinery and equipment controls reporting and tagging defects.

Unit Mapping Information

Code and title	Code and title	Comments	Equivalence status
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current version	previous version		
AHCMOM203 Operate basic machinery and equipment Release 2	AHCMOM203 Operate basic machinery and equipment Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM203 Operate basic machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has undertaken pre start checks, operated, maintained and shut down at least two types of basic machinery and equipment used in the agriculture, horticulture or land management sectors.

For each type, the individual must have demonstrated the following:

- identified and reported hazards and implemented safe working practices
- carried out basic machinery and equipment pre-operational checks including basic servicing and maintenance according to operation and maintenance manual
- operated basic machinery and equipment in a safe and controlled manner consistent with operation and maintenance manual and manufacturer specifications
- carried out safe shut down and storage procedures for basic machinery and equipment
- followed workplace health and safety procedures during the operation and use of basic machinery and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with basic machinery and equipment operation
- pre-operational and safety checks for basic machinery and equipment
- operating principles and operating methods for basic machinery and equipment
- procedures for cleaning, securing and storing basic machinery and equipment
- risks associated with the operation of machinery and equipment in different types of weather and terrain conditions
- duty of care to self, others and the environment when using and operating basic machinery and equipment

- workplace procedures applicable to work health and safety requirements to operate basic machinery and equipment safely.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating the machinery
- resources, equipment and materials:
 - a range of basic machinery and equipment
 - enclosed toe shoes
 - safety equipment and personal protective equipment applicable to the machinery and equipment being used and the task being undertaken
- specifications:
 - basic machinery and equipment operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to basic machinery and equipment operation
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM204 Undertake operational maintenance of machinery

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, carry out and complete operational maintenance of machinery used in the agriculture, horticulture and land management sectors.

The unit applies to individuals who undertake routine work under general supervision with limited autonomy and accountability when conducting machinery maintenance tasks.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for maintenance	1.1 Confirm with supervisor activity to be undertaken, including identifying and reporting potential hazards and risks and implementing safe working practices to manage risks 1.2 Select tools and supplies that conform with job requirements and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	maintenance plan 1.3 Select and check serviceability of tools, equipment and materials according to machinery operation and maintenance manual 1.4 Select and maintain personal protective equipment according to workplace safety requirements 1.5 Fit and use personal protective equipment applicable to maintenance task to be undertaken
2. Perform scheduled maintenance	2.1 Undertake machinery basic servicing tasks in line with workplace practices 2.2 Adjust equipment according to task requirements 2.3 Apply basic diagnostic techniques and identify and fix mechanical faults 2.4 Report serious or complex faults to supervisor
3. Complete maintenance activities	3.1 Clean and store tools according to workplace procedures 3.2 Clean and maintain work areas and return to operating condition 3.3 Collect, treat and dispose or recycle waste from maintenance activities according to workplace procedures 3.4 Record maintenance procedures in workshop records

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information and workplace operations
Writing	<ul style="list-style-type: none"> Document machinery maintenance activities in required format
Oral communication	<ul style="list-style-type: none"> Use clear language to report safety concerns and serious or complex faults Participate in verbal exchanges to respond to questions and clarify information

Skill	Description
Numeracy	<ul style="list-style-type: none"> Calculate quantities of machinery fluids including oil, lubricant and fuel
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Machinery must include at least two of the following:	<ul style="list-style-type: none"> chainsaws harvesters hedge trimmers mechanical pruners motorcycles rotary hoes sprayers tractors turf mowers vehicles winches.
Basic servicing tasks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machinery damage and serviceability removal and replacement of faulty parts and/or components tagging complex faulty parts and/or components checking for missing parts fluid leaks and levels fuel level machine controls servicing tasks applicable to machinery.
Basic diagnostic techniques must include at least one of the following:	<ul style="list-style-type: none"> inspection trouble shooting fault finding.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM204 Undertake operational maintenance of machinery Release 2	AHCMOM204 Undertake operational maintenance of machinery Release 1	Minor changes to performance criteria and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM204 Undertake operational maintenance of machinery

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared for, carried out and completed operational maintenance of at least two types of machinery used in the agriculture, horticulture or land management sectors. For each machinery type, the individual must have demonstrated the following:

- identified and reported hazards and implemented safe working practices
- selected and prepared tools and equipment required for machinery maintenance
- carried out lubrication and operational servicing of machinery
- conducted basic diagnostic tests required for maintenance of machinery
- checked machinery components for wear and tear, replaced parts, tagged and reported defects
- collected, removed and recycled or disposed of wastes according workplace environmental procedures
- followed workplace health and safety procedures when undertaking operational maintenance of machinery.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types and uses of lubricants and other commonly used servicing materials
- operating principles of machinery including mechanical and auto-electrical systems
- servicing characteristics of plant and equipment
- types, characteristics, uses and limitations of hand power tools
- functions of components of common mechanical and hydraulic systems
- different working principles of two stroke, four stroke, petrol and diesel engines

- set-up requirements of plant and equipment, and principles of calibration
- basic diagnostic processes and techniques used to identify faults
- sourcing machinery and equipment operation and maintenance manuals
- environmental impacts of machinery maintenance and disposal of fuels, oils and other wastes
- procedures applicable to health and safety in the workplace requirements to maintain machinery safely.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - machinery
 - maintenance tools and equipment
 - personal protective equipment applicable to the task being undertaken
- specifications:
 - machinery operation and maintenance manual
 - workplace procedures applicable to machinery maintenance
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM205 Operate vehicles

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to undertake pre-start checks, operate and shut down vehicles used in the agriculture, horticulture and land management sectors.

The unit applies to individuals who operate vehicles to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare vehicle for	1.1 Confirm with supervisor activity to be undertaken, including

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
use	<p>identifying and reporting potential hazards and risks and implementing safe working practices to manage risk</p> <p>1.2 Source and interpret relevant vehicle operation and maintenance manual and observe manufacturer instructions</p> <p>1.3 Select and use personal protective equipment and safety equipment applicable to operating the vehicle</p> <p>1.4 Carry out vehicle routine pre-operational checks and maintenance of vehicle prior to use</p> <p>1.5 Identify faults or malfunctions and report to supervisor for repair</p> <p>1.6 Secure loads according to vehicle operation manual and manufacturer instructions</p>
2. Drive vehicle	<p>2.1 Carry out pre-start, and start up procedures according to workplace health and safety guidelines</p> <p>2.2 Drive vehicle in a safe and controlled manner</p> <p>2.3 Identify and anticipate driving hazards during vehicle operation</p> <p>2.4 Apply safe and defensive driving techniques for controlling hazards</p> <p>2.5 Identify environmental and biosecurity implications associated with vehicle operation and minimise impact</p>
3. Complete vehicle operation	<p>3.1 Park vehicle and conduct shut down according to workplace procedures</p> <p>3.2 Perform routine operational servicing and minor maintenance according to vehicle operation and maintenance manual</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage to supervisor</p> <p>3.4 Clean, decontaminate, secure and store vehicle</p> <p>3.5 Remove and store keys according to workplace procedures</p> <p>3.6 Maintain vehicle use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about vehicle operation
Writing	<ul style="list-style-type: none"> Document vehicle usage including mileage, dates and times
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Vehicle must include at least one of the following:	<ul style="list-style-type: none"> utilities four wheel drive vehicles light trucks.
Pre-operational checks must include:	<ul style="list-style-type: none"> vehicle damage and serviceability checking for missing parts fluid leaks and levels fuel level brakes and clutch operation condition of tyres vehicle controls.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM205 Operate vehicles Release 2	AHCMOM205 Operate vehicles Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM205 Operate vehicles

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has undertaken pre-start checks, operated and shut down vehicles used in the agriculture, horticulture and land management sectors on at least one occasion and has:

- identified and reported hazards and implemented safe operating procedures for vehicle operation
- prepared the vehicle for use by undertaking routine pre-operational checks and maintenance tasks
- safely secured loads prior to vehicle operation
- driven the vehicle in a safe and controlled manner
- carried out vehicle shut down procedures including securing of vehicle and safe storage
- minimised environmental impacts associated with vehicle usage and operation
- followed workplace health and safety procedures during preparing vehicle for use, operation and shut down
- followed industry and workplace biosecurity procedures
- completed required documentation for vehicle use.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with vehicle operations
- safety requirements for vehicle use and operation
- vehicle operation and maintenance manual
- vehicle components, controls, features, technical capabilities and limitations
- vehicle operating principles and operating methods

- load limits and the principles of weight distribution with regard to load shifting and vehicle movement
- effects of adverse surface and terrain conditions on the operation of vehicles
- duty of care to self, others and the environment when operating vehicles
- relevant legislation with regard to vehicle operation and licensing requirements
- environmental impacts relevant to operation of vehicles
- workplace procedures applicable to workplace health and safety requirements to operate a vehicle safely
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating vehicles
- resources, equipment and materials:
 - a range of vehicles
 - vehicle loads
 - tie down devices
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - vehicle operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to vehicle operation
 - legislation relevant to vehicle operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM206 Conduct grader operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, carry out and shut down grader operations in an agricultural environment.

The unit applies to individuals who conduct grader operations to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for grader operation	1.1 Confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>practices to manage risks</p> <p>1.2 Source and interpret grader operation and maintenance manual and observe manufacturer instructions</p> <p>1.3 Select and maintain personnel protective equipment according to workplace safety requirements</p> <p>1.4 Fit and use personal protective equipment and confirm safety equipment applicable to the task being undertaken</p> <p>1.5 Conduct grader routine pre-operational checks according to operation and maintenance manual and report faults or malfunctions to supervisor for repair</p> <p>1.6 Observe safety rules and regulations, including site rules and legislation and site specific instructions</p>
2. Operate grader	<p>2.1 Carry out pre-start, and start up procedures according to health and safety in the workplace guidelines</p> <p>2.2 Drive and operate grader, and modify operating technique to meet changing work conditions</p> <p>2.3 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p> <p>2.4 Identify environmental and biosecurity implications associated with grader operation and minimise impact</p> <p>2.5 Complete work task according to agreed plan and within the operating capacity of the equipment and operator</p>
3. Complete grader operation	<p>3.1 Park grader and conduct shut down procedures</p> <p>3.2 Perform routine operational servicing and minor maintenance according to the grader operation and maintenance manual</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage to supervisor</p> <p>3.4 Clean, decontaminate, secure and store grader</p> <p>3.5 Remove and store keys in the required location</p> <p>3.6 Maintain grader use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document grader use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure or track tension
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre operational checks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machine damage and serviceability checking for missing parts fluid leaks and levels fuel level brakes and clutch operation condition of tyres or tracks machine controls.
Biosecurity implications must include:	<ul style="list-style-type: none"> Control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM206 Conduct grader operations Release 2	AHCMOM206 Conduct grader operations Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM206 Conduct grader operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared for, carried out and shut down grader operations at least once and has demonstrated the following:

- identified hazards and implemented safe operating procedures for grader operations
- carried out pre-operational checks required for safe grader operation
- driven and operated a grader safely and modified operating technique to meet changing work conditions
- carried out grader shut down procedures including securing and safe storage of grader
- minimised environmental impacts associated with grader operation
- followed workplace health and safety procedures while undertaking pre-operational checks, operational and shut down procedures for the grader
- followed industry and workplace biosecurity procedures
- completed required documentation for grader use.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with grader operations
- grader and site safety requirements
- grader components, controls, features, technical capabilities and limitations
- grader operation and maintenance manual
- duty of care to self, others and the environment when operating a grader
- relevant legislation with regard to grader operation and licensing requirements
- environmental impacts relevant to the operation of graders

- workplace procedures applicable to health and safety in the workplace requirements to operate a grader safely
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating the machinery
- resources, equipment and materials:
 - graders
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - grader operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to grader operation
 - legislation relevant to grader operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM207 Conduct front-end loader operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, carry out and shut down front-end loader operations in an agricultural environment.

The unit applies to individuals who conduct front-end loader operations to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for front-end loader operation	1.1 Confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>practices to manage risks</p> <p>1.2 Source and interpret front-end loader operation and maintenance manual and manufacturer instructions</p> <p>1.3 Assess the work-site and confirm suitability of the machinery and equipment for the task</p> <p>1.4 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.5 Fit and use personal protective equipment and confirm safety equipment applicable to the task being undertaken</p> <p>1.6 Conduct front-end loader routine pre-operational checks according to operation and maintenance manual and report faults or malfunctions to supervisor for repair</p> <p>1.7 Observe safety rules and regulations, including site rules and legislation and site specific instructions</p>
2. Operate front-end loader	<p>2.1 Carry out pre-start, and start up procedures according to health and safety in the workplace guidelines</p> <p>2.2 Drive and operate front-end loader, and modify operating technique to meet changing work conditions</p> <p>2.3 Select loading technique and modify where required to meet changing work conditions</p> <p>2.4 Use attachments according to manufacturer instructions and site requirements</p> <p>2.5 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p> <p>2.6 Identify environmental and biosecurity implications associated with front-end loader operation and minimise impact</p> <p>2.7 Complete work task according to the agreed plan and within the operating capacity of the equipment and operator</p>
3. Complete front-end loader operation	<p>3.1 Park front-end loader and conduct shut down procedures</p> <p>3.2 Perform routine operational servicing and minor maintenance according to front-end loader operation and maintenance manual</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage to supervisor</p> <p>3.4 Clean, secure and store front-end loader</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.5 Remove and store keys in the required location 3.6 Maintain front-end loader use records in required format

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document front-end loader use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure or track tension
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machine damage and serviceability checking for missing parts fluid leaks and levels
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	<ul style="list-style-type: none"> • fuel level • brakes and clutch operation • condition of tyres or tracks • machine controls.
Attachments must include at least one of the following:	<ul style="list-style-type: none"> • bale fork • bucket • bull blades • log fork • pallet fork • S Houle rock bucket • silage fork.
Biosecurity implications must include:	<ul style="list-style-type: none"> • control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM207 Conduct front-end loader operations Release 2	AHCMOM207 Conduct front-end loader operations Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM207 Conduct front-end loader operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared for, carried out and shut down front-end loader operations at least once and has demonstrated the following:

- identified hazards and implemented safe operating procedures for front-end loader operations
- carried out front-end loader pre-operational checks for safe front-end loader operations
- driven and operated a front-end loader safely and modified operating technique to meet changing work conditions
- operated front-end loader features and attachments consistent with operation and maintenance manual and manufacturer specifications
- carried out front-end loader shut down procedures including securing and safe storage of front-end loader
- minimised environmental impacts associated with front-end loader operation
- followed workplace health and safety procedures while undertaking pre-operational checks, operational and shut down procedures for the front-end loader
- followed industry and workplace biosecurity procedures
- completed required documentation for front-end loader use.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with front-end loader operations
- front-end loader site safety requirements
- front-end loader components, controls, features, technical capabilities and limitations

- front-end loader operation and maintenance manual
- duty of care to self, others and the environment when operating a front-end loader
- relevant legislation with regard to front-end loader operation and licensing requirements
- environmental impacts relevant to the operation of front-end loaders
- workplace procedures applicable to health and safety in the workplace requirements to operate a front-end loader safely
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating the machinery
- resources, equipment and materials:
 - front-end loaders
 - attachments
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - front-end loader operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to front-end loader operation
 - legislation relevant to front-end loader operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM208 Conduct excavator operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, carry out and shut down excavator operations in an agricultural environment.

The unit applies to individuals who conduct excavator operations to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for excavator operation	1.1 Confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>practices to manage risks</p> <p>1.2 Source and interpret excavator operation and maintenance manual and observe manufacturer instructions</p> <p>1.3 Assess the work site and confirm the suitability of the machinery for the task</p> <p>1.4 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.5 Fit and use personal protective equipment and confirm safety equipment applicable to the task being undertaken</p> <p>1.6 Conduct excavator routine pre-operational checks according to operation and maintenance manual and report faults or malfunctions to supervisor for repair</p> <p>1.7 Observe safety rules and regulations, including site rules and legislation and site specific instructions</p>
2. Operate excavator	<p>2.1 Carry out pre-start, and start up procedures according to health and safety in the workplace guidelines</p> <p>2.2 Drive and operate excavator, and modify the operating technique to meet changing work conditions</p> <p>2.3 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p> <p>2.4 Identify environmental and biosecurity implications associated with excavator operation and minimise impact</p> <p>2.5 Complete work task according to the agreed plan and within the operating capacity of the equipment and operator</p>
3. Complete excavator operation	<p>3.1 Park excavator and conduct shut down procedures</p> <p>3.2 Perform routine operational servicing and minor maintenance according to excavator operation and maintenance manual</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage to supervisor</p> <p>3.4 Clean, secure and store excavator in line with workplace practices</p> <p>3.5 Remove and store keys in the required location</p> <p>3.6 Maintain excavator use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document excavator use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure or track tension
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machine damage and serviceability checking for missing parts fluid leaks and levels fuel level brakes and clutch operation condition of tyres or tracks machine controls.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM208 Conduct excavator operations Release 2	AHCMOM208 Conduct excavator operations Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM208 Conduct excavator operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared for, carried out and shut down excavator operations at least once and has demonstrated the following:

- identified hazards and implemented safe operating procedures for excavator operations
- carried out excavator pre-operational checks for safe excavator operation
- driven and operated an excavator safely including modifying operating technique to meet changing work conditions
- carried out excavator shut down procedures including securing and safe storage of excavator
- minimised environmental impacts associated with excavator operation
- followed workplace health and safety procedures while undertaking pre-operational checks, operational and shut down procedures for the excavator
- followed industry and workplace biosecurity procedures
- completed required documentation for excavator use.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with excavator operations
- excavator and site safety requirements
- excavator components, controls, features, technical capabilities and limitations
- excavator operation and maintenance manual
- duty of care to self, others and the environment when operating an excavator
- relevant legislation with regard to excavator operation and licensing requirements
- environmental impacts relevant to the operation of excavators

- workplace procedures applicable to health and safety in the workplace requirements to operate an excavator safely
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating the machinery
- resources, equipment and materials:
 - excavators
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - excavator operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to excavator operation
 - legislation relevant to excavator operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM209 Conduct dozer operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, carry out and shut down dozer operations in an agricultural environment.

The unit applies to individuals who conduct dozer operations to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for dozer operation	1.1 Confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing of safe

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>working practices to manage risks</p> <p>1.2 Source and interpret dozer operation and maintenance manual and manufacturer instructions</p> <p>1.3 Assess the work-site and confirm the suitability of the machinery for the task</p> <p>1.4 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.5 Fit and use personal protective equipment and confirm safety equipment applicable to the task being undertaken</p> <p>1.6 Conduct dozer routine pre-operational checks according to operation and maintenance manual and report faults or malfunctions to supervisor for repair</p> <p>1.7 Observe safety rules and regulations, including site rules and legislation and site specific instructions</p>
2. Operate dozer	<p>2.1 Carry out pre-start, and start up procedures according to health and safety in the workplace guidelines</p> <p>2.2 Drive and operate dozer, and modify the operating technique to meet changing work conditions</p> <p>2.3 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p> <p>2.4 Identify environmental and biosecurity implications associated with dozer operation and minimise impact</p> <p>2.5 Complete work task according to the agreed plan and within the operating capacity of the equipment and operator</p>
3. Complete dozer operation	<p>3.1 Park dozer and conduct shut down procedures</p> <p>3.2 Perform routine operational servicing and minor maintenance according to dozer operation and maintenance manual</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage to supervisor</p> <p>3.4 Clean, secure and store dozer in line with workplace practices</p> <p>3.5 Remove and store keys in the required location</p> <p>3.6 Maintain dozer use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document dozer use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure or track tension
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machine damage and serviceability checking for missing parts fluid leaks and levels fuel level brakes and clutch operation condition of tyres or tracks machine controls.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM209 Conduct dozer operations Release 2	AHCMOM209 Conduct dozer operations Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM209 Conduct dozer operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared for, carried out and shut down dozer operations at least once and has demonstrated the following:

- identified hazards and implemented safe operating procedures for dozer operations
- carried out dozer pre-operational checks for safe dozer operation
- driven and operated a dozer safely including modifying operating technique to meet changing work conditions
- carried out dozer shut down procedures including securing and storage of dozer
- minimised environmental impacts associated with dozer operation
- followed workplace health and safety procedures while undertaking pre-operational checks, operational and shut down procedures for the dozer
- followed industry and workplace biosecurity procedures
- completed required documentation for loader use.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with dozer operations
- dozer and site safety requirements
- dozer components, controls, features, technical capabilities and limitations
- dozer operation and maintenance manual
- duty of care to self, others and the environment
- relevant legislation with regard to dozer operation and licensing requirements
- environmental impacts relevant to the operation of dozers

- workplace procedures applicable to health and safety in the workplace requirements to operate dozer safely
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating the machinery
- resources, equipment and materials:
 - dozers
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - dozer operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to dozer operation
 - legislation relevant to dozer operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM210 Conduct scraper operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, carry out and shut down scraper operations used for earthworks in an agricultural environment.

The unit applies to individuals who conduct scraper operations to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for scraper operation	1.1 Confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Source and interpret scraper operation and maintenance manual and observe manufacturer instructions</p> <p>1.3 Assess the work site and confirm the suitability of the machinery for the task</p> <p>1.4 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.5 Fit and use personal protective equipment and confirm safety equipment applicable to the task being undertaken</p> <p>1.6 Conduct scraper routine pre-operational checks according to operation and maintenance manual and report faults or malfunctions to supervisor for repair</p> <p>1.7 Observe safety rules and regulations, including site rules and legislation and site specific instructions</p>
2. Operate scraper	<p>2.1 Carry out pre-start, and start up procedures according to health and safety in the workplace guidelines</p> <p>2.2 Drive and operate scraper, and modify the operating technique to meet changing work conditions</p> <p>2.3 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p> <p>2.4 Identify environmental and biosecurity implications associated with scraper operation and minimise impact</p> <p>2.5 Complete work according to the agreed plan and within the operating capacity of the equipment and operator</p>
3. Complete scraper operation	<p>3.1 Park scraper and conduct shut down procedures</p> <p>3.2 Perform routine operational servicing and minor maintenance according to scraper operation and maintenance manual</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage to supervisor</p> <p>3.4 Clean, secure and store scraper in line with workplace practices</p> <p>3.5 Remove and store keys in the required location</p> <p>3.6 Maintain scraper use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document scraper use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure or track tension
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machine damage and serviceability checking for missing parts fluid leaks and levels fuel level brakes and clutch operation condition of tyres or tracks machine controls.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM210 Conduct scraper operations Release 2	AHCMOM210 Conduct scraper operations Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM210 Conduct scraper operations

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has prepared for, carried out and shut down scraper operations at least once and has demonstrated the following:

- identified hazards and implemented safe operating procedures for scraper operations
- carried out scraper pre-operational checks for safe scraper operations
- driven and operated a scraper safely including modifying operating technique to meet changing work conditions
- carried out scraper shut down procedures including securing and safe storage of scraper
- minimised environmental impacts associated with scraper operations
- followed workplace health and safety procedures while undertaking pre-operational checks, operational and shut down procedures for the scraper
- followed industry and workplace biosecurity procedures
- completed required documentation for scraper use.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with scraper operations
- scraper and site safety requirements
- scraper components, controls, features, technical capabilities and limitations
- scraper operation and maintenance manual
- duty of care to self, others and the environment
- relevant legislation with regard to scraper operation and licensing requirements
- environmental impacts relevant to the operation of scrapers

- workplace procedures applicable to work health and safety requirements to operate a scraper safely
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating the machinery
- resources, equipment and materials:
 - scrapers
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - scraper operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to scraper operation
 - legislation relevant to scraper operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM213 Operate and maintain chainsaws

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to safely operate a hand-held chainsaw and maintain it in working condition.

This unit applies to cross-cutting fallen timber using safe cutting techniques.

The unit applies to individuals who apply low risk work procedures and comply with worksite health and safety requirements when operating hand-held chainsaws to carry out routine work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist in preparation of work-site	1.1 Identify location of worksite and fallen timber from scope of works and confirm with supervisor 1.2 Identify site hazards, assess risks and report to supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Confirm first aid and emergency personnel, equipment and procedures</p> <p>1.4 Document and implement site health and safety in the workplace, environmental and traffic control measures according to workplace procedures</p>
2. Recognise and apply workplace safety procedures	<p>2.1 Identify hazards and risks relevant to the maintenance and operation of chainsaws and implement safe working practices to manage risks</p> <p>2.2 Select, fit and use personal protective equipment according to workplace safety procedures</p> <p>2.3 Confirm with supervisor relevant licensing and legislative requirements with regard to the operation of chainsaws</p> <p>2.4 Transport chainsaw safely according to operation and maintenance manual</p>
3. Check and prepare chainsaw for use	<p>3.1 Select tools and materials required for maintenance</p> <p>3.2 Conduct routine checks and maintenance prior to operation, according to chainsaw operation and maintenance manual</p> <p>3.3 Calculate required fuel oil ratios prior to mixing</p> <p>3.4 Mix fuel and fuel chainsaw according to operation and maintenance manual</p> <p>3.5 Identify, tag, record and report chainsaw faults or malfunctions to supervisor</p>
4. Operate chainsaw	<p>4.1 Communicate with work team during operations using voice, hand or whistle signals</p> <p>4.2 Place supports to ensure a stable base for cutting</p> <p>4.3 Identify materials to be cut and position them for operation</p> <p>4.4 Visually assess material to be cut for defects and embedded hazards</p> <p>4.5 Determine cutting methods appropriate to material type and implement risk controls</p> <p>4.6 Select and use tools associated with chainsaw use</p> <p>4.7 Operate chainsaw to cross-cut timber using documented low risk work methods</p> <p>4.8 Identify and report work-site communication issues to supervisor</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.9 Identify and report environmental impacts of chainsaw operation to supervisor
5. Complete and check chainsaw operation	5.1 Record and report chainsaw damage, malfunction and irregular performance according to workplace procedures 5.2 Clean and store chainsaw according to workplace procedures and operation and maintenance manual 5.3 Dispose of debris from operation in accordance with environmental requirements 5.4 Maintain workplace documentation according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document site health and safety in the workplace, environmental and traffic control measures
Oral communication	<ul style="list-style-type: none"> Use clear language to report hazards and risks and to confirm work site, first aid and emergency personnel, equipment and procedures Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate fuel oil ratios and fuel quantities
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use verbal and non-verbal communications with work team during operations using voice, hand and whistle signals

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Personal protective equipment must include:	<ul style="list-style-type: none"> • safety helmet • mesh visor • gloves • hearing protection • safety glasses or goggles • safety boots.
Routine checks and maintenance must include at least two of the following:	<ul style="list-style-type: none"> • checking and adjusting bar • cleaning air filter • cleaning and/or replacing spark plug • sharpening chain.
Supports must include at least one of the following:	<ul style="list-style-type: none"> • fallen timber • saw horse trestle • v-shaped supports.
Cutting methods must include:	<ul style="list-style-type: none"> • pulling chains cuts (bottom of bar) • pushing chainsaw cuts (top of bar) • bore / plunge cuts (tip of bar).
Tools must include:	<ul style="list-style-type: none"> • bars • chains • files • plug spanner.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM213 Operate and maintain chainsaws Release 2	AHCMOM213 Operate and maintain chainsaws Release 1	Minor changes to performance criteria and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM213 Operate and maintain chainsaws

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has safely operated a hand-held chainsaw at least once, maintained it in working condition and demonstrated the following:

- determined site location for work and work details and clarified with supervisor
- identified site hazards, assessed risks and reported to supervisor
- confirmed work zone with work crew and monitored site
- confirmed first aid and emergency personnel, equipment and procedures
- applied hazard and risk assessment and implemented controls for chainsaw use
- performed routine checks and maintenance for chainsaw usage according to operation and maintenance manual
- identified, tagged and reported chainsaw faults and malfunctions
- recorded and implemented site health and safety in the workplace, environmental and traffic control measures
- used personal protective equipment that complies with Australian Standards
- safely cross-cut fallen timber using compression and tension cuts with a hand held chainsaw
- used appropriate tools and materials to maintain chainsaw
- applied environmentally responsible workplace practices
- applied low risk work practices including stopping, disengaging quickly and dealing with foreign matter
- cleaned and stored chainsaw
- followed workplace procedures relevant to safely operating a chainsaw.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the principles and practice for operating chainsaws
- chainsaw routine checks and maintenance according to operation and maintenance manual, including:
 - checking and adjusting bar
 - cleaning air filter
 - cleaning and replacing spark plug
 - sharpening chain
- workplace safe operating procedures
- hazards and risks when operating a chainsaw
- relevant Australian Standards concerning chainsaw operation including use of personal protective equipment
- components of chainsaws and their respective functions
- common defects in woody materials
- cutting methods and techniques, patterns and sequence of cuts
- health and safety in the workplace requirements for the operation of a chainsaw including caution and hazard signs and symbols
- environmental impacts associated with operating chainsaws.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - personal protective equipment must be worn whilst operating chainsaw
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
- resources, equipment and materials:
 - chainsaws
 - chainsaw tools
 - wood
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - chainsaw manufacturer specifications and operator manuals
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM214 Operate cane haulage vehicle

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, carry out and complete cane haulage vehicle operations in the sugar cane production industry.

The unit applies to individuals who operate cane haulage vehicles to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare cane haulage vehicle	1.1 Confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Source and interpret relevant cane haulage vehicle operation and maintenance manual and manufacturer instructions</p> <p>1.3 Select and maintain personal protective equipment according to health and safety in the workplace requirements</p> <p>1.4 Fit and use personal protective equipment according to job requirements and task to be undertaken</p> <p>1.5 Conduct cane haulage vehicle routine pre-operational checks</p> <p>1.6 Conduct cabin drill according to workplace procedures</p>
2. Carry out cane haulage operations	<p>2.1 Carry out pre-start, and start up procedures required for vehicle operation</p> <p>2.2 Drive and operate cane haulage vehicle, and modify the operating technique to meet changing work conditions</p> <p>2.3 Select, haul and deliver cane using correct pushing or towing practices according to operation and maintenance manual and within equipment capabilities</p> <p>2.4 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p> <p>2.5 Identify environmental and biosecurity implications associated with cane haulage vehicle operation and undertake actions to minimise impact</p> <p>2.6 Complete work according to the agreed plan and within the operating capacity of the equipment and operator</p>
3. Complete cane haulage vehicle operation	<p>3.1 Park cane haulage vehicle and conduct shut down procedures</p> <p>3.2 Identify and report malfunctions, faults, irregular performance or damage to supervisor</p> <p>3.3 Clean, secure and store cane haulage vehicle</p> <p>3.4 Remove and store keys</p> <p>3.5 Maintain cane haulage vehicle use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document cane haulage vehicle use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure or track tension
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Cane haulage vehicle must include at least one of the following:	<ul style="list-style-type: none"> trucks infield transporters tractor-trailer combinations other cane transporter.
Pre-operational checks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machine damage and serviceability checking for missing parts fluid leaks and levels fuel level brakes and clutch operation condition of tyres or tracks machine controls.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM214 Operate cane haulage vehicle Release 2	AHCMOM214 Operate cane haulage vehicle Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM214 Operate cane haulage vehicle

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has operated a cane haulage vehicle to haul a load of cane safely and efficiently at least once and has demonstrated the following:

- identified hazards and risks associated with cane haulage vehicle operation implemented safe work practices
- carried out cane haulage vehicle pre-operational checks
- checked haulage equipment prior to use
- driven and operated a cane haulage vehicle safely including modifying operating technique to meet changing work conditions
- operated cane haulage vehicle features and attachments consistent with operation and maintenance manual and manufacturer specifications
- used safe pushing and towing practices to haul cane safely and efficiently
- carried out cane haulage vehicle shut down procedures
- minimised environmental impacts associated with cane haulage vehicle operation
- followed workplace health and safety procedures
- followed industry and workplace biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with cane haulage vehicle operations
- site safety requirements for cane haulage operations
- cane haulage vehicle components, controls, features, technical capabilities and limitations
- operating methods of cane haulage vehicles including pushing and towing

- principles of weight distribution with regard to load shifting and vehicle movement
- risks associated with the operation of cane haulage vehicles in different weather and terrain conditions
- cane haulage processes and spillage minimisation techniques
- cane harvesting processes as they relate to collection and haulage of harvests
- duty of care to self, others and the environment including environmental impacts relevant to the operation of cane haulage vehicles
- relevant legislation with regard to cane haulage vehicle operation and licensing requirements
- environmental impacts associated with operating a cane haulage vehicle
- workplace procedures applicable to health and safety in the workplace requirements to operate a cane haulage vehicle safely
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating the machinery
- resources, equipment and materials:
 - cane haulage vehicles
 - cane
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - cane haulage vehicle operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to cane haulage vehicle operation
 - legislation relevant to cane haulage vehicle operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM215 Operate commercial lawnmowers

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to operate commercial lawnmowers to mow a lawn surface including preparation of site and equipment requirements, shutdown procedures and routine maintenance.

The unit applies to individuals who operate commercial lawnmowers to undertake routine work under general supervision with limited autonomy and accountability.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare site to be mown	1.1 Confirm site to be mown and identify potential hazards and risks including obstacles and fixtures 1.2 Implement safe working practices to manage risks including removal and replacement obstacles before and after mowing 1.3 Report abnormal conditions or changes in the appearance of the site and existing grass surface

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Prepare equipment for mowing	<p>2.1 Select appropriate tools, equipment and machinery for site to be mown</p> <p>2.2 Calibrate lawnmower and adjust to height according to manufacturer guidelines</p> <p>2.3 Complete pre-operational checks of tools, equipment and machinery</p> <p>2.4 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>2.5 Fit and use personal protective equipment according to job requirements</p> <p>2.6 Erect safety warning notices during work periods</p>
3. Mow site surface	<p>3.1 Assess grass appearance and changes during mowing operations in line with requirements for the site</p> <p>3.2 Match implements to the lawnmower according to manufacturers' specifications</p> <p>3.3 Maintain continuous oversight of mowing activities including monitoring of hazards and risks</p> <p>3.4 Identify environmental impacts associated with operation of equipment and minimise where possible</p>
4. Complete mowing and check lawnmower operation	<p>4.1 Conduct shut down procedures in line with workplace practices</p> <p>4.2 Perform routine operational servicing and minor maintenance</p> <p>4.3 Identify and report malfunctions, faults, irregular performance or damage in required format</p> <p>4.4 Clean and store lawnmower and associated equipment in the required location</p> <p>4.5 Maintain lawnmower use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations and products
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare lawnmower use records
Numeracy	<ul style="list-style-type: none"> Calculate quantities of lawn mower fluids including oil and fuel
Oral Communication	<ul style="list-style-type: none"> Use clear language to report abnormal conditions, changes to site appearance, malfunctions, faults, irregular performance or damage
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Get the work done	<ul style="list-style-type: none"> Take responsibility for routine decisions about operating commercial lawnmowers and reflect on outcomes to identify effectiveness of decisions

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Personal protective equipment must include:	<ul style="list-style-type: none"> hearing protection eye protection gloves safety footwear long trousers.
Routine operational servicing and minor maintenance must include:	<ul style="list-style-type: none"> engine oil fuel cutting blades.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM215 Operate	Not applicable	New unit	No equivalent unit

commercial lawnmowers			
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Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM215 Operate commercial lawnmowers

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has mown a commercial site using a commercial lawnmower at least once and has:

- determined the condition of the existing grass surface and sought advice for subsequent routine preparations and treatments
- prepared site and equipment used for mowing
- used lawnmower, equipment, machinery and implements according to manufacturer specifications
- operated a commercial mower safely including making adjustments for attached implements and modifying techniques to meeting changed conditions
- minimised environmental impacts associated with lawnmower operation
- implemented lawnmower shut down procedures
- carried out routine servicing and maintenance and recorded malfunctions, faults or irregular performance
- cleaned and stored mower according to workplace guidelines
- followed workplace health and safety procedures for safe use and operation of commercial lawnmowers.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of grass preparation
- preparation methods and treatments required for optimal maintenance of grass surfaces
- effect of adverse outdoor climatic conditions on commercial lawnmower operations
- use of lawnmower, equipment, machinery and implements according to manufacturer specifications
- commercial lawnmower operation and maintenance requirements
- hazards and risks associated with commercial lawnmower operation

- environmental impacts relevant to the operation of commercial lawnmowers
- workplace procedures applicable to health and safety in the workplace requirements to operate a commercial lawnmower safely.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - commercial lawn mower
 - lawnmower implements
 - personal protective equipment specific to lawnmower operation
- specifications:
 - lawn mower manufacturer specifications and manufacturer guidelines
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM216 Operate side by side utility vehicles

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to safely operate a side by side utility vehicle including undertaking pre-start checks and shut down procedures.

The unit applies to individuals who operate side by side utility vehicles to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1.Prepare side by side utility vehicle for use	<p>1.1 Confirm with supervisor activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks</p> <p>1.2 Conduct routine pre-operational checks on the vehicle according to operators manual and report faults or malfunctions for repair</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.4 Use, wear and correctly fit personal protective equipment including helmets that are fit for purpose according to operators manual</p> <p>1.5 Attach equipment and loads that do not exceed the weight limitations of the vehicle</p> <p>1.6 Secure loads to ensure safe transport</p>
2. Operate side by side utility vehicle	<p>2.1 Start up, steer, manoeuvre, position and stop side by side utility vehicle in a controlled manner</p> <p>2.2 Identify environmental and biosecurity implications associated with side by side utility vehicle operation and minimise impact of vehicle use</p> <p>2.3 Apply side by side utility vehicle driver skills</p> <p>2.4 Operate side by side utility vehicles in accordance with task requirements, conditions and operators manual</p> <p>2.5 Identify and avoid riding surfaces, terrains and slopes that are dangerous to safe operation</p> <p>2.6 Operate and manoeuvre over a variety of surfaces, slopes and terrain to minimise risk to safety</p> <p>2.7 Modify side by side utility vehicle operation according to local weather conditions</p> <p>2.8 Ensure that vehicle seat belts and other safety features are functional and correctly fitted</p>
3. Complete side by side utility vehicle operation	<p>3.1 Shut down side by side utility vehicle</p> <p>3.2 Identify and report malfunctions, faults, irregular performance or damage to supervisor</p> <p>3.3 Park and secure side by side utility vehicle</p> <p>3.4 Remove and store keys in the required location</p> <p>3.5 Unload, load and secure side by side utility vehicle safely</p> <p>3.6 Maintain vehicle use records for servicing purposes in line with workplace practices</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults and irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including oil and fuel Calculate load volumes and weights Identify correct tyre pressure
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> vehicle damage and serviceability fuel brakes tyres including pressure and condition vehicle controls.
Personal protective equipment must include:	<ul style="list-style-type: none"> a suitable helmet according to operators manual enclosed toe shoes
Side by side utility vehicle driver skills must include:	<ul style="list-style-type: none"> parking across the slope when parking on a hill or gradient on-board weight distribution load security crossing obstacles avoiding hazards.
Safety features must include at least three of	<ul style="list-style-type: none"> roll-over protective structure seat belts

the following:	<ul style="list-style-type: none"> • side nets • doors • occupant hand holds • tyre selection and inflation pressure.
Unload, load and secure side by side utility vehicle must include at least one of the following:	<ul style="list-style-type: none"> • trailer • transportation device • on site vehicle storage.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM216 Operate side by side utility vehicles	AHCMOM211 Operate side by side utility vehicles	Significant changes to performance criteria, foundation skills and range of conditions	No equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM216 Operate side by side utility vehicles

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has safely operated a side by side utility vehicle on at least two riding surface conditions and on an even, uneven and sloping terrain and has:

- identified hazards and risks associated with side by side utility vehicle use
- identified and avoided driving surfaces, terrains and slopes that are dangerous to safe operation of side by side utility vehicles
- selected and worn side by side utility vehicle helmet that is fit for purpose according to operators manual
- selected, fitted and used other personal protective equipment that is required for the task
- maintained personal protective equipment in suitable condition for use
- unloaded the side by side utility vehicle safely and checked it is safe to use
- operated and manoeuvred side by side utility vehicles in different surface and terrain conditions including uneven and sloping terrain
- started, steered, manoeuvred, positioned and stopped a side by side utility vehicle in a controlled manner
- selected appropriate modes of operation and applied side by side utility vehicle driver skills to assist vehicle stability
- parked the side by side utility vehicle safely and checked for any damage, malfunctions or faults
- loaded and secured side by side utility vehicle safely
- minimised environmental impacts associated with side by side utility vehicle operation
- followed industry and workplace biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with side by side utility vehicle areas of operation

- components, controls, modes and features of side by side utility vehicles and their functions
- side by side utility vehicle functional applications, including:
 - occupant hand holds, correct use, importance of reach and keeping body parts inside vehicle
 - roll-over protective structure
 - tyre selection and inflation pressure
 - side nets and doors
- operating principles and operating methods of side by side utility vehicles
- workplace safety plan for operating and maintaining side by side utility vehicles
- side by side utility vehicle operator's manual
- side by side utility vehicle driver skills, including higher level two foot pedal operation skills, for technical applications
- effects of different surfaces and terrain conditions on the operation of side by side utility vehicle
- load limits and attachments specific to side by side utility vehicle capabilities and the effects to dynamic stability of the side by side utility vehicle including:
 - weight distribution
 - load security
 - liquid or shifting loads
 - effect of load when operating on uneven or steep terrain
- loading and unloading safely from a trailer, transportation device and site storage, including use of:
 - tie down devices
 - vehicle ramps
 - loading surfaces and angle
- variations in state/territory regulations and legislation that may apply in regard to side by side utility vehicle use
- environmental impacts associated with operating side by side utility vehicles and consequences of substandard environmental and biosecurity practices
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - helmets must be worn whilst operating side by side utility vehicles according to operators manual
- resources, equipment and materials:
 - side by side utility vehicle
 - vehicle fuel

- side by side utility vehicle helmet as identified by operator manual
- enclosed toe shoes
- specifications:
 - side by side utility vehicle manufacturer specifications and operator manuals
 - industry and workplace biosecurity procedures applicable to side by side utility vehicle operation
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM217 Operate quad bikes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to safely operate quad bikes including undertaking pre-start checks and shut down procedures.

The unit applies to individuals who operate quad bikes to undertake routine work under general supervision with limited autonomy and accountability.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare a quad bike for operation	1.1 Confirm with supervisor activity to be undertaken and that the vehicle is fit for purpose 1.2 Identify potential hazards and risks and implement safe working practices to manage risks 1.3 Select and maintain personal protective equipment according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace safety requirements 1.4 Use, wear and correctly fit personal protective equipment including quad bike helmet that is fit for purpose 1.5 Conduct routine pre-operational checks on quad bike according to operation and maintenance manual and report faults or malfunctions to supervisor 1.6 Identify and confirm no go areas with supervisor according to workplace safety plan 1.7 Identify quad bike applications, loads and fixed attachments according to operation and maintenance manual
2. Operate a quad bike	2.1 Start up, steer, manoeuvre, position and stop quad bike in a controlled manner 2.2 Identify environmental and any biosecurity implications associated with quad bike operation and minimise impact 2.3 Identify situations where quad bike active riding techniques are required 2.4 Apply quad bike active riding techniques to pre-position the operators body to assist bike stability 2.5 Identify and avoid riding surfaces, terrains and slopes that are dangerous to safe operation 2.6 Operate and manoeuvre over a variety of surfaces, slopes and terrain safely 2.7 Modify quad bike operation according to local weather conditions
3. Complete quad bike operation	3.1 Shut down quad bike 3.2 Park up and secure quad bike in line with workplace practices 3.3 Identify and report malfunctions, faults, irregular performance or damage to supervisor 3.4 Remove and store keys in the required location 3.5 Unload, load and secure quad bike safely

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults and irregular performance or damage Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including oil and fuel Calculate load volumes and weights Identify correct tyre pressure
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Personal protective equipment must include:	<ul style="list-style-type: none"> a suitable quad bike helmet enclosed toe shoes.
Pre-operational checks must include:	<ul style="list-style-type: none"> vehicle damage and serviceability fuel brake effectiveness throttle smooth operation and self-closing return tyres including pressure and condition vehicle controls.
Quad bike active riding techniques must include:	<ul style="list-style-type: none"> pre-positioning, correct timing and appropriate adjustment of operator body weight when going uphill including body weight forward pre-positioning, correct timing and appropriate adjustment of operator body weight when going downhill including body weight rearward positioning of operator body weight centrally when cornering at

	<p>very slow speeds, and transition to positioning of operator body weight to the inside of the turn when cornering at higher speeds</p> <ul style="list-style-type: none"> • positioning of operator body weight centrally when cornering at very slow speeds, and transition to positioning of operator body weight to the uphill side when riding across slopes • standing up to improve situational awareness and ability to exercise active riding technique, when operating in restricted visibility situations, rough terrains, crossing obstacles and avoiding hazards.
Unload, load and secure quad bike must include at least one of the following:	<ul style="list-style-type: none"> • trailer • transportation device • on-site vehicle storage.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM217 Operate quad bikes	AHCMOM212 Operate quad bikes	Significant changes to performance criteria, foundation skills and range of conditions	No equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM217 Operate quad bikes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has safely operated a quad bike on at least two different riding surface conditions and on an even, uneven and sloping terrain and has:

- identified hazards and risks associated with quad bike areas of operation
- identified and avoided riding surfaces, terrains and slopes that are dangerous to safe operation of quad bikes
- identified and confirmed quad bike no go areas
- selected, fitted and used quad bike helmet and other personal protective equipment that was fit for purpose
- maintained personal protective equipment in suitable condition for use
- unloaded the quad bike safely and checked it is safe to use
- operated and manoeuvred quad bikes in different riding surface and terrain conditions including uneven and sloping terrain
- started, steered, manoeuvred, positioned and stopped a quad bike in a controlled manner
- applied quad bike active riding techniques to reposition operator body weight to assist bike stability
- parked the quad bike safely and checked for any damage, malfunctions and faults
- loaded and secured the quad bike safely
- minimised environmental impacts associated with quad bike operation
- followed industry and workplace biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with quad bike areas of operation including quad bike no go areas
- components, controls and features of quad bikes and their functions
- quad bike functional applications, including appropriate selection of machine for task

- workplace safety plan for operating and maintaining quad bikes
- quad bike operator's manual
- operating principles and operating methods of quad bikes
- circumstances when quad bike active riding techniques should be applied
- quad bike active riding techniques, including both when and when not to apply quad bike active riding techniques
- effects of different riding surfaces and terrain conditions on the operation of quad bikes
- load limits and attachments specific to quad bike capabilities and the effects to dynamic stability of the quad bike, including:
 - weight distribution
 - load security
 - liquid or shifting loads
 - effect of load when operating on uneven or steep terrain
- loading and unloading safely from a trailer, transportation device and site storage, including use of:
 - tie down devices
 - vehicle ramps
 - loading surfaces and angle
- variations in state/territory regulations and legislation that may apply in regard to quad bike use
- environmental impacts associated with operating quad bikes and consequences of substandard environmental and biosecurity practices
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - no passengers on single seat quad bikes
 - no riders under 16 years of age on adult sized quad bikes
 - no towing
 - helmets must be worn whilst operating quad bikes
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
- resources, equipment and materials:
 - quad bike
 - vehicle fuel
 - a suitable quad bike helmet
 - enclosed toe shoes

- specifications:
 - quad bike operation and maintenance manual
 - industry and workplace biosecurity procedures applicable to quad bike operation
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM301 Coordinate machinery and equipment maintenance and repair

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to coordinate the maintenance and repair of machinery and equipment used principally in agriculture, horticulture, and conservation and land management work.

The unit applies to individuals who coordinate machinery and equipment maintenance and repair under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for maintenance and repair work	1.1 Clarify requirements of the work responsibilities with the supervisor 1.2 Identify equipment and material resource requirements according

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>to the scope of the coordination work and supervisor instructions</p> <p>1.3 Identify, document and present the priorities for maintenance and repair activities and time allocation to the supervisor for verification</p> <p>1.4 Identify the environmental implications of the proposed maintenance and repair work and assess and report potential impacts to the supervisor</p> <p>1.5 Identify workplace hazards, assess risks and implement risk controls</p> <p>1.6 Select, fit, use and maintain personal protective equipment according to job requirements and task to be undertaken</p>
2. Coordinate maintenance and repair of machinery and equipment	<p>2.1 Purchase, store and use materials to assist in maintenance and repair work</p> <p>2.2 Organise delivery of materials to the site according to maintenance requirements</p> <p>2.3 Organise machinery and equipment required for maintenance and repair to be on site and in good order when they are required</p> <p>2.4 Identify and organise routine maintenance and repairs of machinery and equipment and facilitate repairs that require specialist attention</p>
3. Coordinate and report on maintenance and repair activities	<p>3.1 Coordinate staff and resources to suit the maintenance and repair activities and priority of work</p> <p>3.2 Inform operators of their responsibilities in respect to operational maintenance requirements of machinery and equipment</p> <p>3.3 Monitor personnel and document activities, timelines and materials usage</p> <p>3.4 Recognise and report contingency situations to the supervisor and adjust schedules accordingly</p> <p>3.5 Document and report maintenance and repair activities undertaken and completed to relevant personnel</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Legibly and accurately fill out workplace documentation when recording activities, timelines and materials usage
Oral communication	<ul style="list-style-type: none"> Use clear language to report service or repair requirements
Numeracy	<ul style="list-style-type: none"> Calculate quantities of material and resource requirements, including; fuels, oils, cleaning agents, solvents and chemicals Calculate maintenance and repair time allocation
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Material resource requirements must include at least two of the following:	<ul style="list-style-type: none"> tools fuel oil cleaning agents solvents chemicals.
Personal protective clothing and equipment must include:	<ul style="list-style-type: none"> enclosed toe shoes safety glasses/goggles.
Contingency situations must include at least one of the following:	<ul style="list-style-type: none"> delays in delivery of equipment or machinery machinery or equipment breakdowns poor weather conditions poor quality materials unforeseen problems.

Unit Mapping Information

Code and title	Code and title	Comments	Equivalence status
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current version	previous version		
AHCMOM301 Coordinate machinery and equipment maintenance and repair Release 2	AHCMOM301 Coordinate machinery and equipment maintenance and repair Release 1	Minor changes to performance criteria and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM301 Coordinate machinery and equipment maintenance and repair

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has coordinated maintenance and repair of machinery and equipment for a small enterprise and has:

- identified workplace hazards, assessed risks and implemented safe workplace procedures
- interpreted documentation associated with work site activities
- sought specialist advice on repairs requiring specialist attention
- established priorities for repair and maintenance work to be carried out
- co-ordinated staff and resources to achieve work priorities
- minimised environmental impacts of machinery and equipment maintenance and repair activities
- responded to contingencies and taken corrective actions where necessary
- documented activities, timelines and material usage
- applied workplace health and safety procedures when organising and conducting maintenance and repair activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- work schedule programming
- possible causes of disruption to work activities and their effect on quality and time schedules
- responsibilities and requirements for maintaining and repairing machinery and equipment
- range, use and availability of materials, equipment and machinery required for the project
- environmental impacts of machinery and equipment maintenance and repair work and disposal of fuels, oils and other wastes

- workplace procedures applicable to health and safety in the workplace, and machinery and equipment maintenance and repair.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - machinery and equipment
 - maintenance tools and equipment
 - material resources
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - machinery operation and maintenance manual
 - workplace procedures applicable to health and safety in the workplace and machinery maintenance
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM302 Perform machinery maintenance

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare, inspect, maintain and record maintenance requirements for machinery that is used principally in agriculture, horticulture, and conservation and land management work.

The unit applies to individuals who conduct machinery maintenance under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to use equipment	1.1 Determine job requirements from workplace instructions 1.2 Source and interpret machinery and equipment operation and maintenance manual servicing information

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Select suitable and safe work site for maintenance activities</p> <p>1.4 Identify workplace hazards, assess risks and implement risk controls</p> <p>1.5 Select and check for serviceability tools, equipment and materials according to operation and maintenance manual</p> <p>1.6 Fit, use and maintain personal protective equipment according to job requirements and operation and maintenance manual</p>
2. Inspect engine and components	<p>2.1 Carry out regular engine and component checks on machinery and equipment</p> <p>2.2 Lubricate all relevant grease or lubricant points</p> <p>2.3 Change oils and filters at intervals prescribed in operation and maintenance manual</p> <p>2.4 Check hydraulic hoses and systems for deterioration and rectify defects according to operation and maintenance manual</p>
3. Inspect transmission	<p>3.1 Check drive and steering clutches for operation and adjust where applicable according to operation and maintenance manual</p> <p>3.2 Check transmission oil levels</p> <p>3.3 Check tracks or wheels and undercarriage for oil leaks and wear</p> <p>3.4 Identify faulty seals or leaks and take corrective actions according to operation and maintenance manual</p> <p>3.5 Clean machinery according to workplace requirements</p>
4. Maintain components and attachments	<p>4.1 Check components for wear and condition</p> <p>4.2 Replace worn or unserviceable components according to operator and maintenance manual</p> <p>4.3 Complete component inspection and replacement activities in line with workplace procedures</p> <p>4.4 Check moving operational components for wear and condition and adjust to the tolerances specified in operator and maintenance manual</p> <p>4.5 Clean and maintain work areas and return to operating condition</p> <p>4.6 Collect, treat and dispose or recycle waste from maintenance activities according to workplace procedures</p>
5. Record maintenance	<p>5.1 Record identified faults and defects in machine record</p> <p>5.2 Record maintenance procedures in workshop record in line with</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures 5.3 Report service or repair requirements to management

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Legibly and accurately fill out workplace documentation when recording faults, defects and maintenance procedures
Oral communication	<ul style="list-style-type: none"> Use clear language to report service or repair requirements
Numeracy	<ul style="list-style-type: none"> Calculate quantities of machinery fluids including oil Identify correct tyre pressure
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Machinery and equipment must include at least one of the following:	<ul style="list-style-type: none"> heavy earthmoving equipment tractors vehicles and trucks skid steer loaders self-propelled harvesters and pickers front end loaders forklifts
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	<ul style="list-style-type: none"> • land levellers • motorised turf mowing equipment • spraying equipment • pumps • grain handling equipment.
Personal protective clothing and equipment must include:	<ul style="list-style-type: none"> • enclosed toe shoes • safety glasses/goggles.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM302 Perform machinery maintenance Release 2	AHCMOM302 Perform machinery maintenance Release 1	Minor changes to performance criteria and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOMB02 Perform machinery maintenance

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has undertaken maintenance of machinery that is used principally in agriculture, horticulture or conservation and land management work at least once and has:

- identified workplace hazards, assessed risks and implemented safe workplace procedures
- carried out engine and equipment inspection and maintenance
- carried out transmission inspection and maintenance
- carried out lubrication and replacement of oils and filters
- checked machinery and equipment components for wear and tear, replaced parts, tagged and reported defects
- minimised environmental impacts associated with undertaking machinery maintenance
- maintained machinery and equipment components
- recorded details of maintenance and monitoring
- applied workplace health and safety procedures when undertaking machinery maintenance activities.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- engine function principles
- turbo charging and after cooling
- assessing engine specifications in line with power requirements
- engine electric and hydraulic indicators and gauges
- transmission and drive systems
- machinery and equipment operation and maintenance manual

- environmental impacts of machinery servicing and disposal of fuels, oils and other wastes
- workplace procedures applicable to health and safety in the workplace and machinery maintenance.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - machinery and equipment
 - maintenance tools and equipment
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - machinery operation and maintenance manual
 - workplace procedures applicable to health and safety in the workplace and machinery maintenance
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOMB04 Operate machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare and operate machinery and equipment in a safe and controlled manner that is used principally in agriculture, horticulture, and conservation and land management work.

This unit does not apply to chainsaws, tractors, vehicles or earth moving equipment.

The unit applies to individuals who operate machinery and equipment under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare machinery and equipment for use	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Source and interpret relevant machinery and equipment operation and maintenance manual and manufacturer instructions</p> <p>1.3 Assess the work site and confirm the suitability of the machinery and equipment for the task</p> <p>1.4 Select and maintain personnel protective equipment applicable to the machinery and equipment to be operated and the task to be undertaken</p> <p>1.5 Fit and use personal protective equipment according to workplace procedures and job requirements</p> <p>1.6 Conduct routine pre-operational checks as described in operation and maintenance manual</p> <p>1.7 Replace and report damaged or worn components in line with workplace reporting requirements</p> <p>1.8 Attach ancillary equipment and check for correct operation</p>
2. Operate machinery and equipment	<p>2.1 Operate machinery according to task requirements, conditions, operation and maintenance manual and manufacturer specifications</p> <p>2.2 Monitor machinery performance and efficiency and make adjustments</p> <p>2.3 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p>
3. Complete machinery and equipment operation	<p>3.1 Conduct shut down of machinery according to workplace procedures</p> <p>3.2 Perform routine operational servicing and minor maintenance according to operation and maintenance manual</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures</p> <p>3.4 Clean, secure and store machinery and equipment according to workplace procedures</p> <p>3.5 Maintain machinery and equipment use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document machinery and equipment use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Numeracy	<ul style="list-style-type: none"> Calculate quantities of machinery fluids including oil and fuel
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Machinery and equipment must include at least one of the following:	<ul style="list-style-type: none"> hydraulic equipment stationary engines spraying equipment mulching and chipping equipment powered trailers three point linkage equipment.
Pre operational checks must include:	<ul style="list-style-type: none"> machinery and equipment damage and serviceability engine oil fuel machinery and equipment controls reporting and tagging defects.

Unit Mapping Information

Code and title	Code and title	Comments	Equivalence status
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current version	previous version		
AHCMOM304 Operate machinery and equipment Release 2	AHCMOM304 Operate machinery and equipment Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM304 Operate machinery and equipment

Modification History

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Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has operated agricultural or horticultural machinery and equipment at least once and has:

- identified and reported workplace hazards and implemented safe operating procedures
- carried out machinery and equipment pre-operational checks including basic servicing and maintenance according to operation and maintenance manual
- operated machinery and equipment in a safe and controlled manner consistent with task requirements, conditions, operation and maintenance manual and manufacturer specifications
- attached ancillary equipment and checked for correct operation
- carried out machinery shut down procedures
- recognised, reported and documented defects in equipment and machinery and operational capacity
- cleaned, secured and stored machinery and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with machinery and equipment operation
- pre-operational and safety checks for machinery and equipment according to operation and maintenance manual
- operating principles and operating methods for machinery and equipment
- procedures for cleaning, securing and storing machinery, equipment and materials
- risks associated with the operation of machinery and equipment in different weather conditions and difficult terrain conditions

- duty of care to self, others and the environment
- workplace procedures applicable to health and safety in the workplace requirements for operating machinery and equipment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating machinery and equipment
- resources, equipment and materials:
 - a range of machinery and equipment
 - enclosed toe shoes
 - safety equipment and personal protective equipment applicable to the machinery and equipment being used and the task being undertaken
- specifications:
 - machinery and equipment operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to machinery and equipment operation
 - records must include details of the machinery and equipment that the individual was assessed on
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM305 Operate specialised machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare and operate specialised machinery and equipment in a safe, efficient and controlled manner that is used principally in agriculture, horticulture, and conservation and land management work.

The unit applies to individuals who operate specialised machinery and equipment under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select and prepare specialised machinery and equipment for use	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Source and interpret relevant specialised machinery and equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>operation and maintenance manual and manufacturer instructions</p> <p>1.3 Assess the work site and confirm the suitability of the specialised machinery and equipment for the task</p> <p>1.4 Select specialised machinery and equipment suitable for the task</p> <p>1.5 Select and maintain personnel protective equipment applicable to the machinery and equipment to be operated and the task to be undertaken</p> <p>1.6 Fit and use personal protective equipment according to workplace procedures and job requirements</p> <p>1.7 Conduct routine pre-operational checks as described in operation and maintenance manual</p> <p>1.8 Replace and report damaged or worn components in line with workplace requirements</p> <p>1.9 Attach ancillary equipment and check for correct operation</p>
2. Operate specialised machinery and equipment	<p>2.1 Operate specialised machinery and equipment safely</p> <p>2.2 Operate specialised machinery and equipment according to task requirements, conditions, operation and maintenance manual and manufacturer specifications</p> <p>2.3 Monitor specialised machinery and equipment performance and efficiency and make adjustments where required</p> <p>2.4 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p>
3. Complete specialised machinery and equipment operation	<p>3.1 Conduct shut down of machinery according to workplace procedures</p> <p>3.2 Perform routine operational servicing and minor maintenance according to operation and maintenance manual</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures</p> <p>3.4 Clean, secure and store specialised machinery and equipment according to workplace procedures</p> <p>3.5 Maintain specialised machinery and equipment use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document specialised machinery and equipment use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Numeracy	<ul style="list-style-type: none"> Calculate quantities of machinery fluids including oil and fuel
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Specialised machinery and equipment must include at least one of the following:	<ul style="list-style-type: none"> feed mixers specialised turf equipment specialised nursery equipment livestock feeding systems specialised harvesting or planting equipment filtering and pumping equipment poultry performance monitoring equipment fertilising application grain handling equipment.
Pre-operational checks must include:	<ul style="list-style-type: none"> specialised machinery and equipment damage and serviceability engine oil fuel specialised machinery and equipment controls reporting and tagging defects.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM305 Operate specialised machinery and equipment Release 2	AHCMOM305 Operate specialised machinery and equipment Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOMB05 Operate specialised machinery and equipment

Modification History

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Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has operated specialised agricultural or horticultural machinery and equipment at least once and has:

- identified and reported hazards and implemented safe operating procedures
- carried out specialised machinery and equipment pre-operational checks including basic servicing and maintenance according to operation and maintenance manual
- operated specialised machinery and equipment in a safe and controlled manner consistent with task requirements, conditions, operation and maintenance manual and manufacturer specifications
- attached ancillary equipment and checked for correct operation
- carried out machinery shut down procedures
- recognised and reported defects in specialised machinery and equipment and operational capacity
- cleaned, secured and stored specialised machinery and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with specialised machinery and equipment operation
- pre-operational and safety checks for specialised machinery and equipment according to operation and maintenance manual
- operating principles and operating methods for specialised machinery and equipment
- procedures for cleaning, securing and storing specialised machinery and equipment and materials

- risks associated with the operation of specialised machinery and equipment in different weather conditions and difficult terrain conditions
- duty of care to self, others and the environment
- workplace procedures applicable to health and safety in the workplace requirements for operating specialised machinery and equipment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating specialised machinery and equipment
- resources, equipment and materials:
 - a range of specialised machinery and equipment
 - enclosed toe shoes
 - safety equipment and personal protective equipment applicable to the specialised machinery and equipment being used and the task being undertaken
- specifications:
 - specialised machinery and equipment operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to specialised machinery and equipment operation
 - records must include details of the specialised machinery and equipment that the individual was assessed on
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM306 Ground spread fertiliser and soil ameliorant

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare and undertake activities required to ground spread fertiliser and soil ameliorants.

This unit applies to individuals who apply industry codes of practice and operating principles to ground spread fertiliser and soil ameliorants under broad direction, and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, manufacturer specifications, sustainability and biosecurity practices.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm customer	1.1 Confirm with customer that fertiliser or soil ameliorant products to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
requirements	<p>be spread are consistent with customer order</p> <p>1.2 Verify with customer that technical specification of products are acceptable for job</p> <p>1.3 Confirm fertiliser order documentation with customer to enable depot and factory traceability</p> <p>1.4 Document spreading services agreement according to workplace requirements and industry code of practice</p>
2. Identify features of target area	<p>2.1 Identify and agree with customer on the location and boundaries of area to be treated and document according to workplace requirements and industry code of practice</p> <p>2.2 Visually assess soil type and condition or seek advice from customer</p> <p>2.3 Identify environmentally sensitive areas and plan operations to ensure minimum adverse impact and compliance with required buffer zones</p> <p>2.4 Inspect and identify features that present a hazard to the operation, consult with customer and take appropriate action to minimise risks</p> <p>2.5 Identify the location of services and utilities in consultation with customer and adjust proposed spreading operation</p> <p>2.6 Identify local weather and climate conditions and take into account potential impacts when preparing for operation</p>
3. Perform pre-spreading checks	<p>3.1 Determine rate of spreading and calculate buffer zone allowance</p> <p>3.2 Ensure machinery and equipment are clean of soil and/or plant material before it is moved onto site</p> <p>3.3 Prepare, set up, calibrate and confirm serviceability of machinery and equipment according to workplace procedures and manufacturer instructions</p>
4. Spread products	<p>4.1 Select and maintain personal protective equipment to be used by operator and all personnel involved in spreading tasks</p> <p>4.2 Fit and use personal protective equipment according to job requirements and task to be completed</p> <p>4.3 Apply fertiliser or soil ameliorant in a manner that complies with guidelines on buffer zones and minimises run off into waterways and drains</p> <p>4.4 Monitor meteorological conditions before and during application</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>and modify operations as required</p> <p>4.5 Identify environmental and biosecurity implications associated with fertiliser or ameliorant application and minimise impact</p> <p>4.6 Follow any existing site quarantine or biosecurity protocols</p> <p>4.7 Continually monitor workplace hazards and risks, and ensure safety of self, other personnel and equipment</p>
5. Shut down equipment and undertake maintenance requirements	<p>5.1 Conduct shut down procedures required for ground spread of fertiliser and ameliorant equipment</p> <p>5.2 Clean and check serviceability of machinery, equipment and hand tools</p> <p>5.3 Perform basic preventative maintenance</p> <p>5.4 Record faults for remedial action according to workplace procedures</p> <p>5.5 Return machinery, equipment and hand tools to depot or storage area according to workplace procedures</p> <p>5.6 Complete operational records according to workplace procedures and industry code of practice</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information, including maps to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document fertiliser and soil ameliorant order and spreading services agreement Complete operational records
Oral communication	<ul style="list-style-type: none"> Use clear language to confirm with customer fertiliser or soil ameliorant products for spreading prior to use Participate in verbal exchanges to respond to questions and clarify information

Skill	Description
Numeracy	<ul style="list-style-type: none"> Record quantities of fertiliser and soil ameliorant
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information to operator and personnel involved in spreading tasks about location of spreading services, buffer zones and personal protective equipment for operators and other personnel

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Machinery must include at least one of the following:	<ul style="list-style-type: none"> tractors other drive equipment.
Personal protective clothing and equipment must include:	<ul style="list-style-type: none"> protective clothing respirators protective eyewear unlined rubber or plastic gloves neoprene or nitrile boots.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM306 Ground spread fertiliser and soil ameliorant Release 2	AHCMOM306 Ground spread fertiliser and soil ameliorant Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM306 Ground spread fertiliser and soil ameliorant

Modification History

Release	Comments
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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has safely operated fertiliser and soil ameliorant spreading equipment and machinery at least once and has:

- identified hazards and implemented safe workplace practices and procedures
- assessed environmental and physical hazards that may be encountered when undertaking ground spreading operations and taken appropriate action to minimise risks
- communicated with clients to ensure a common understanding and agreement of task to be undertaken
- used maps and interpreted written instructions regarding areas to be spread including types of products and application rates
- maintained, calibrated and operated ground spreading equipment according to operation and maintenance manual, manufacturer specifications and in line with industry standards for uniformity of application
- monitored weather conditions during ground spreading operations and adjusted operations to minimise risk to local environment and personnel in the vicinity
- minimised environmental impacts associated with fertiliser and soil ameliorant application including attention to buffer zones and run-off
- applied fertiliser or soil ameliorants at rate agreed by customer to specified land area
- implemented shut down procedures including cleaning, securing, and safe storage of machinery
- completed operational and equipment maintenance records according to workplace procedures
- followed industry and workplace biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with fertiliser and soil ameliorant application, and machinery and equipment operation
- fertiliser and soil ameliorant machinery and equipment operating components, controls, features, technical capabilities and limitations
- operational limits of equipment with regard to uniformity of application and potential health and safety implications
- spreading characteristics of different fertiliser and soil ameliorant products
- environmental impacts associated with fertiliser spreading including hazards to waterways
- purpose of buffer zones
- methods of monitoring local weather conditions and the effects of changes on ground spreading activities
- operating principles and operating methods of fertiliser and soil ameliorant machinery and equipment
- procedures for cleaning, securing and storing fertiliser and soil ameliorant machinery, equipment and tools
- workplace procedures applicable to fertiliser and soil ameliorant application
- workplace procedures applicable to health and safety in the workplace and fertiliser and soil ameliorant application, and fertiliser and soil ameliorant machinery and equipment
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating fertiliser and soil ameliorant machinery
- resources, equipment and materials:
 - fertiliser and soil ameliorant machinery, equipment and tools
 - fertiliser or soil ameliorant products
 - protective clothing
 - respirators
 - protective eyewear
 - unlined rubber or plastic gloves
 - neoprene or nitrile boots

- safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - fertiliser and soil ameliorant machinery and equipment operation and maintenance manuals and manufacturer specifications
 - industry code of practice applicable to fertiliser and soil ameliorant application
 - industry and workplace biosecurity procedures applicable to fertiliser and soil ameliorant application, and fertiliser and soil ameliorant machinery and equipment
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOMB07 Operate a cane harvester

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, operate and complete cane harvester operations in the sugar cane production industry.

The unit applies to individuals who operate cane harvesters under broad direction, and take responsibility for their own work.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare cane harvesting equipment for use	1.1 Confirm work activity to be undertaken, including identifying potential hazards and risks implementing safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Source and interpret relevant cane harvester operation and maintenance manual and manufacturer instructions</p> <p>1.3 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.4 Fit and use personal protective equipment according to job requirements and applicable to task to be undertaken</p> <p>1.5 Conduct cane harvester routine pre-operational checks</p> <p>1.6 Document damaged or worn components and organise for replacement according to workplace procedures</p> <p>1.7 Conduct cabin drill according to workplace procedures</p> <p>1.8 Locate and select crop class, variety and field for harvest</p>
2. Carry out cane harvesting	<p>2.1 Carry out pre-start, and start up procedures</p> <p>2.2 Set and operate cane harvester in a safe, controlled and correct manner and monitor for performance and efficiency</p> <p>2.3 Operate cane harvester in co-ordination with cane haulage vehicles and other associated harvesting equipment</p> <p>2.4 Harvest cane in a productive, safe and controlled manner and consign according to workplace procedures</p> <p>2.5 Identify environmental and biosecurity implications associated with cane harvesting and undertake activities to minimise impact</p> <p>2.6 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p>
3. Complete cane harvesting operations	<p>3.1 Park cane harvester and conduct shut down procedures according to workplace practices</p> <p>3.2 Perform routine operational servicing and minor maintenance</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures</p> <p>3.4 Clean and sterilise cane harvester to prevent cross-site contamination</p> <p>3.5 Store and secure cane harvester</p> <p>3.6 Remove and store keys in the required location</p> <p>3.7 Maintain cane harvester use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document cane harvester use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure or track tension
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Cane harvester must include at least one of the following:	<ul style="list-style-type: none"> track cane harvester half-track cane harvester wheel cane harvester double row cane harvester.
Pre-operational checks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machine damage and serviceability checking for missing parts fluid leaks and levels fuel level brakes and clutch operation condition of tyres or tracks machine controls.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOMB07 Operate a cane harvester Release 2	AHCMOMB07 Operate a cane harvester Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM307 Operate a cane harvester

Modification History

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Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has safely operated a cane harvester to harvest a commercial crop of cane at least once and has:

- identified hazards and implemented safe workplace practices and procedures
- carried out cane harvester pre-operational checks according to operation and maintenance manual
- checked cane harvester equipment prior to use
- familiarised self with field and local conditions for harvest
- set and operated a cane harvester in a safe, controlled and correct manner and monitored for performance and efficiency
- operated cane harvester consistent with operation and maintenance manual and manufacturer specifications
- recognised and reported defects in cane harvester equipment and operational capacity
- communicated and co-operated with relevant personnel including haul-out drivers
- controlled and minimised cane spillage
- carried out cane harvester shut-down procedures
- cleaned and sterilised the harvester to prevent cross-site contamination
- minimised environmental impacts associated with cane harvester operation
- followed industry and workplace biosecurity procedures
- applied workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with cane harvester operations

- cane harvester and site safety requirements
- cane harvester components, controls, features, technical capabilities and limitations
- operating principles and operating methods for cane harvesters
- cane harvester processes and spillage minimisation techniques
- harvest and haulage processes as they relate to collection and haulage of harvests
- principles of the safe removal of obstacles from harvesters and adjustment of harvester settings
- duty of care to self, others and the environment
- relevant legislation with regard to cane harvester operation and licensing requirements
- environmental impacts associated with operating cane harvesters
- workplace procedures applicable to health and safety in the workplace and operating a cane harvester safely
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - in a range of weather and surface conditions and on a range of different terrains
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating cane harvester
- resources, equipment and materials:
 - cane harvester
 - cane
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - cane harvester operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to cane harvesting
 - legislation relevant to cane harvester operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM308 Operate broadacre and row crop harvest machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to operate harvest machinery and equipment used for broadacre and row crop harvesting in the agriculture and horticulture sectors.

This unit applies to individuals who operate broadacre or row crop harvesting machinery and equipment under broad direction, and take responsibility for their own work.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare broadacre and	1.1 Confirm activity to be undertaken, including identifying potential

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
row crop harvesting machinery for use	hazards and risks and implementing of safe working practices to manage risks 1.2 Source and interpret relevant harvesting machinery and equipment operation and maintenance manual and manufacturer instructions 1.3 Select and maintain personal protective equipment according to workplace safety requirements 1.4 Fit and use personal protective equipment according to job requirements and applicable to task to be undertaken 1.5 Conduct harvest machinery and equipment routine pre-operational checks 1.6 Document damaged or worn components and organise for replacement according to workplace procedures 1.7 Attach ancillary equipment and check for correct operation
2. Operate broadacre and row crop machinery and equipment	2.1 Carry out pre-start, and start up procedures according to workplace practices 2.2 Operate harvest machinery and equipment in a safe, controlled and efficient manner and monitor for performance and efficiency 2.3 Operate harvest machinery according to operation and maintenance manual, manufacturer specifications, task requirements and conditions 2.4 Identify environmental and biosecurity implications associated with harvesting and undertake activities to minimise impact 2.5 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment
3. Complete work	3.1 Conduct shut down in line with workplace procedures 3.2 Perform routine operational servicing and minor maintenance 3.3 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures 3.4 Clean, store and secure harvest machinery and equipment 3.5 Remove and store keys in the required location 3.6 Maintain harvest machinery use records in required format

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document harvest machinery use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure or track tension
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre operational checks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machine damage and serviceability checking for missing parts fluid leaks and levels fuel level brakes and clutch operation condition of tyres or tracks machine controls.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCMOM308 Operate broadacre and row crop harvest machinery and equipment Release 2	AHCMOM308 Operate broadacre and row crop harvest machinery and equipment Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit
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Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOMB308 Operate broadacre and row crop harvest machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has operated broadacre and row crop harvesting machinery and equipment at least once and has:

- identified hazards and implemented safe workplace practices and procedures
- carried out harvest machinery and equipment pre-operational checks according to operation and maintenance manual
- performed minor maintenance
- recognised and documented defects in broadacre and row crop harvest machinery equipment and operational capacity
- attached and detached ancillary equipment safely
- operated harvest machinery and equipment according to operation and maintenance manual, manufacturer specifications, task requirements and local conditions
- shut down machinery and equipment and recorded usage
- minimised environmental impacts associated with harvest machinery and equipment operation
- followed industry and workplace biosecurity procedures
- followed workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with broadacre and row crop harvest machinery and equipment operations
- broadacre and row crop harvest machinery and equipment components, controls, features, technical capabilities and limitations

- manufacturer and workplace requirements for:
 - pre-operational checks
 - machinery operation techniques
 - operator level servicing
 - planned and emergency shut down procedures
- relevant legislation with regard to harvest machinery operation and licensing requirements
- environmental impacts associated with operating machinery and equipment used for harvesting
- workplace procedures applicable to health and safety in the workplace requirements and harvest machinery and equipment operation
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating harvest machinery
- resources, equipment and materials:
 - harvest machinery and equipment
 - broadacre or row crop
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - harvest machinery and equipment operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to broadacre and row crop harvesting
 - legislation relevant to harvest machinery operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM309 Operate broadacre sowing machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to operate machinery and equipment required for broadacre sowing in agriculture and horticulture sectors.

The unit applies to individuals who operate broadacre sowing machinery and equipment under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare broadacre sowing machinery for use	<p>1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks</p> <p>1.2 Source and interpret relevant broadacre sowing machinery and</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>equipment operation and maintenance manual and manufacturer instructions</p> <p>1.3 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.4 Fit and use personal protective equipment according to job requirements and applicable to task to be undertaken</p> <p>1.5 Conduct broadacre sowing machinery and equipment routine pre-operational checks</p> <p>1.6 Document damaged or worn components and organise for replacement according to workplace procedures</p> <p>1.7 Attach ancillary equipment and check for correct operation</p>
2. Operate broadacre sowing machinery and equipment	<p>2.1 Carry out machinery pre-start, and start up procedures</p> <p>2.2 Operate broadacre sowing machinery in a safe, controlled and efficient manner and monitor for performance and efficiency</p> <p>2.3 Operate broadacre sowing machinery according to operation and maintenance manual, manufacturer specifications, task requirements and conditions</p> <p>2.4 Identify environmental and biosecurity implications associated with broadacre sowing operations and undertake activities to minimise impact</p> <p>2.5 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p>
3. Complete work	<p>3.1 Conduct shut down procedures for broadacre sowing machinery and equipment</p> <p>3.2 Perform routine operational servicing and minor maintenance in line with workplace requirements</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures</p> <p>3.4 Clean, store and secure broadacre sowing machinery and equipment</p> <p>3.5 Remove and store keys in the required location</p> <p>3.6 Maintain broadacre sowing machinery use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document broadacre sowing machinery use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Numeracy	<ul style="list-style-type: none"> Identify correct tyre pressure
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre operational checks must include:	<ul style="list-style-type: none"> machine damage and serviceability checking for missing parts condition of tyres.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOMB09 Operate broadacre sowing machinery and	AHCMOMB09 Operate broadacre sowing machinery and equipment Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

equipment Release 2			
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Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM309 Operate broadacre sowing machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has safely operated broadacre sowing machinery and equipment at least once and has:

- identified hazards and implemented safe workplace practices and procedures
- carried out broadacre sowing machinery and equipment pre-operational checks according to operation and maintenance manual
- performed minor maintenance
- recognised and documented defects in broadacre sowing machinery and equipment and operational capacity
- attached and detached ancillary equipment safely
- operated broadacre sowing machinery and equipment according to operation and maintenance manual, manufacturer specifications, task requirements and conditions
- followed sowing requirements
- shut down machinery and equipment and recorded usage
- minimised environmental impacts associated with broadacre sowing machinery and equipment operation
- followed industry and workplace biosecurity procedures
- applied workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with broadacre sowing machinery and equipment operations
- broadacre sowing machinery and equipment components, controls, features, technical capabilities and limitations

- manufacturer requirements and workplace requirements for:
 - pre-operational checks
 - machinery operation techniques
 - operator level servicing
 - planned and emergency shut down procedures
- workplace procedures applicable to work health and safety and broadacre sowing machinery and equipment operation
- environmental impacts associated with operating machinery and equipment used for broadacre sowing
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating broadacre sowing machinery
- resources, equipment and materials:
 - broadacre sowing machinery and equipment
 - safety equipment and personal protective clothing and equipment applicable to the task being undertaken
- specifications:
 - broadacre sowing machinery and equipment operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to broadacre sowing
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM310 Operate land-forming machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to operate machinery and equipment used for land-forming in agriculture and horticulture sectors.

The unit applies to individuals who operate land-forming machinery and equipment under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare land-forming machinery for use	<p>1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks</p> <p>1.2 Source and interpret relevant land-forming machinery and equipment operation and maintenance manual and manufacturer</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>instructions</p> <p>1.3 Select and maintain personal protective clothing and equipment according to workplace safety requirements</p> <p>1.4 Fit and use personal protective equipment according to job requirements and applicable to task to be undertaken</p> <p>1.5 Conduct land-forming machinery and equipment routine pre-operational checks</p> <p>1.6 Document damaged or worn components and organise for replacement according to workplace procedures</p> <p>1.7 Attach ancillary equipment and check for correct operation</p>
2. Operate land-forming machinery and equipment	<p>2.1 Carry out machinery pre-start, and start up procedures</p> <p>2.2 Operate land-forming machinery and equipment in a safe, controlled and efficient manner and monitor for performance and efficiency</p> <p>2.3 Operate land-forming machinery according to operation and maintenance manual, manufacturer specifications, task requirements and conditions</p> <p>2.4 Identify environmental and biosecurity implications associated with land-forming and undertake activities to minimise impact</p> <p>2.5 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p>
3. Complete work	<p>3.1 Conduct shut down procedures for land-forming machinery and equipment in line with workplace processes</p> <p>3.2 Perform routine operational servicing and minor maintenance</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures</p> <p>3.4 Clean, store and secure land-forming machinery and equipment according to workplace procedures</p> <p>3.5 Maintain land-forming machinery use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document land-forming machinery use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> machine damage and serviceability checking for missing parts.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM310 Operate land-forming machinery and equipment Release 2	AHCMOM310 Operate land-forming machinery and equipment Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM310 Operate land-forming machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has safely operated land-forming machinery and equipment for agricultural or conservation earthworks purposes at least once and has:

- identified hazards and implemented safe workplace practices and procedures
- carried out land-forming machinery and equipment pre-operational checks according to operation and maintenance manual
- performed minor maintenance
- recognised and documented defects in land-forming machinery and equipment and operational capacity
- attached and detached ancillary equipment safely
- operated land-forming machinery and equipment according to operation and maintenance manual, manufacturer specifications, task requirements and conditions
- shut down machinery and equipment and recorded usage
- minimised environmental impacts associated with land-forming machinery and equipment operation
- followed industry and workplace biosecurity procedures
- applied workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with land-forming machinery and equipment operations
- land-forming machinery and equipment components, controls, features, technical capabilities and limitations

- manufacturer requirements and workplace requirements for:
 - pre-operational checks
 - machinery operation techniques
 - operator level servicing
 - planned and emergency shut down procedures
- general land forming concepts and practices including:
 - contouring, surface drainage and erosion
 - slope requirements
 - survey and set out
- workplace procedures applicable to health and safety in the workplace requirements for land-forming machinery and equipment operation
- environmental impacts associated with operating machinery and equipment used for land-forming
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - in a range of weather and surface conditions and on a range of different terrains
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating land-forming machinery
- resources, equipment and materials:
 - land-forming machinery and equipment
 - safety equipment and personal protective clothing and equipment applicable to the task being undertaken
- specifications:
 - land-forming machinery and equipment operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to land-forming
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOMB311 Operate precision control technology

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to operate precision technology used for the control of specialised machinery and equipment and to optimise specialised machinery performance.

The unit applies to individuals who operate precision control technology under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare precision technology for use	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Source and interpret relevant precision control technology

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	operation and maintenance manual and manufacturer instructions 1.3 Conduct precision control technology routine pre-operational checks according to workplace practices 1.4 Record minor routine servicing and housekeeping tasks in line with workplace processes 1.5 Check ancillary equipment for correct operation 1.6 Check that data complies with job specifications
2. Operate precision technology	2.1 Operate precision control technology according to operation and maintenance manual, manufacturer specifications, task requirements and conditions 2.2 Monitor activities to ensure that machinery is operating in an efficient and controlled manner and make adjustments as required 2.3 Monitor and assess hazards and risks, and ensure safety of self, other personnel and associated equipment 2.4 Identify and assess impacts on the environment of precision control equipment operation and undertake activities to minimise
3. Complete work	3.1 Conduct shut down procedures for precision control equipment according to workplace practices 3.2 Download data and complete operational records 3.3 Perform basic diagnostic procedures as required according to job specifications 3.4 Identify and report malfunctions, faults and irregular performance or damage according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations

Skill	Description
Writing	<ul style="list-style-type: none"> Complete operational records
Numeracy	<ul style="list-style-type: none"> Check and compare precision control technology data against job specifications Download and interpret precision control technology data and record in operational records
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Precision control technology must include at least one of the following:	<ul style="list-style-type: none"> on-board Global Positioning System (GPS), Global Navigation Satellite System (GNSS) or Differential Global Positioning System (DGPS) precision control equipment fixed GPS, GNSS or DGPS precision control equipment.
Pre-operational checks must include at least one of the following:	<ul style="list-style-type: none"> precision control technology equipment damage and serviceability Automatic Section Control measurement check equipment dimension check GPS offset setting.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM311 Operate precision control technology Release 2	AHCMOM311 Operate precision control technology Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOMB11 Operate precision control technology

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has used precision control technology in the operation of agricultural or horticultural machinery at least once and has:

- identified hazards and implemented safe workplace practices and procedures
- carried out precision control technology pre-operational checks according to operation and maintenance manual
- used technology to operate machinery in an efficient and controlled manner
- minimised environmental impacts associated with use of precision control technology to operate machinery
- performed routine maintenance tasks
- performed basic diagnostic procedures
- downloaded and uploaded data for the task
- applied workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- manufacturer specifications and requirements for:
 - precision control technology pre-operational checks
 - precision instrument controls, feature and functions
 - minor servicing requirements
- uploading and downloading of data produced during the operation of precision control machinery and associated equipment
- components and controls features and functions of equipment
- diagnostic techniques for operational performance

- characteristics, technical capabilities and limitations of associated machinery and equipment
- environmental impacts of using precision control technology to operate machinery.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating precision control technology equipment
- resources, equipment and materials:
 - precision control technology equipment
- specifications:
 - precision control technology equipment operation and maintenance manuals
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM312 Operate row crop planting and seeding machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to operate machinery and equipment required for row crop planting and seeding in agriculture and horticulture sectors.

The unit applies to individuals who operate row crop planting and seeding machinery and equipment under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare row crop planting and seeding machinery for use	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Source and interpret relevant planting and seeding machinery and equipment operation and maintenance manual and manufacturer instructions</p> <p>1.3 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.4 Fit and use personal protective equipment according to job requirements and applicable to task to be undertaken</p> <p>1.5 Conduct planting and seeding machinery and equipment routine pre-operational checks</p> <p>1.6 Document damaged or worn components and organise for replacement according to workplace procedures</p> <p>1.7 Attach ancillary equipment and check for correct operation</p>
2. Operate row crop planting and seeding machinery and equipment	<p>2.1 Carry out machinery pre-start, and start up procedures according to workplace practices</p> <p>2.2 Operate planting and seeding machinery in a safe, controlled and efficient manner and monitor for performance and efficiency</p> <p>2.3 Operate planting and seeding machinery according to operation and maintenance manual, manufacturer specifications, task requirements and conditions</p> <p>2.4 Identify environmental and biosecurity implications associated with row crop planting and seeding machinery usage and undertake activities to minimise impact</p> <p>2.5 Continually monitor hazards and risks, and ensure safety of self, other personnel and equipment</p>
3. Complete work	<p>3.1 Conduct shut down procedures for row crop planting and seeding machinery and equipment according to workplace requirements and manufacturers' specifications</p> <p>3.2 Perform routine operational servicing and minor maintenance</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures</p> <p>3.4 Clean, store and secure planting and seeding machinery and equipment</p> <p>3.5 Maintain planting and seeding machinery use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document planting and seeding machinery use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Numeracy	<ul style="list-style-type: none"> Identify correct tyre pressure
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> machine damage and serviceability checking for missing parts condition of tyres.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM312 Operate row crop planting and seeding machinery and	AHCMOM312 Operate row crop planting and seeding machinery and equipment	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

equipment Release 2	Release 1		
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Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOMB12 Operate row crop planting and seeding machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has operated row crop planting and seeding machinery and equipment at least once and has:

- identified hazards and implemented safe workplace practices and procedures
- carried out planting and seeding machinery and equipment pre-operational checks according to operation and maintenance manual
- performed minor maintenance
- recognised and documented defects in row crop planting machinery and equipment and operational capacity
- attached and detached ancillary equipment
- operated planting and seeding machinery and equipment according to operation and maintenance manual, manufacturer specifications, task requirements and conditions
- followed planting requirements
- minimised environmental impacts associated with row crop planting and seeding machinery and equipment operation
- followed industry and workplace biosecurity procedures
- applied workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with row crop planting and seeding machinery and equipment operations
- planting and seeding machinery and equipment components, controls, features, technical capabilities and limitations

- manufacturer requirements and workplace requirements for:
 - pre-operational checks
 - machinery operation techniques
 - operator level servicing
 - planned and emergency shut down procedures
- environmental impacts associated with operating machinery and equipment used for row crop planting and seeding
- workplace procedures applicable to health and safety in the workplace for row crop planting and seeding machinery and equipment operation
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - in a range of weather and surface conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating row crop planting and seeding machinery
- resources, equipment and materials:
 - row crop planting and seeding machinery and equipment
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - row crop planting and seeding machinery and equipment operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to row crop planting and seeding
- relationships:
 - supervisors
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM313 Operate mobile irrigation machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to operate mobile machinery and equipment used for irrigation in agriculture and horticulture sectors.

The unit applies to individuals who operate mobile irrigation machinery and equipment under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare mobile irrigation machinery for use	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks 1.2 Source and interpret relevant mobile irrigation machinery and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>equipment operation and maintenance manual and manufacturer instructions</p> <p>1.3 Select and maintain personal protective clothing and equipment according to workplace safety requirements</p> <p>1.4 Fit and use personal protective equipment according to job requirements and applicable to task to be undertaken</p> <p>1.5 Conduct mobile irrigation machinery and equipment routine pre-operational checks</p> <p>1.6 Document damaged or worn components and organise for replacement according to workplace procedures</p> <p>1.7 Attach ancillary equipment and check for correct operation</p>
2. Operate mobile irrigation machinery and equipment	<p>2.1 Carry out machinery pre-start, and start up procedures according to workplace practices</p> <p>2.2 Operate mobile irrigation machinery in a safe, controlled and efficient manner and monitor for performance and efficiency</p> <p>2.3 Operate mobile irrigation machinery according to operation and maintenance manual, manufacturer specifications, task requirements and conditions</p> <p>2.4 Identify environmental and biosecurity implications associated with mobile irrigation machinery operation and undertake activities to minimise impact</p> <p>2.5 Continually monitor hazards and risks, and ensure safety of self, other personnel and equipment</p>
3. Complete work	<p>3.1 Conduct shut down procedures for mobile irrigation machinery and equipment according to workplace requirements</p> <p>3.2 Perform routine operational servicing and minor maintenance</p> <p>3.3 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures</p> <p>3.4 Clean, store and secure mobile irrigation machinery and equipment in line with workplace processes</p> <p>3.5 Maintain mobile irrigation machinery use records in required format</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document mobile irrigation machinery use
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Numeracy	<ul style="list-style-type: none"> Identify correct tyre pressure
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> machine damage and serviceability checking for missing parts condition of tyres.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM313 Operate mobile irrigation machinery and equipment	AHCMOM313 Operate mobile irrigation machinery and equipment Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Release 2			
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Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM313 Operate mobile irrigation machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has safely operated either lateral or centre pivot mobile irrigation machinery and equipment at least once and has:

- identified hazards and implemented safe workplace practices and procedures
- carried out mobile irrigation machinery and equipment pre-operational checks according to operation and maintenance manual
- performed minor maintenance
- recognised and documented defects in mobile irrigation machinery and equipment and operational capacity
- attached and detached ancillary equipment
- operated mobile irrigation machinery and equipment according to operation and maintenance manual, manufacturer specifications, task requirements and conditions
- shut down machinery and equipment and recorded usage
- minimised environmental impacts associated with mobile irrigation machinery and equipment operation
- followed industry and workplace biosecurity procedures
- applied workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with mobile irrigation machinery and equipment operations
- mobile irrigation machinery and equipment components, controls, features, technical capabilities and limitations
- manufacturer requirements and workplace requirements for:

- pre-operational checks
- machinery operation techniques
- operator level servicing
- planned and emergency shut down procedures
- health and safety in the workplace procedures applicable to mobile irrigation machinery and equipment operation
- environmental impacts associated with operating machinery and equipment used for mobile irrigation
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating mobile irrigation machinery
- resources, equipment and materials:
 - mobile irrigation machinery and equipment
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - mobile irrigation machinery and equipment operation and maintenance manuals
 - industry and workplace biosecurity procedures applicable to mobile irrigation
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOMB314 Transport machinery

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to load, transport and unload machinery used for earth-moving and agricultural operations.

The unit applies to individuals who transport machinery under broad direction, and take responsibility for their own work.

Vehicles must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Load machines	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe workplace procedures for transporting machinery and managing risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Prepare trailer, low loader or float for loading according to contractor policy 1.3 Load machine according to safe operating procedures and workplace procedures 1.4 Complete tie down procedures according to industry practice 1.5 Secure machine to prevent movement in transport according to industry practice 1.6 Display signs indicating oversized loads according to legislative requirements 1.7 Arrange permits, clearances and escorts for transporting oversized loads
2. Transport machines	2.1 Plan transport route ensuring compliance with oversized loads, permits, clearances and relevant legislation 2.2 Drive machines on or off road in compliance with relevant licensing requirements and regulations 2.3 Transport machinery safely to destination according to licensing requirements and regulations
3. Unload machines	3.1 Complete untie procedures according to industry practice 3.2 Unload machines according to safe operating procedures and workplace procedures 3.3 Complete workplace documentation in required format

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Load must include at least one of the following:	<ul style="list-style-type: none"> • side loaded • rear loaded.
Tie down must include at least one of the following:	<ul style="list-style-type: none"> • webbing straps • chains • wire rope • polypropylene or nylon filament rope • clevis claw hook • grab hook • ratchet hook.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM314 Transport machinery Release 2	AHCMOM314 Transport machinery Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM314 Transport machinery

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has loaded, transported and unloaded large machinery used for earthmoving or agricultural operations at least once and has:

- identified hazards and risks and implemented safe work practices and procedures
- safely loaded and unloaded large earthmoving or agricultural machinery
- secured machinery as a transport load
- provided an escort for wide loads
- arranged permits and escorts as required by legislation
- driven machinery to destination, complying with requirements for moving wide loads
- applied workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- legislation pertaining to transport of heavy vehicles and machinery
- machinery operating principles and operating methods used for earth moving and agricultural operations
- tying down procedures for large machinery
- relevant legislation with regard to vehicle operation and licensing requirements
- workplace procedures relevant to health and safety in the workplace requirements to transport machinery safely
- industry practice and workplace procedures relevant to transport of machinery.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating machinery
- resources, equipment and materials:
 - a range of machinery
 - tie down devices
- specifications:
 - machinery operation and maintenance manuals
 - legislation relevant to vehicle operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM315 Operate chemical application machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to operate machinery and equipment used for specialised liquid and granular chemical application in agriculture and horticulture sectors.

This unit applies to individuals who apply legislative and regulatory requirements and operating principles to chemical application machinery and equipment operation under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare chemical application machinery	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
for use	<p>risks</p> <p>1.2 Source and interpret relevant chemical application machinery and equipment operation and maintenance manual and manufacturer instructions</p> <p>1.3 Identify and interpret safety data sheets relevant to chemicals to be used and applied</p> <p>1.4 Select and maintain personal protective equipment according to workplace procedures</p> <p>1.5 Fit and use personal protective equipment according to job requirements and applicable to task to be undertaken</p> <p>1.6 Conduct chemical application machinery and equipment routine pre-operational checks</p> <p>1.7 Document damaged or worn components and organise for replacement according to workplace procedures</p> <p>1.8 Set up and calibrate equipment according to application plan</p> <p>1.9 Attach ancillary equipment and check for correct operation</p> <p>1.10 Record pre-operational checks according to workplace procedures</p>
2. Operate chemical application machinery and equipment	<p>2.1 Operate chemical application machinery and equipment in a safe, controlled and efficient manner and monitor for performance and efficiency</p> <p>2.2 Operate chemical application machinery according to operation and maintenance manual, manufacturer specifications, task requirements and regulatory requirements</p> <p>2.3 Identify environmental and biosecurity implications associated with chemical application and minimise impact</p> <p>2.4 Continually monitor hazards and risks, and ensure safety of self, other personnel and equipment</p> <p>2.5 Assess and minimise spray drift risk</p> <p>2.6 Monitor meteorological conditions before and during chemical application and respond to changed conditions</p>
3. Complete work	<p>3.1 Conduct shut down procedures for chemical application machinery and equipment</p> <p>3.2 Flush and clean components according to manufacturer specifications and chemical label requirements</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.3 Perform routine operational servicing and minor maintenance 3.4 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures 3.5 Clean, store and secure chemical application machinery and equipment 3.6 Complete operational records according to legislative and regulatory requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document chemical application machinery use Complete operational records
Oral communication	<ul style="list-style-type: none"> Use clear language to report malfunctions, faults, irregular performance or damage
Numeracy	<ul style="list-style-type: none"> Estimate, calculate and record quantities of liquid and/or granular chemicals Identify correct tyre pressure
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Chemical application	<ul style="list-style-type: none"> specialised liquid chemical application machinery
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machinery and equipment must include at least one of the following:	<ul style="list-style-type: none"> specialised granular application machinery machinery and equipment used for crop protection and pest management.
Personal protective equipment must include:	<ul style="list-style-type: none"> protective clothing respirators protective eyewear unlined rubber or plastic gloves neoprene or nitrile boots.
Pre-operational checks must include:	<ul style="list-style-type: none"> machine damage and serviceability checking for missing parts condition of tyres.
Biosecurity implications must include:	<ul style="list-style-type: none"> control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM315 Operate chemical application machinery and equipment Release 2	AHCMOM315 Operate chemical application machinery and equipment Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM315 Operate chemical application machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that, on at least one occasion, the individual has calibrated, operated and cleaned specialised liquid or granular chemical application machinery and equipment and has:

- identified hazards and implemented safe workplace practices and procedures
- carried out chemical application machinery and equipment pre-operational checks according to operation and maintenance manual
- sourced and interpreted relevant Safety Data Sheets (SDS)
- performed minor maintenance
- recognised and documented defects in chemical application machinery and equipment and operational capacity
- attached and detached ancillary equipment
- calibrated and set up application components
- operated chemical application machinery according to operation and maintenance manual, manufacturer specifications, task requirements and regulatory requirements
- assessed and minimised spray drift risk
- completed operational records according to legislative and regulatory requirements
- minimised environmental impacts associated with chemical application machinery and equipment operation
- followed industry and workplace biosecurity procedures
- applied workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hazards and risks associated with chemical application machinery and equipment operations
- categories of information contained in SDS
- chemical application machinery and equipment components, controls, features, technical capabilities and limitations
- manufacturer requirements and workplace requirements for:
 - pre-operational checks
 - machinery operation techniques
 - operator level servicing
 - planned and emergency shut down procedures
- features and functions of chemical application equipment components, including:
 - liquid spray; nozzles, tanks, agitation systems, pumps, filters, pressure regulation valves
 - granular applicators/dusters; hoppers, flow control valves
- effects of meteorological conditions on chemical application
- legislative and regulatory requirements applicable to chemical application
- workplace procedures applicable to health and safety in the workplace for chemical application machinery and equipment operation
- environmental impacts associated with operating chemical application machinery and equipment including spray drift
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating chemical application machinery
- resources, equipment and materials:
 - chemical application machinery and equipment
 - protective clothing
 - respirators
 - protective eyewear
 - unlined rubber or plastic gloves
 - neoprene or nitrile boots
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:

- chemical application machinery and equipment operation and maintenance manuals and manufacturer specifications
- legislative and regulatory requirements applicable to chemical application
- industry and workplace biosecurity procedures applicable to chemical application
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM316 Refuel machinery or vehicle

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to receive and store bulk fuel, prepare for refuelling, refuel machinery or vehicle and complete refuelling.

The unit applies to individuals who refuel machinery or vehicles under broad direction, and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Receive and store bulk fuel	1.1 Identify regulatory and industry requirements for the receipt and storage of bulk fuel, and refuelling operations 1.2 Identify health and safety hazards in the workplace, assess risks and implement suitable controls

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify dangers of volatile fuel liquids and vapours</p> <p>1.4 Locate and check firefighting and spill response equipment, and replace faulty equipment according to manufacturer specification</p> <p>1.5 Ensure facilities for storage of bulk fuel meet national standards</p> <p>1.6 Check bulk fuel storage facilities to ensure fuel quality is maintained during storage</p> <p>1.7 Check storage facilities and refuelling equipment for leaks</p> <p>1.8 Receive bulk fuel into storage according to regulatory requirements and workplace procedures</p> <p>1.9 Complete documentation for receipt of bulk fuel according to workplace procedures</p> <p>1.10 Monitor bulk fuel during storage to maintain fuel quality and usage</p>
2. Prepare for refuelling	<p>2.1 Select and maintain personal protective equipment</p> <p>2.2 Fit and use personal protective equipment and confirm safety equipment applicable to the task being undertaken</p> <p>2.3 Select fuel based on machinery or vehicle use and manufacturer specifications</p> <p>2.4 Ensure appropriate firefighting and spill response equipment are accessible</p> <p>2.5 Ensure appropriate refuelling equipment is available and meets national standards</p> <p>2.6 Check and secure refuelling equipment according to workplace practices and manufacturer specifications</p> <p>2.7 Position and secure machinery or vehicle for refuelling</p>
3. Refuel machinery or vehicle from fixed storage	<p>3.1 Open tank valves on machinery or vehicle if necessary</p> <p>3.2 Refuel machinery or vehicle according to regulatory requirements and manufacturer specifications</p> <p>3.3 Ensure there is no residual fuel left in any equipment used for fuel transfer</p> <p>3.4 Contain spills and mitigate environmental or safety dangers according to legislation and workplace procedures</p> <p>3.5 Check fuel levels are at required level for refuelling purposes</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.6 Close and secure tank valves if necessary
4. Refuel machinery or vehicle from portable containers	4.1 Ensure only approved containers are used to transport decanted fuel 4.2 Ensure portable containers being towed are secure 4.3 Check containers to ensure fuel quality is maintained 4.4 Decant fuel from fixed storage into containers ensuring risks are minimised 4.5 Ensure there is no residual fuel in fuel transfer equipment for all decanting procedures 4.6 Transport containers to worksite according to regulatory requirements and workplace procedures 4.7 Decant fuel from portable containers using appropriate equipment 4.8 Contain spills and mitigate environmental or safety dangers according to legislation and workplace procedures
5. Complete refuelling	5.1 Clean, maintain and store refuelling equipment and containers according to workplace procedures 5.2 Complete workplace documentation and records in required format

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Complete operational records
Numeracy	<ul style="list-style-type: none"> Estimate, calculate and record quantities of fuel
Navigate the world of	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety

Skill	Description
work	requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Personal protective equipment must include:	<ul style="list-style-type: none"> • protective clothing • protective eyewear • unlined rubber or plastic gloves • neoprene or nitrile boots • high visibility clothing.
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM316 Refuel machinery or vehicle Release 2	AHCMOM316 Refuel machinery or vehicle Release 1	Minor changes to performance criteria, foundation skills and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM316 Refuel machinery or vehicle

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has received and stored bulk fuel and has refuelled machinery or a vehicle on at least one occasion and has demonstrated the following:

- identified health and safety hazards in the workplace, assessed risks and implemented suitable controls
- received and stored bulk fuel according to workplace and regulatory requirements
- prepared for refuelling of machinery or a vehicle from fixed storage and from a portable container
- refuelled machinery or vehicle from fixed storage
- refuelled machinery or vehicle from portable containers
- completed refuelling according to workplace procedures
- completed required documentation
- minimised environmental impacts associated with machinery and vehicle refuelling
- applied workplace health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- regulatory and industry requirements for the receipt and storage of bulk fuel, and refuelling operations
- health and safety in the workplace procedures relevant to machinery and vehicle refuelling
- types, use and maintenance of personal protective equipment
- types, features and use of fuels for machinery and vehicles
- requirements, types, features and facilities used to store and receive fuel

- workplace procedures for checking fuel storage facilities, refuelling equipment and fuel transfer equipment for leaks
- types, features, use, maintenance and storage of fuel transfer and refuelling equipment
- risks and dangers associated with volatile fuel liquids and vapours, and mitigation and protection measures
- procedures for emptying fuel transfer equipment and checking that they are empty of residual fuel
- methods and procedures for securing portable fuel containers during transport
- environmental impacts of fuel leaks and spills
- types, features, use and maintenance of firefighting and spill response equipment
- legislation and workplace procedures relevant to containment methods and equipment for fuel spills
- workplace procedures applicable to environmental protection and sustainability procedures for mitigation and protection measures for fuel spills.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when refuelling machinery or vehicles
- resources, equipment and materials:
 - a range of machinery or vehicles
 - refuelling equipment
 - fuel
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - machinery or vehicle operation and maintenance manuals
 - regulations, legislation, industry requirements, manufacturer specifications and workplace procedures relevant to machinery and vehicle refuelling and fuel storage requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOMB317 Operate tractors with attachments

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, operate and maintain tractor operations with attached equipment.

Working with tractors is an inherently dangerous activity. Individuals who work at this level must be thoroughly instructed in all health and safety in the workplace aspects of operating tractors. The tractor must also comply with relevant Australian standards for tractors.

The unit applies to individuals who operate tractors with attachments under broad direction and take responsibility for their own work.

Vehicle must be operated according to relevant state/territory licensing authority vehicle licence requirements and regulations.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare tractor for operation	1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>risks</p> <p>1.2 Source and interpret relevant machinery operation and maintenance manual and manufacturer instructions</p> <p>1.3 Select and maintain personal protective equipment according to workplace safety requirements</p> <p>1.4 Fit and use personal protective equipment required for safe tractor operation and task to be undertaken</p> <p>1.5 Conduct tractor routine pre-operational checks according to operation and maintenance manual</p> <p>1.6 Inspect for missing parts, damage, faults, or malfunctions and report and tag defects</p>
2. Select, remove and fit attachments	<p>2.1 Select attachment for the task</p> <p>2.2 Safely fit attachment according to manufacturer instructions and local conditions for use</p> <p>2.3 Test attachment to ensure correct fitting and safe operation</p> <p>2.4 Use attachment in accordance with recommendations and design limits</p>
3. Operate tractor	<p>3.1 Carry out pre-start and start up equipment procedures</p> <p>3.2 Drive and operate tractor, and modify the operating technique to meet changing work conditions</p> <p>3.3 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p> <p>3.4 Identify environmental and biosecurity implications associated with tractor operation and minimise impact</p> <p>3.5 Complete work according to agreed plan and within the operating capacity of the equipment and operator</p> <p>3.6 Act on or report abnormal monitoring system indicators and alarms</p>
4. Complete and check tractor operation	<p>4.1 Park tractor and conduct shut down procedures according to workplace practices</p> <p>4.2 Perform routine operational servicing and minor maintenance according to the operation and maintenance manual</p> <p>4.3 Identify and report malfunctions, faults, irregular performance or damage according to workplace procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.4 Safely remove attachments according to manufacturer instructions 4.5 Clean and store removed attachments in designated location 4.6 Clean, decontaminate, secure and store tractor in designated location 4.7 Remove and store keys in the required location 4.8 Maintain tractor and equipment use records in required format

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Document tractor and equipment use
Numeracy	<ul style="list-style-type: none"> Calculate quantities of vehicle fluids including fuel Identify correct tyre pressure or track tension
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Pre-operational checks must include:	<ul style="list-style-type: none"> maintenance interval schedule daily check machine damage and serviceability guards are in place and undamaged checking for missing parts fluid leaks and levels
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	<ul style="list-style-type: none"> • fuel level • brakes and clutch operation • condition of tyres or tracks • machine controls.
Attachment must include one three point linkage, one Power Take Off (PTO) driven and one trailed implement from the following tractor attachments and implements:	<ul style="list-style-type: none"> • three point linkage implement linkage adjustment • three point linkage PTO driven • three point linkage hydraulic operated • tractor mounted implement direct drive • tractor mounted implement hydraulic operated • tractor mounted implement PTO operated • trailed implement manual adjustment • trailed implement mechanical adjustment • trailed implement PTO operated • trailed implement hydraulic operated.
Biosecurity implications must include:	<ul style="list-style-type: none"> • control of cross-site contamination.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM317 Operate tractors with attachments Release 1	Not applicable	New unit	No equivalent unit

Links

Assessment of skills must take place under the following conditions: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOMB17 Operate tractors with attachments

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has used safe working practices when operating tractors and fitting and using attachments on at least one occasion and has:

- identified hazards and risks associated with operating tractors and using attachments
- implemented safe working practices to minimise risks when fitting and using attachments
- carried out tractor pre-operational checks and maintenance including tagging defects
- driven and operated a tractor safely, including modifying operating technique to meet changing work conditions
- selected and safely attached, removed, tested and used one three point linkage, one power take off driven and one trailed implement according to manufacturer specifications and weather conditions
- used safe towing practices
- operated tractors on an incline and an off-road surface with and without attachments and implements
- carried out tractor shut down procedures
- minimised environmental impacts associated with tractor operation
- applied workplace health and safety procedures or safe tractor operation
- followed industry and workplace biosecurity procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- tractor components, controls and features and operational functions
- tractor steering systems and features
- tractor operation and maintenance manuals
- features, operational functions and procedures for safe fitting and use of attachments and implements

- load limits and the principles of weight distribution with regard to load shifting and tractor movement
- distinguishing characteristics of individual tractors including rated performance capacities
- effects of various surface and difficult terrain conditions on tractor operation and use of attachments
- duty of care to self, others and the environment
- relevant legislation with regard to tractor operation and licensing requirements
- environmental impacts relevant to operation of tractors with attachments
- common injuries, causes and implications of using unsafe practices when operating tractors and fitting attachments
- workplace procedures relevant to health and safety in the workplace requirements to operate a tractor safely
- industry and workplace biosecurity procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
 - individual must not be under the influence of alcohol or drugs
 - individual must not be taking any medication (prescribed or otherwise) that may impair judgement
 - individual must not be in a fatigued state when operating the machinery
- resources, equipment and materials:
 - tractors
 - attachments
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - tractor operation and maintenance manual
 - industry and workplace biosecurity procedures applicable to tractor operation
 - legislation relevant to tractor operation and licensing requirements
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM401 Conduct major repair and overhaul of machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, carry out and complete major repair and overhaul of machinery and equipment.

The unit applies to individuals who apply specialised skills and knowledge to ensure that workplace machinery and equipment is repaired or overhauled in a way that enables minimal disruption to workplace operations. They have responsibility for their own work and for the quality of the work of others within known parameters. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to carry out	1.1 Identify major repairs and overhaul requirements for machinery

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
major repairs and overhaul of machinery and equipment	and equipment and organise resources according to workplace procedures, operation and maintenance manuals and manufacturer specifications 1.2 Identify, access and confirm tools and equipment against job requirements 1.3 Identify hazards and assess risks in the workplace and implement control practices to manage risks according to health and safety workplace procedures 1.4 Select, fit and use personal protective equipment according to workplace procedures and operation and maintenance manuals
2. Conduct major repairs and overhaul of machinery and equipment	2.1 Confirm machinery and equipment faults and malfunctions listed 2.2 Estimate scope and cost for repairs or overhaul and inform management and other relevant personnel 2.3 Consult with specialist technical personnel in regard to overhaul requirements and major repairs 2.4 Identify worn or damaged parts and remove or overhaul 2.5 Implement repair and replacement process for major repairs according to workplace requirements and manufacturers' specifications
3. Carry out advanced welding repairs and workplace engineering	3.1 Identify health and safety in the workplace hazards, assess risks and implement, monitor and review risk controls 3.2 Select and set up cutting and welding equipment and materials according to health and safety in the workplace requirements 3.3 Conduct cutting and welding according to industry and workplace safety standards 3.4 Carry out workplace engineering tasks to modify design or manufacture parts according to job requirements
4. Complete major repairs and overhaul operation	4.1 Shut down, adjust, clean and store tools and equipment according to workplace practices 4.2 Collect and treat, dispose or recycle waste from maintenance activities according to workplace procedures 4.3 Clean, maintain and return work areas to operating condition 4.4 Record breakdowns, major repairs, overhauls and incidents according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Complete workplace documentation to record machinery and equipment breakdowns, major repairs, overhauls and safety incidents
Oral communication	<ul style="list-style-type: none"> Use clear language to present information to management and consult with specialist technical personnel
Numeracy	<ul style="list-style-type: none"> Estimate and calculate repair and overhaul costs for materials requirements, resources and specialist technical personnel Provide timeframes for completing machinery and equipment repair
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Machinery and equipment must include at least one of the following:	<ul style="list-style-type: none"> harvesters tractors seeding machines with components including metering systems, air flow control, blower drives, air system, electronic monitoring systems, hydraulic hoses and couplings engines boom spray units grain handling equipment.
Personal protective equipment must include:	<ul style="list-style-type: none"> non-slip heat and fire resistant boots or shoes safety glasses and goggles welding gloves and gauntlets welding helmet.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM401 Conduct major repair and overhaul of machinery and equipment Release 2	AHCMOM401 Conduct major repair and overhaul of machinery and equipment Release 1	Minor changes to performance criteria and range of conditions	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM401 Conduct major repair and overhaul of machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that, on at least one occasion, the individual has undertaken major repair and overhaul of machinery and equipment in a manner that allows the core business of the enterprise to continue with minimal disruption and has:

- identified potential workplace hazards and implemented control measures
- diagnosed faults and identified the most effective and economic option in the replacement, repair and overhaul of components
- selected and used tools and materials appropriate to the task
- recognised and replaced deteriorated or worn parts
- disassembled and reassembled parts and components of machinery and equipment according to operation and maintenance manual and manufacturer specifications
- used and operated welding and thermal cutting equipment safely and effectively
- determined appropriate cutting and welding techniques
- disposed of wastes to minimise environmental impact
- recorded details of breakdowns, major repairs, overhauls and incidents in workshop record.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- assemblies and components of drive, electrical and hydraulic systems
- operational requirements of machinery and equipment
- detailed knowledge of mechanics and equipment operating systems
- use and storage of welding equipment

- maintenance manuals and manufacturer specifications for machinery and equipment operation relevant to repair tasks
- environmental impacts of machinery and equipment major repair and disposal of fuels, oils and other wastes
- workplace procedures applicable to health and safety in the workplace for major repair of machinery and equipment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - machinery and equipment
 - repair and overhaul tools and equipment
 - welding equipment
 - safety equipment and personal protective equipment applicable to the task being undertaken
- specifications:
 - machinery and equipment operation and maintenance manual and manufacturer specifications
 - workplace procedures applicable to health and safety in the workplace and machinery maintenance
- relationships:
 - team members and supervisors
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM402 Supervise maintenance of property, machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to identify, implement and supervise the maintenance requirements of property, machinery and equipment for an enterprise.

The unit applies to individuals who apply specialised skills and knowledge to supervising the maintenance of property, machinery and equipment and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare maintenance	1.1 Identify maintenance requirements for property, machinery and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
plan	<p>equipment from relevant information sources</p> <p>1.2 Check maintenance requirements against warranty, insurance agreements and indemnity provisions</p> <p>1.3 Identify and quantify total maintenance costs</p> <p>1.4 Develop a maintenance plan to promote and sustain performance and production systems in line with workplace requirements</p> <p>1.5 Establish an effective workplace communication strategy that refers to the maintenance plan and includes workplace environmental, health and safety procedures</p>
2. Implement maintenance plan	<p>2.1 Identify, secure and include resource, supply and operational requirements in workplace budgets</p> <p>2.2 Communicate maintenance schedules and procedures to staff, contractors and suppliers</p> <p>2.3 Implement and schedule a maintenance plan to minimise disruption to workplace operations</p> <p>2.4 Assess potential risks with regard to staff and supply problems, and prepare contingency plans accordingly</p> <p>2.5 Align tasks required to staff capability and provide training where required</p> <p>2.6 Confirm machinery and equipment is operated to manufacturer specifications and workplace environmental and health and safety procedures</p>
3. Monitor maintenance plan	<p>3.1 Monitor maintenance activities and performance against maintenance plan for efficiency and effectiveness</p> <p>3.2 Monitor and control workplace hazards and environmental implications associated with maintenance procedures according to health and safety procedures</p> <p>3.3 Monitor and control costs within workplace budget requirements</p> <p>3.4 Document relevant information with regard to the maintenance plan according to workplace procedures</p> <p>3.5 Ensure property, machinery and equipment are maintained in clean and safe operational condition</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding maintenance requirements for property, machinery and equipment Interpret warranty, insurance agreements and indemnity provisions to confirm information related to maintenance requirements for property, machinery and equipment
Writing	<ul style="list-style-type: none"> Complete maintenance plan and schedule to include maintenance requirements and costs
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff, contractors and suppliers, using clear language to communicate maintenance schedules and procedures
Numeracy	<ul style="list-style-type: none"> Estimate and calculate maintenance and repair costings of property, machinery and equipment maintenance Monitor costs against budget
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements, including safety requirements, associated with own role and area of responsibility Monitor self and others adherence to workplace requirements including safety requirements
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information about maintenance schedules and procedures within the work team

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM402 Supervise maintenance of property, machinery and equipment Release 2	AHCMOM402 Supervise maintenance of property, machinery and equipment Release 1	Minor changes to performance criteria and foundation skills	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM402 Supervise maintenance of property, machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has implemented and supervised the range of maintenance programs covering property, machinery and equipment that are required to be performed in an agriculture/horticulture industry enterprise, and has demonstrated the following on at least one occasion:

- identified potential workplace hazards and implemented control measures
- planned, costed and scheduled maintenance requirements
- allocated resources
- monitored and controlled costs within workplace budget requirements
- dealt with contingencies and rescheduled maintenance where necessary
- established and monitored performance targets for maintenance team
- monitored and reported on performance of maintenance activities
- ensured property, machinery and equipment are maintained in clean and safe operational condition
- communicated effectively with work team, contractors and management
- monitored health and safety in the workplace and adherence to environmental procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of maintenance requirements with regard to property, machinery and equipment
- maintenance and servicing cycles for property, machinery and equipment
- maintenance planning, scheduling and budgeting
- warranty, insurance agreements and indemnity provisions applicable to property, machinery and equipment maintenance

- workplace procedures applicable to health and safety in the workplace and property, machinery and equipment maintenance.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - warranties, insurance agreements, and indemnity provisions
 - property, machinery and equipment maintenance plans and schedules
 - property, machinery and equipment budgets
- specifications:
 - property maintenance schedule
 - machinery and equipment operation and maintenance manual and manufacturer specifications
 - workplace procedures applicable to health and safety in the workplace and property, machinery and equipment maintenance
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM501 Manage machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to coordinate, monitor and review the operation and maintenance of machinery and equipment for an enterprise.

This unit applies to individuals who apply specialised skills and knowledge to the management of machinery and equipment, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Evaluate machinery and equipment usage	1.1 Review and match operations of available machinery and equipment to production processes 1.2 Calculate operation and servicing costs of machinery and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>equipment to determine total purchasing price</p> <p>1.3 Estimate productivity returns from machinery and equipment to identify benefit to production processes</p> <p>1.4 Monitor machinery and equipment replacement cycles to identify improvement options and maximise the life cycle of components</p> <p>1.5 Acquire machinery and equipment through appropriate procurement options</p>
2. Coordinate machinery and equipment maintenance	<p>2.1 Identify and schedule maintenance and service cycles to ensure servicing is according to manufacturer specifications and production processes</p> <p>2.2 Cost and arrange storing and housing of machinery and equipment</p> <p>2.3 Document and record operational and service history</p> <p>2.4 Identify and assess risks and hazards to health and safety in the workplace and review and record risk controls</p> <p>2.5 Provide, maintain and store suitable personal protective equipment according to workplace health and safety procedures</p> <p>2.6 Develop and monitor repair and maintenance routines according to manufacturer specifications and workplace health and safety procedures</p>
3. Monitor operation	<p>3.1 Make available for use, maintain and dispose of consumables and operational support materials according to workplace procedures</p> <p>3.2 Monitor adherence to health and safety in the workplace and environmental practices according to workplace procedures</p> <p>3.3 Ensure operational procedures are clear, documented and followed according to manufacturer specifications and workplace procedures</p> <p>3.4 Provide operators with instructions and supervision according to health and safety standards and efficient workplace practices</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding maintenance requirements for machinery and equipment
Writing	<ul style="list-style-type: none"> Document plans and prepare written reports for workplace personnel regarding machinery and equipment operation
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff, contractors and suppliers, using clear language to communicate machinery and equipment maintenance schedules and workplace procedures Use clear communications with management to discuss estimates, servicing costs and budget
Numeracy	<ul style="list-style-type: none"> Estimate and calculate resources, machinery and equipment costs and servicing costs
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility Monitor self and others adherence to workplace requirements including safety requirements
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information within work team Provide instruction, supervision and mentoring to the work team

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM501 Manage machinery and equipment Release 2	AHCMOM501 Manage machinery and equipment Release 1	Minor changes to performance criteria and foundation skills	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM501 Manage machinery and equipment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that individual has coordinated, monitored and reviewed the operation and maintenance of machinery and equipment for an enterprise and has demonstrated the following on at least one occasion:

- identified potential workplace hazards and implemented safe working systems for machinery and equipment operation
- monitored machinery and equipment operations for a workplace
- evaluated machinery and equipment requirements for a workplace
- developed machinery and equipment operation and maintenance procedures according to health and safety guidelines, manufacturer specifications, workplace procedures and hazardous substances legislation
- scheduled, supervised and recorded the service and maintenance of machinery and equipment
- monitored machinery and equipment operations and maintenance requirements, and reviewed risk assessments periodically to ensure a safe operating environment
- communicated effectively with staff
- assessed staff capability in machinery maintenance and operation, and provided supervision and mentoring.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- servicing and maintaining machinery and equipment within area of responsibility
- methods of calculating the cost of machines and their contribution
- training and instruction techniques for directing the learning of staff

- hazard identification, risk assessment and procedures for developing risk controls
- workplace procedures, legislation and regulation requirements applicable to machinery and equipment maintenance and management
- environmental legislation applicable to maintenance of machinery and equipment, disposal of waste and hazardous substances
- workplace procedures applicable to health and safety in the workplace and machinery and equipment management.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - machinery and equipment maintenance plans and schedules
 - machinery and equipment budgets
- specifications:
 - machinery and equipment operation and maintenance manual and manufacturer specifications
 - workplace procedures and health and safety in the workplace procedures, legislation and regulation applicable to machinery and equipment maintenance and management
 - legislation and regulation requirements applicable to machinery and equipment management
 - environmental legislation applicable to maintenance of machinery and equipment, disposal of waste and hazardous substances
- relationships:
 - team members
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM502 Implement a machinery management system

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to coordinate and manage services, maintenance and operational requirements of machinery and equipment to implement a machinery management system for an enterprise.

This unit applies to individuals who apply specialised skills and knowledge to implementing a machinery management system, who take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish machinery and equipment	1.1 Identify machinery and equipment requirements of the workplace 1.2 Evaluate applicability of alternative options to machinery

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
requirements	<p>ownership</p> <p>1.3 Identify and address storage and housing requirements for machinery and equipment</p> <p>1.4 Monitor and assess machinery innovations for applicability to workplace requirements, safety and functions</p> <p>1.5 Maintain inventory of machinery and equipment according to workplace procedures</p>
2. Select and manage machinery services provided by off-property suppliers	<p>2.1 Identify services to be provided by off-property suppliers</p> <p>2.2 Develop criteria to select and monitor the provision of services according to workplace safety, operational and financial requirements</p> <p>2.3 Record and monitor agreements and transactions related to service provision for machinery operating requirements</p>
3. Manage machinery maintenance	<p>3.1 Determine machinery and equipment maintenance requirements from operation and maintenance manuals and manufacturer specifications</p> <p>3.2 Establish maintenance schedules and systems for recording machinery use and maintenance</p> <p>3.3 Monitor machinery maintenance to ensure adherence to schedules, operation and maintenance manuals, and manufacturer instructions</p>
4. Manage machinery and equipment operation	<p>4.1 Monitor and record machinery and equipment use according to workplace procedures</p> <p>4.2 Monitor machinery operation to ensure compliance with manufacturer instructions</p> <p>4.3 Determine procedures for operation of machinery and monitor to ensure adherence to safe procedures</p> <p>4.4 Develop and implement staff training program in the safe operation of machinery and procedures for machinery maintenance</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding maintenance requirements for machinery and equipment Interpret information related to management of machinery and equipment
Writing	<ul style="list-style-type: none"> Develop documentation to record machinery purchase, maintenance and replacement plans
Oral communication	<ul style="list-style-type: none"> Initiate discussions with staff, contractors and suppliers, using clear language to communicate machinery management system, machinery and equipment maintenance schedules and workplace procedures Use clear communications with management to discuss machinery purchase, running costs, servicing costs and budget
Numeracy	<ul style="list-style-type: none"> Compare costs of services provided by off-property suppliers Apply comparative analysis of machinery purchase and running costs
Navigate the world of work	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility Monitor self and others adherence to workplace requirements including safety requirements
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information within work team

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Machinery and equipment must include:	<ul style="list-style-type: none"> vehicles and attachments stationary and mobile plant used in the workplace.
Services must include:	<ul style="list-style-type: none"> machinery repair machinery overhaul parts supply.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM502 Implement a machinery management system Release 2	AHCMOM502 Implement a machinery management system Release 1	Minor changes to performance criteria and foundation skills	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM502 Implement a machinery management system

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has established and managed a machinery management system for an enterprise and has demonstrated the following on at least one occasion:

- identified machinery and equipment requirements for a workplace
- identified potential workplace hazards and implemented safe working systems for machinery and equipment operation
- sourced, selected and managed machinery services provided by off-property suppliers
- managed machinery and equipment operation for a workplace
- managed machinery maintenance schedules for a workplace
- documented procedures for machinery and equipment operation and maintenance used in the workplace
- communicated effectively with staff
- identified staff training requirements for the safe operation of machinery and maintenance procedures
- developed and implemented training plans related to operation and maintenance of machinery in the workplace.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- total costs associated with the use of machinery
- maintenance requirements of machinery and equipment
- storage and housing requirements for machinery
- safe operating procedures for machinery

- systems for monitoring machinery maintenance and operation
- licensing requirements for the operation of machinery
- workplace procedures applicable to health and safety in the workplace and environmental legislation and machinery management systems
- principles of staff learning, development and training.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - machinery and equipment maintenance schedules
 - machinery and equipment budgets
- specifications:
 - machinery and equipment operation and maintenance manual and manufacturer specifications
 - workplace procedures and health and safety in the workplace procedures, legislation and regulation applicable to machinery and equipment management
 - licensing and legislation applicable to machinery operation
 - environmental legislation applicable to maintenance of machinery and equipment, disposal of waste and hazardous substances
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCMOM601 Analyse machinery options

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to calculate, review and analyse machinery options within an agricultural, horticultural or land management enterprise.

This unit applies to individuals who apply advanced skills and knowledge to analysing machinery options and take personal responsibility and exercise autonomy in undertaking complex work. They analyse information and exercise judgement to complete a range of advanced skilled activities. They work in contexts that are subject to change and adapt a range of fundamental principles accordingly.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Machinery operation and maintenance (MOM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Calculate costs associated with	1.1 Source and compare relevant benchmark data that relates

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
machinery use	<p>machinery costs to workplace productivity and data</p> <p>1.2 Calculate operating, overhead and intangible costs related to use of machinery for a workplace</p> <p>1.3 Make comparisons of productivity and suitability between different types and brands of machinery</p>
2. Review machinery requirements	<p>2.1 Review machinery inventory in the context of workplace objectives, current and future productivity, and profitability levels</p> <p>2.2 Assess and control risks associated with high capital investment in machinery to make decisions about machinery requirements for a workplace</p> <p>2.3 Identify, cost and evaluate alternatives to ownership</p> <p>2.4 Identify tax impact of the capital investment using professional support where required and incorporate into a cost analysis</p>
3. Analyse returns from major capital investments in machinery	<p>3.1 Use capital budgeting techniques including energy efficiency considerations to calculate the rate of return on major investment decisions</p> <p>3.2 Review machinery options plan, and analyse and record changes according to workplace requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret technical details and operational running costs for different types of machinery
Writing	<ul style="list-style-type: none"> Prepare detailed reports to document machinery options using multiple criteria
Numeracy	<ul style="list-style-type: none"> Analyse complex data to evaluate machinery options Calculate rates of return for major investments in machinery over specified timeframes
Navigate the world of	<ul style="list-style-type: none"> Identify and describe own workplace requirements associated with own role and area of responsibility

Skill	Description
work	

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Alternatives to ownership must include at least one of the following:	<ul style="list-style-type: none"> • contracting • share agreements and syndication • machinery rings.
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCMOM601 Analyse machinery options Release 2	AHCMOM601 Analyse machinery options Release 1	Minor changes to performance criteria and foundation skills	Equivalent unit

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCMOM601 Analyse machinery options

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has analysed machinery options for a workplace, including the associated costs and potential returns on capital investments, and has demonstrated the following on at least one occasion:

- compared the productivity and suitability of different types and brands of machinery
- identified and calculated total costs associated with machinery operations
- reviewed machinery requirements for a workplace and evaluated costed alternative options
- analysed the financial costs, tax impacts and investment risks for different types of machinery
- budgeted and incorporated benchmarks of energy efficiency for total running costs of machinery
- calculated potential returns from major capital investments in machinery over designated timeframes
- documented machinery usage analysis and preferred options
- reviewed the machinery options plan and analysis of options.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- benchmarking practices and procedures for determining machinery requirements, including energy efficiency, carbon footprint and water use efficiency
- capital budgeting techniques
- relevant taxation provisions relating to investment in machinery types including related technology and equipment

- risks associated with machinery investments
- analysis and planning processes required for machinery operation and location.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - machinery requirements and machinery options plan
 - machinery costs benchmark data
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM301 Establish an Australian native stingless bee colony

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to identify, procure, establish and maintain a colony of Australian native stingless bees (ANSBs) suitable for establishing in a specific location for a defined purpose.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Recognise common Australian native stingless bees suitable	1.1 Recognise common Australian native bees and their nesting habits 1.2 Recognise common ANSB species suitable for domestication for a specified location

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
for domestication	<p>1.3 Select a species of ANSB and identify the environmental conditions required</p> <p>1.4 Prepare a basic management strategy for establishing and maintaining ANSBs for a defined purpose</p>
2. Prepare a structure to house an ANSB colony	<p>2.1 Identify type of structure required to house the ANSB colony and acquire components according to design and workplace procedures</p> <p>2.2 Identify health and safety hazards and risks, and apply appropriate controls according to workplace procedures</p> <p>2.3 Select, fit and use personal protective equipment</p> <p>2.4 Select tools and equipment required to assemble the planned structure according to workplace procedures</p> <p>2.5 Assemble components to house ANSBs according to design</p>
3. Set up an ANSB colony	<p>3.1 Procure a population of native bees and prepare to establish a new colony according to workplace procedures and legislative requirements</p> <p>3.2 Identify and select a preferred method for establishing colony</p> <p>3.3 Prepare bee structure to receive the native bee colony</p> <p>3.4 Perform manipulations required to establish the bee colony according to selected method</p> <p>3.5 Transfer the colony to a location and position suitable to native bee species, colony management strategy and biosecurity procedures</p> <p>3.6 Monitor native bee colony for desired development and take remedial action to rectify development problems</p>
4. Monitor and maintain the health of ANSBs	<p>4.1 Identify and recognise common native bee pests, diseases and disorders</p> <p>4.2 Inspect native bee colony for pests, diseases and disorders, and take remedial action according to workplace biosecurity procedures</p> <p>4.3 Monitor environmental conditions and maintain optimal condition according to workplace procedures and management strategy</p>
5. Manipulate ANSB colony to achieve strategic outcomes	<p>5.1 Confirm purpose and outcomes for ANSB colony against management strategy</p> <p>5.2 Manipulate and manage colony to achieve purpose and outcome of management strategy</p> <p>5.3 Review outcomes of manipulations to assess achievement of</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	management strategy

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret designs and plans suitable for housing ANSB colonies
Writing	<ul style="list-style-type: none"> Document a basic management strategy for an ANSB colony using appropriate terminology and required format
Numeracy	<ul style="list-style-type: none"> Measure and perform calculations for layout and construction requirements of ANSB structures according to proposed design

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM301 Establish an Australian native stingless bee colony Release 2	AHCNRM301 Establish an Australian native stingless bee colony Release 1	Removed Core Skills for Work from Foundation Skills field	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM301 Establish an Australian native stingless bee colony

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, established an Australian native bee colony, including:

- recognised and selected appropriate Australian native stingless bees (ANSBs) for domestication, and prepared a strategy for managing the colony for a defined purpose
- identified a suitable structure to house an ANSB colony, and acquired components
- used tools and equipment, including personal protective equipment (PPE), to safely prepare a structure to house an ANSB colony
- procured a population of ANSBs and established and located the colony in a suitable environment
- monitored the colony conditions, pests, diseases and disorders during establishment according to colony workplace and biosecurity procedures
- monitored, manipulated and assessed the colony to achieve strategic outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of Australian native bees and their basic biology and nesting habits for a given locality, including:
 - stinging
 - stingless
 - social
 - solitary
- ANSBs and their attributes suitable for 'domestication', including:

- colony forming
- health and safety risks
- suitable environmental conditions
- role in pollination
- commercial and non-commercial outcomes for keeping ANSBs, including:
 - pollination and pollination services
 - honey production
 - education
 - conservation
 - pets
- developing, monitoring and assessing basic strategies for keeping ANSBs
- equipment and resources required for keeping ANSBs, including beekeeping tools, use and maintenance
- structures to house Australian native stingless bees, including:
 - natural habitats
 - hives and hive designs
- health, hygiene and biosecurity considerations
- health and safety hazards and risks associated with handling and working with ANSBs, including:
 - PPE
 - public safety
 - lifting and handling
 - safe use of tools
- methods used for procuring and establishing ANSBs, including:
 - legislative requirements when collecting wild populations
 - transfer techniques for wild colony
 - budding
 - splitting
 - trapping
 - purchasing established colony
- locating colonies and establishing native bee meliponary, including:
 - locality/location/region
 - weather and temperature
 - orientation
 - access to food and water
 - proximity of colonies to each other and competition
- pests, diseases and disorders of Australian native stingless bees, and their control, including biosecurity
- monitoring procedures and signs of health or declining population
- ANSB manipulation techniques, including:

- inspections
- accessing honey
- splitting.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - Australian native stingless bee colony
 - tools and equipment for assembling and working with Australian native stingless bee colonies
 - PPE
- specifications:
 - workplace procedures and specifications related to establishing Australian native stingless bee colonies
 - manufacturer instructions for equipment and machinery to maintain structures to house bee colonies
 - access to legislation and codes of practice related to Australian native stingless bee colonies.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM503 Support the implementation of waterways strategies

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to support implementation of catchment plans relevant to improvement of waterways using a diverse range of strategies.

The unit applies to individuals who have a role in the development and management of waterways and are responsible for implementing waterways improvement plans by working with a range of stakeholders and applying a range of strategies. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm arrangements for waterways planning and management within a catchment area	1.1 Identify the roles and responsibilities of key stakeholders 1.2 Review the purpose, scope and impact of legislation and regulations on waterways management 1.3 Review waterways planning and management arrangements and current trends 1.4 Review government policies and plans on waterways planning and management
2. Prioritise plans for waterways improvement	2.1 Review and compare catchment plans with legislation and policies, management targets and priorities 2.2 Collect and assess information on the specific needs of waterways 2.3 Establish priorities, targets and funding requirements through consultation with stakeholders 2.4 Determine funding opportunities for projects 2.5 Assess strategies and programs for relevance to achievement of priorities and targets
3. Facilitate stakeholder participation	3.1 Communicate priorities and targets to stakeholders 3.2 Communicate funding and other opportunities that support strategies for action to stakeholders 3.3 Support the development of plans or submissions 3.4 Facilitate cooperation and partnerships between stakeholders
4. Advise and support stakeholders	4.1 Document and report findings for use in future planning 4.2 Provide support to ensure that legislative requirements are met 4.3 Notify stakeholders of variations to planned approaches 4.4 Meet stakeholder needs with timely and appropriate support 4.5 Use communication and negotiation skills to resolve conflicts
5. Evaluate the achievement of priorities and targets	5.1 Use appropriate monitoring strategies 5.2 Collect and analyse monitoring information against priorities and targets 5.3 Evaluate progress towards achievement of priorities and targets 5.4 Communicate findings to stakeholders

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, assess and critique data and information from planning documents, management plans, maps, images, legislation and regulations for incorporation into waterways strategies
Writing	<ul style="list-style-type: none"> Select appropriate conventions and stylistic devices to express precise meaning in documented plans and strategies for specified stakeholders
Oral Communication	<ul style="list-style-type: none"> Establish and maintain complex and effective communications when negotiating and consulting with stakeholders on waterways strategies

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM503 Support the implementation of waterways strategies Release 2	AHCNRM503 Support the implementation of waterways strategies Release 1	Minor changes to Application and Performance Criteria for clarity Added Foundation Skills Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM503 Support the implementation of waterways strategies

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has communicated with stakeholders, identified a diverse range of strategies and supported the implementation of waterways strategies.

There must also be evidence that the individual has:

- applied appropriate communication techniques in order to:
 - collect information on needs
 - inform funding opportunities
 - develop plans and submissions
 - educate and resolve conflict
- identified and applied strategies to achieve priorities and related targets from catchment plans
- evaluated progress towards achievement of priorities and targets
- prioritised projects based on regional targets and funding provisions
- determined funding requirements and identified funding mechanisms
- supported the development of plans, which must include:
 - priorities and targets
 - strategies and program outcomes
 - steps and sequence of implementation
 - monitoring and evaluation requirements and procedures
 - reporting methodology
 - communication strategy and procedures

- developed reports for stakeholders and future planning purposes according to workplace requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- identifying and working with stakeholders, and their importance in building relationships for consultation and formulating strategies, including:
 - waterways agencies and managing authorities
 - Indigenous land rights and ownership
 - special interest groups engaged in water-based activities
 - property owners impacted by waterways strategies and their obligations
 - education and training
- environmental legislation
- contemporary regional catchment management strategies
- ecology of aquatic environments and waterways management
- principles of community capacity building and engagement
- relevant policies across all levels of government and within the specific region, including those under catchment plans
- waterways management and improvement techniques, including:
 - fencing
 - revegetation
 - habitat restoration
 - pest plant control.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- specifications:
 - workplace policies, procedures and processes for implementing waterways strategies
 - waterways strategies for implementation
 - legislation and regulations for waterways management
- relationships:
 - stakeholders
- timeframes:
 - according to stakeholder needs.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM504 Interpret and report on catchment hydrology

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to interpret catchment hydrology to report on water quantity and quality within a catchment.

The unit applies to individuals employed in a technical capacity to collect, collate, analyse and report on hydrological data for use in floodplain management, asset protection and water allocation. This person will analyse information and exercise judgement to complete a range of skilled activities. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collate and evaluate catchment information	1.1 Determine data collection priorities in consultation with supervisor or team

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Access and collate catchment information 1.3 Determine the requirements for accuracy and currency of information and identify additional data requirements 1.4 Identify land uses within the catchment 1.5 Determine management units within the catchment
2. Analyse hydrological processes of a catchment using available data	2.1 Analyse natural ground and surface water processes 2.2 Identify man-made ground and surface water movement 2.3 Determine and analyse man-made impacts on water quantity 2.4 Determine the need for, and identify appropriate representative sites for, collection of additional data 2.5 Apply work health and safety policies and procedures, environmentally sustainable practices and biosecurity measures when analysing hydrological processes
3. Design and implement field surveys and assess findings	3.1 Determine objectives, locations and resource requirements for site assessments in consultation with supervisor or team 3.2 Assess physical entities, processes and threats within representative management units 3.3 Collect site data according to enterprise policies, procedures and guidelines
4. Report on catchment hydrology	4.1 Prepare a written overview on catchment hydrological behaviour 4.2 Present a visual overview of catchment hydrological behaviour to stakeholders 4.3 Provide advice and guidance on remediation measures consistent with catchment management objectives

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Numeracy	<ul style="list-style-type: none"> Analyse and synthesise mathematical information from a range of hydrological datasets, and compile and evaluate the information to draw conclusions and prepare reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM504 Interpret and report on catchment hydrology Release 2	AHCNRM504 Interpret and report on catchment hydrology Release 1	Minor changes to Application and Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM504 Interpret and report on catchment hydrology

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has accessed and collated a wide range of hydrological information and data, and interpreted and reported outcomes to stakeholders.

There must also be evidence that the individual has:

- determined the movement of water within a catchment
- assessed processes within catchment to evaluate non-sustainable practices
- reported on catchment hydrological behaviour to workplace requirements
- applied work health and safety practices and biosecurity awareness to the collection and testing of water.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- hydrological cycles
- chemical and physical properties of water
- rock and soil types, including weathering processes
- fluvial geomorphology, including:
 - drainage basin function
 - factors influencing stream flow rates
 - interactions between ground and surface water
 - stream hierarchy and ordering
 - human impacts on surface water quality and quantity

- hydrogeology, including:
 - aquifer types and properties
 - aquifer discharge and recharge
 - rates of water movement through aquifers
 - human impacts on groundwater quality and quantity
- sustainable use of ground and surface water, including:
 - uses of water in catchments
 - water allocation
 - policies and strategies determining water use.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology and software for report writing and statistical analysis
- specifications:
 - workplace policies, procedures and processes for accessing, collating and manipulating hydrological data
 - site-related hydrological data sets
- relationships:
 - work team and supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM505 Provide technical advice on sustainable catchment management

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to provide technical advice on sustainable catchment management to land managers in a catchment area or region.

The unit applies to individuals in a catchment management role who are responsible for identifying and managing land degradation, as well as providing advice and information on programs and funding for the sustainable management of farms, small properties, recreational land and land used for commercial activities. The person will analyse information and exercise judgement to complete a range of skilled activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Respond to requests	1.1 Respond to requests for advice from land managers

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
for advice on sustainable catchment management	<p>1.2 Seek information on location, land management or production objectives and land management concerns</p> <p>1.3 Review state and regional legislation, regulations and strategies relevant to the region in relation to potential constraints</p> <p>1.4 Confirm options and processes for provision of advice with land managers</p>
2. Identify and analyse land management issues	<p>2.1 Conduct a site assessment to collect information on geological characteristics, ecological processes and biodiversity</p> <p>2.2 Apply workplace health and safety policies and procedures, environmentally sustainable practices and biosecurity measures when conducting site assessments</p> <p>2.3 Collect information on land uses and land management techniques</p> <p>2.4 Interpret and communicate site information for land managers and other stakeholders using supportive and non-threatening communication</p> <p>2.5 Evaluate the type and extent of land degradation in a site assessment</p>
3. Provide advice on sustainable land and catchment management	<p>3.1 Provide advice according to state and regional legislation, regulations and strategies</p> <p>3.2 Propose options for changing land management practices according to economic, technical, practical, social and environmental standards</p> <p>3.3 Advise land manager on outcomes of analysis, land management techniques, planning outcomes and remediation measures</p> <p>3.4 Provide resource materials and information for supporting programs and accessing funding</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, assess and review information from stakeholders, land managers and legislation and regulations, and consolidate and rationalise for communicating to stakeholders
Oral communication	<ul style="list-style-type: none"> Establish and maintain effective communications when discussing, consulting and advising stakeholders

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM505 Provide technical advice on sustainable catchment management Release 1	AHCNRM505 Provide technical advice on sustainable catchment management Release 2	Minor changes to Application, Performance Criteria for clarity Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM505 Provide technical advice on sustainable catchment management

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has provided technical advice on sustainable catchment management to land managers in a catchment area or region, according to state and regional legislation, regulations and strategies and stakeholder requirements.

There must also be evidence that the individual has:

- reviewed state and regional legislation, regulations and strategies for relevance to responsibilities of land managers
- analysed issues, processes and techniques in sustainable land management
- assessed land management practices in complying with long-term objectives of a catchment or region
- sourced and communicated advice on sustainable land management practices to a variety of land managers in a knowledgeable and non-threatening manner.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- geological processes and influences on land management, including:
 - rock types and weathering
 - soil formation and soil types
- ecological processes, including:
 - energy flow through ecological systems
 - matter flow through ecological systems

- nutrient cycling
- land degradation processes and impacts, including:
 - soil compaction
 - erosion
 - tree decline
 - pest plant and animal infestations
 - eutrophication
 - acidification
 - salinity
 - fertility decline
- catchment management principles, including:
 - catchment planning priorities and programs
 - roles and responsibilities of land users in catchments
- biodiversity, including:
 - basic plant identification techniques
 - animal identification
 - ecological vegetation communities
- whole property planning principles:
 - energy flows
 - sustainable water management
 - land capability.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- specifications:
 - workplace policies, procedures and processes for catchment management
 - catchment management plans
 - legislation and regulations for catchment management
- relationships:
 - land managers.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCNRM603 Implement a monitoring, evaluation and reporting program

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement a monitoring, evaluation and reporting program for an organisation to measure progress against targets and reporting responsibilities. It includes implementation of evaluation strategies developed to inform a natural resource management Monitoring, Evaluation, Reporting and Improvement (MERI) framework used to manage human, social, natural, physical and financial assets.

The unit applies to individuals who are in senior land management roles and who apply knowledge and skills in land management with autonomy and judgement, and analyse information to complete activities, interpret and transmit solutions to others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Implement a monitoring and	1.1 Collect relevant baseline data according to MERI plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
evaluation strategy	1.2 Consult with stakeholders 1.3 Brief stakeholders implementing program on the monitoring and evaluation methods to be used 1.4 Implement selected monitoring and evaluation methods according to defined strategy 1.5 Access and use standard procedures and recording templates 1.6 Communicate and monitor program timelines to stakeholders
2. Collect and analyse data	2.1 Verify data and information is collected according to workplace and industry standards and formats 2.2 Corroborate collected data addresses key evaluation questions, and rectify design where unsuitable 2.3 Verify data security, storage and access complies with workplace policies and procedures 2.4 Coordinate all stakeholders involved in monitoring and evaluation process 2.5 Evaluate effectiveness, efficiencies and financial objectives and priorities have been achieved according to evaluation design
3. Prepare reports and information products	3.1 Assess and report on achievement of milestones and outputs 3.2 Produce information products to inform and engage stakeholders 3.3 Communicate findings and activities to stakeholder groups according to program schedule 3.4 Negotiate changes to projects and programs with stakeholders according to MERI findings 3.5 Apply findings to improve delivery and alignment of projects and policy decisions with organisational targets and mission 3.6 Use a style of reporting that reflects audience and information use
4. Review the monitoring and evaluation process	4.1 Encourage ongoing participation, consultation and communication of stakeholders by fostering a culture of self-evaluation and learning 4.2 Review evaluation strategy and processes, and provide feedback on implementation and evaluation design to stakeholders

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access, collate and analyse complex data and information from baseline reports and MERI activities, and use to implement changes and report on progress of MERI activity
Writing	<ul style="list-style-type: none"> Demonstrate sophisticated writing skills by selecting appropriate conventions and stylistic devices to express precise meaning and understanding when reporting on MERI activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCNRM603 Implement a monitoring, evaluation and reporting program Release 3	AHCNRM603 Implement a monitoring, evaluation and reporting program Release 2	Minor changes to Application, Performance Criteria for clarity Updated Foundation Skills, Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCNRM603 Implement a monitoring, evaluation and reporting program

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has implemented a monitoring and evaluation and reporting strategy, and has:

- applied monitoring and evaluation methods ensuring integrity and validity of data
- collected and managed data related to the monitoring program according to workplace procedures
- analysed complex information related to the monitoring program according to enterprise requirements
- prepared reports and information products for stakeholder use according to workplace standards
- reviewed the monitoring and evaluation process for continuous improvement.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- quantitative and qualitative methods for monitoring and evaluation
- data management processes and systems
- policy and program management processes
- adaptive management and review cycles
- Monitoring, Evaluation, Reporting and Improvement (MERI) framework
- national standards for the practice of ecological restoration.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- specifications:
 - workplace policies, procedures and processes for formatting and documenting reports and data sets
 - data sets from a MERI project
 - legislation and codes of practice and standards for conducting MERI projects
- relationships:
 - stakeholders and stakeholder groups.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG101 Support organic production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to support livestock and plant based organic production.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under close supervision. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare materials, tools and equipment for organic production	1.1 Identify required materials, tools and equipment according to supervisor instructions

Element	Performance criteria
work	1.2 Conduct checks for serviceability on all materials, tools and equipment and report insufficient or faulty items 1.3 Demonstrate correct manual handling techniques when loading and unloading materials and minimise damage to self, load and vehicle 1.4 Select, check and fit suitable personal protective clothing and equipment before work 1.5 Identify and report work health and safety hazards
2. Undertake organic production work as directed	2.1 Follow instructions and directions and seek clarification when necessary 2.2 Undertake work in an environmentally appropriate manner and according to workplace information and principles of organic agriculture 2.3 Follow site quarantine, biosecurity protocols and farm and personal hygiene requirements as required by enterprise guidelines 2.4 Meet enterprise's food safety requirements where appropriate 2.5 Interact with other staff and customers in a positive and professional manner 2.6 Follow enterprise policies and procedures for workplace practices and handling and disposal of materials 2.7 Report problems or difficulties in completing work to required standards or timelines 2.8 Maintain a clean and safe work site while working
3. Handle materials and equipment	3.1 Store waste material produced during work in a designated area according to supervisor instructions 3.2 Handle and transport materials, tools and equipment according to supervisor instructions and enterprise guidelines
4. Clean up on completion of work	4.1 Return materials to store or dispose of 4.2 Clean, maintain and store tools and equipment 4.3 Report work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG101A Support organic production.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG101 Support organic production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply principles of organic agriculture to daily work routines
- follow supervisor instructions
- follow work health and safety procedures and where appropriate, food safety procedures
- report any variations from required standards or procedures to supervisor
- apply enterprise quarantine and biosecurity protocols

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles of organic production
- organic procedures and recording requirements
- safe work practices relevant to the tasks being undertaken, including safe use of tools and equipment
- food safety requirements for enterprise's activities where appropriate
- work health and safety, biosecurity and environmental protection legislation and enterprise procedures

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG401 Manage biodynamic production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage a farming system according to the principles of, and using the practices of, biodynamic agriculture.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to farmers who manage according to the principles of biodynamic agriculture. Work is likely to be done independently and according to the requirements of the National Standard for Organic and Biodynamic Produce.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare a plan for a biodynamic farming enterprise	1.1 Work in an environmentally appropriate manner and according to work health and safety requirements and enterprise guidelines 1.2 Identify requirements for biodynamic certification 1.3 Incorporate personal, ecological and financial goals for a biodynamic enterprise into an enterprise plan 1.4 Develop marketing plan for biodynamic produce which maintains product quality and integrity 1.5 Trial research findings for biodynamic agriculture and incorporate into plans 1.6 Develop and implement biodynamic production plan based on biodynamic principles and farm strategies
2. Make and apply biodynamic field spray preparations	2.1 Make and store horn manure (500), horn silica (501) and horn clay preparations 2.2 Stir preparations by creating vortex and chaos 2.3 Select equipment for application of biodynamic preparations 2.4 Calibrate and adjust equipment for suitable application rate 2.5 Apply preparations according to biodynamic principles
3. Use biodynamic compost preparations, composts and liquid brews	3.1 Use and store biodynamic compost preparations according to biodynamic principles 3.2 Identify materials and mineral inputs for compost from farm production plan and soil analysis 3.3 Build compost heap 3.4 Apply biodynamic preparations to compost according to biodynamic principles 3.5 Monitor aeration, moisture and temperature of compost heap 3.6 Apply compost to enhance natural cycles
4. Apply biodynamic principles and techniques to enhance soil and plant health	4.1 Plan planting, harvest and pruning times according to moon rhythms and planetary patterns 4.2 Optimise soil and plant health using biodynamic preparations, cover crops, crop rotation, mulching and composting and through application of farm-based fertility products 4.3 Identify weeds and insect pests in enterprise 4.4 Evaluate options for managing weeds and insects that consider natural predators, life cycles, cultural practices, soil health and the plant community

Element	Performance criteria
	4.5 Develop and implement plan for managing pests and weeds
5. Manage animals within a biodynamic production system	5.1 Optimise soil and plant health to provide a nutrient-dense and balanced diet 5.2 Develop and incorporate grazing and feeding strategies into the biodynamic system 5.3 Incorporate homeopathic remedies and allowable treatments into animal health strategies 5.4 Implement enterprise animal welfare policies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG401A Manage biodynamic production.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG401 Manage biodynamic production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply biodynamic principles
- develop and implement biodynamic production plan
- make and apply biodynamic preparations and compost
- enhance soil and plant health
- integrate and manage animals in a biodynamic enterprise
- apply enterprise work health and safety policies and guidelines
- implement enterprise animal welfare policies
- implement enterprise environmental sustainability practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- animal health
- biodynamic preparations and their role in soil food web and atmosphere
- biodiversity, shelter belts, birds and native bush on biodynamic farm
- calcium-clay-silica polarities
- crop and animal rotation systems
- cultivation methods
- etheric and astral forces and how they relate to biodynamics
- experiments and testing methods such as chromatography and sensitive crystallisation
- green manuring
- management of insects and birds

- paradigms of various farming systems: biodynamics, organics and permaculture, and holistic management
- peppering for animals and insects
- planting calendar
- purpose of various herbs and organs used for making biodynamic preparations
- relationship between soil, plant, animal and human health
- research in biodynamics principles and practices
- rhythms and cycles of planets and moon
- role of the biodynamic preparations 500-508
- role of bacteria and fungi
- role of humus
- soil: food web information, how it is made, its structure and feeding cycle
- water retention
- weed management
- principles, practices and inputs allowable under the National Standard for Organic and Biodynamic Produce

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG402 Manage organic livestock production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to integrate livestock production into an organic production system.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to farmers who work according to the principles of organic and ecological agriculture.

Work is likely to be done independently and according to the requirements of the National Standard for Organic and Biodynamic Produce and agro-ecological principles. This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Manage animal health and welfare	1.1 Consider natural behaviours of animals and requirements of animal welfare codes of practice in planning for organic livestock production 1.2 Select and use varieties/genetics for the enterprise that match environmental conditions and optimise animal health 1.3 Monitor livestock constantly for health and welfare and keep records 1.4 Develop animal health preventative strategies, communicate to others working on farm and implement 1.5 Identify and use animal health inputs suitable for organic systems where required 1.6 Follow restrictions and prohibited/restricted inputs for certified organic systems and quarantine if applicable 1.7 Conduct animal husbandry and transport in compliance with animal welfare principles and organic certification requirements 1.8 Maintain livestock records required for organic certification
2. Develop and implement supplementary feed requirements	2.1 Identify feed gaps and requirements for supplementary feed taking into account seasonal conditions and drought 2.2 Incorporate on-farm supplementary feed strategies including fodder crops, agroforestry or standing hay paddocks into the annual program for animal feed and on-farm sustainability 2.3 Implement good storage practises for feed inputs to ensure quality is maintained 2.4 Purchase and use nutritional inputs in the feed program that meet relevant Organic Standards and/or agro-ecological principles where applicable
3. Develop and implement a sustainable grazing strategy	3.1 Determine feed requirements, sustainable carrying capacity and a sustainable stocking rate for the enterprise that takes into account seasonal variability and livestock needs 3.2 Determine indicators and benchmarks for sustainable pasture, land and soil use for the property 3.3 Identify grazing infrastructure required for a planned grazing strategy and incorporate into a property improvement program 3.4 Develop and implement a planned grazing system that ensures optimal livestock health and productivity at all times 3.5 Develop and implement a planned grazing system that matches

Element	Performance criteria
	<p>stocking rate to carrying capacity and ensure sustainable pasture, land and soil condition at all times</p> <p>3.6 Optimise soil and plant health to provide a nutrient-dense and balanced diet for livestock</p> <p>3.7 Monitor the grazing system to ensure productivity and sustainability on an on-going basis</p> <p>3.8 Implement strategies for controlling weeds in pastures based on Organic Standards and/or agro-ecological principles where applicable</p> <p>3.9 Keep grazing and feed records for enterprise management and to ensure compliance to Organic Standards where applicable</p>
4. Manage farm fertility for the livestock enterprise	<p>4.1 Estimate level of nutrients exported from farm</p> <p>4.2 Implement a fertility monitoring program such as soil-testing, plant testing or observation of pasture species to monitor pasture and soil fertility</p> <p>4.3 Maintain soil nutrient levels and balance through recycling, optimising nutrient availability in soil and/or sourcing fertility inputs that meet Organic Standards and/or agro-ecological principles where applicable</p> <p>4.4 Eliminate the risk of weed and chemical contamination to the farm by following Organic Standards and/or agro-ecological principles</p> <p>4.5 Keep fertility input records for enterprise management and to ensure compliance to Organic Standards where applicable</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG402A Manage organic livestock production

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG402 Manage organic livestock production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- monitor and maintain animals in an organic production system
- provide a suitable diet and living environment for animals based on the National Organic Standards for Organic Livestock Production and/or agro-ecological principles
- integrate animals into an organic production system
- manage animal health and welfare using Organic Standards and/or agro-ecological principles
- manage grazing of animals and allowable inputs to enhance soil health and fertility
- apply enterprise work health and safety policies and guidelines
- implement enterprise animal welfare policies
- implement enterprise environmental sustainability practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant organic certification requirements
- organic agriculture and agro-ecological principles
- animal health, pests, parasites and diseases
- relevant animal welfare code of practice
- grazing management, including pasture identification and assessment, feed budgeting and planned grazing strategies
- carrying capacity and sustainable pasture utilisation
- pasture, land and soil condition and indicators
- management options for animal health based on an understanding of pest life cycles, genetic selection and acquired immunity

- permitted, restricted and prohibited inputs and activities as described in the National Organic Standards for Organic Livestock Production relationship between soil, plant and animal health
- work health and safety and animal welfare legislation and codes of practice.
- record keeping
- principles, practices and inputs allowable under the National Standard for Organic and Biodynamic Produce

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG403 Manage organic soil improvement

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage organic soil improvement.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to managers on farms that are managed according to the principles of organic agriculture. Work is likely to be done independently and according to the requirements of the National Standard for Organic and Biodynamic Produce.

All work is done in an environmentally appropriate manner and according to workplace information, principles of organic agriculture and/or agro-ecology, work health and safety requirements and enterprise guidelines.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor indicators of soil fertility	1.1 Undertake work in an environmentally appropriate manner and according to the principles of organic agriculture, work health and safety requirements and enterprise guidelines 1.2 Sample and test soil at reference sites according to organic industry standards to develop baseline data to monitor soil health and fertility 1.3 Assess and record soil pH, mineral balances, and organic matter levels 1.4 Assess and record soil texture, structure, salinity and sodicity 1.5 Assess and record soil biological activity 1.6 Assess soil condition for drainage, compaction, aeration and water infiltration in relation to requirements for desired plant growth for selected species 1.7 Analyse results to identify trends in soil health and fertility and areas for improvement
2. Assess soil-related factors for selected plants	2.1 Identify nutritional requirements of selected plant species 2.2 Select soil analyses to be conducted using a suitable lab facility 2.3 Conduct plant tissue sample collection according to requirements of testing facility if applicable 2.4 Combine results of soil or tissue testing with observations of plant vigour and productivity to determine management and input requirements of the farming system
3. Select, design and implement allowable systems, techniques and inputs to optimise soil fertility	3.1 Identify range of allowable inputs according to requirements of the National Standard for Organic and Biodynamic Produce 3.2 Identify and implement cultural practices to enhance soil fertility, function and health 3.3 Calculate appropriate inputs based on soil/plant analyses, crop removal and plant/animal observations 3.4 Select and manage cover crop and pasture systems where applicable 3.5 Develop, apply and monitor mulching and composting systems where required 3.6 Design and implement crop rotations and grazing management systems to optimise soil fertility where appropriate

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG403A Manage organic soil improvement.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG403 Manage organic soil improvement

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- implement principles of organic agriculture and agroecology
- implement knowledge of interrelationships between soil fertility, animals, plants, pests and diseases
- devise and implement a soil improvement plan to correct imbalances and maintain soil fertility
- sample soils and analyse soil test results for a range of indicators of soil fertility
- work with natural processes and allowable inputs to improve and maintain soil fertility
- apply enterprise work health and safety policies and guidelines
- implement enterprise environmental sustainability practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- availability, use and definition of organic fertilisers
- structural properties of soils
- factors contributing to soil acidity, sodicity and salinity
- factors promoting soil and plant water-holding capacity
- importance of soil biological activity
- major nutrient elements and their role in plant growth
- methods and inputs that can be used to correct imbalances and maintain soil fertility
- principles of organic agriculture
- processes and practices that impact on soil structure, biological activity, water-holding capacity and weed patterns

- processes of aggregate and colloid formation
- range of soil analyses available and principles of each
- relationship between soil structure, water holding capacity and nutrient availability
- role of organic matter, humus and micro-organisms
- role of livestock in enhancing soil fertility
- role of macro and micro-elements in soil and plants
- role of weeds
- significance of levels and balance of soil fertility indicators
- soil food chains and food webs
- soil textural types and determinants
- when and how to take soil samples to test for indicators of soil fertility
- principles, practices and inputs allowable under the National Standard for Organic and Biodynamic Produce

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG404 Arrange selling through community based marketing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to arrange selling through community based marketing.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within know parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify and evaluate selling options	1.1 Identify the various types of community based selling schemes 1.2 Identify characteristics of the farm business produce 1.3 Identify and document the potential customer base 1.4 Evaluate and document selling options

Element	Performance criteria
2. Comply with the requirements of the selected community marketing scheme	2.1 Identify and comply with market requirements 2.2 Comply with legislative requirements in each step of the supply chain 2.3 Keep records to verify compliance with the community marketing scheme, food safety and organic certification where applicable
3. Develop and maintain a relationship with customers	3.1 Investigate characteristics of the community customers 3.2 Identify potential links between the community and the farm system 3.3 Develop the connections between individuals and the farm production system 3.4 Develop a 'farm story' and communicate the uniqueness of the enterprise to the community using appropriate communication channels 3.5 Monitor community satisfaction levels through customer feedback and address valid concerns
4. Organise transport	4.1 Identify transport requirements and engage carriers as required 4.2 Arrange transport timing and delivery of product with carrier, processing and or selling facility and, where appropriate, agent 4.3 Comply with any special requirements to ensure appropriate transport 4.4 Comply with all relevant legislative requirements including food safety and organic certification
5. Keep records	5.1 Complete pre and post sale documentation 5.2 Record transactions to ensure traceability and reconciliation can be effected and business performance criteria can be assessed 5.3 Document customer feedback and identify and record potential improvements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG404A Arrange selling through community based marketing.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG404 Arrange selling through community based marketing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify farm produce selling options
- identify and comply with requirements of a community marketing scheme and its characteristics
- establish relationships with community stakeholders and customers
- monitor and record community satisfaction levels and customer feedback and address concerns
- communicate the 'farm story' and the uniqueness of the enterprise to the community
- arrange timely transport and delivery of produce and address any special transport requirements
- comply with transport legislative requirements
- accurately record pre and post sale documentation and transactions
- identify and record potential improvements
- work with natural processes and allowable inputs to improve and maintain soil fertility
- apply enterprise work health and safety policies and guidelines
- implement enterprise environmental sustainability practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes in selling produce through community based markets
- relevant legislation and regulations relating to work health and safety
- organic certification systems and standards

- organisation policies and procedures related to supply chain management, purchasing, and contracting and tendering
- characteristics and composition of farm business marketing plans
- characteristics of community marketing schemes and the steps within a farm produce supply chain
- product knowledge related to goods and services required by the organisation
- ways to build trust and collaboration as opposed to competition
- business terms and conditions for purchasing, tendering and contracting
- ethical behaviour
- established communication channels and protocols
- procedures for operating electronic communications equipment
- procedures for recording and reporting workplace information and completing relevant documentation

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG405 Implement sustainable practices in the organic farm based business

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage the establishment and implementation of sustainable work practices in organic farming enterprises of all sizes and in a variety of work settings.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to production managers and workplace supervisors in an organic farming enterprise that are responsible for identifying selling options, developing a relationship with community groups, complying with community based marketing scheme requirements, organising appropriate transport and keeping sale records.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within know parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Access the farm businesses guidelines and principles for social, financial and environmental sustainability	1.1 Identify environmental regulations, organic farming requirements and the organic farm plan which apply to the farming enterprise 1.2 Source and interpret environmental and sustainable organic farming information and current best practice guidelines and underlying organic principles 1.3 Identify the impact of best practice guidelines and using organic principles on day to day farm operations and management 1.4 Identify key sustainability practices for an organic farming enterprise 1.5 Access business guidelines and farm practices which comply with sustainable organic farming guidelines and principles
2. Implement established farm business guidelines and principles	2.1 Implement strategies to effectively integrate sustainability principles and practices into the organic farm system 2.2 Identify continuous improvement opportunities and document identified changes to businesses guidelines and principles 2.3 Implement agreed improvements to the farm businesses guidelines and principles
3. Monitor farm business sustainability initiatives for effectiveness and compliance	3.1 Monitor and evaluate the effectiveness and compliance of organic and sustainability practices in terms of environmental, social and financial goals 3.2 Evaluate and report changing trends and techniques relevant to sustainable organic farming for continuous improvement
4. Engage farm business stakeholders in sustainability practices	4.1 Communicate sustainability strategies to stakeholders and relevant staff 4.2 Monitor stakeholder compliance with organic sustainability strategies along the entire supply chain 4.3 Identify and document identified continuous improvement initiatives 4.4 Encourage and assist stakeholders to implement improvements to the system
5. Determine Social Capital benefits from Community engagement with the farm enterprise	5.1 Identify food security and food sovereignty issues addressed by farm business practices 5.2 Monitor compliance with regulatory and legislative requirements in relation to labour management where applicable 5.3 Determine level of engagement with community engagement with local networks and community groups, regional food networks and regional bodies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG405A Implement sustainable practices in the organic farm based business.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG405 Implement sustainable practices in the organic farm based business

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify businesses guidelines and principles for social, financial and environmental sustainability
- identify and interpret environmental regulations, sustainable organic farming requirements, farm plan and current best practice guidelines and principles
- implement strategies to integrate sustainability principles and practices into the farm system and identify continuous improvement opportunities
- monitor farm business sustainability initiatives for effectiveness and compliance
- adopt and document continuous improvement initiatives
- encourage staff and farm business stakeholders to embrace sustainability practices
- apply enterprise work health and safety policies and guidelines
- implement enterprise environmental sustainability practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- best practice guidelines
- principles and processes relevant to sustainable organic farming
- compliance requirements for all relevant environmental/sustainability legislation, regulations and codes of practice including resource hazards/risks associated with work area, job specifications and procedures
- sustainability issues including environmental and social issues that relate to an organic farm
- external benchmarks used within an organic farming enterprise, including approaches to improving techniques used and expected outcomes

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG406 Oversee compliance with an organic certification scheme

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to oversee continued compliance with an organic certification scheme.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to production managers and workplace supervisors in an organic farming enterprise that are responsible for ensuring compliance within the scope of the selected organic certification scheme.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within know parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify compliance requirements of the selected organic standard relating to the farm system	1.1 Access the selected organic certification scheme relevant to the operation and management of the organic farming enterprise 1.2 Identify and interpret key clauses and requirements of the organic standard that relate to the existing farm system enterprise mix 1.3 Identify and document compliance of the farm system with the requirements of the selected organic certification scheme 1.4 Identify and document key farm operations that are impacted by the organic standards
2. Keep records to comply with organic certification requirements	2.1 Identify the records and detail required for compliance with the organic certification scheme 2.2 Complete and maintain clear and accurate records to an approved industry standard 2.3 Communicate recording requirements to appropriate stakeholders and key personnel 2.4 Monitor the record keeping process and maintain records as required by the National Organic Standard
3. Support compliance with organic standards by staff in the farm business	3.1 Identify all steps within the production system that require compliance with the selected organic standards 3.2 Support and train staff and key personnel to implement and foster a compliant organic supply chain culture 3.3 Keep accurate records at all key supply chain steps to verify and maintain compliance, and to allow reconciliation and traceability 3.4 Describe certification compliance requirements of staff in Job Descriptions and Key Performance Indicators
4. Meet annual audit requirements of the selected organic certification scheme	4.1 Comply with the specific certification requirements 4.2 Prepare the farm and organic records and documents for audit and ensure accessibility 4.3 Conduct an internal organic audit of the farm system and complete associated records and documents 4.4 Take corrective actions to comply with the specific certification requirements 4.5 Participate in an annual organic audit 4.6 Comply with and close any corrective actions requested
5. Comply with food safety requirements	5.1 Identify food safety requirements that must be satisfied by the farm system to comply with industry regulations and standards 5.2 Communicate food safety requirements to all staff

Element	Performance criteria
	5.3 Keep records to demonstrate compliance with food safety requirements to industry regulations and standards 5.4 Correct any non-conformance issues identified by internal audit or industry compliance audit

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG406A Oversee compliance with an organic certification scheme.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG406 Oversee compliance with an organic certification scheme

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify and document compliance requirements of the selected organic standard relating to the farm system
- identify and document key farm operations impacted by the organic standards
- support and train key personnel and staff to implement and foster a compliant organic supply chain culture
- keep accurate records at all key supply chain steps to verify and maintain organic compliance
- conduct an internal organic audit of the farm system and accurately complete associated records and documents
- participate in an annual organic audit and successfully close any identified corrective actions
- identify food safety requirements and ensure compliance of the farm system with industry standards
- ensure all farm records, traceability and production data is kept, monitored and maintained in compliance with National Organic Standard requirements
- comply with requirements of relevant organic standards

Knowledge Evidence

The candidate must demonstrate knowledge of:

- organic standards, compliance requirements and industry specifications
- applicable food safety and licensing requirements
- farm supply chain market requirements for product
- organic quality specifications for product

- enterprise and industry quality assurance systems
- strategies for control of hazards to organic compliance
- document control protocols

Assessment Conditions

Assessment may take place in a simulated or real workplace, however all evidence collected must meet minimum requirements including industry standard timeframes for performance of tasks.

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG408 Manage on farm composting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage on farm composting.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to farm managers who work according to the principles of sustainable, organic and ecological agriculture. Work is likely to be done independently and according to the requirements of State regulations, Australian Standards, the National Standard for Organic and Biodynamic Produce or agro-ecological principles

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within know parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Organise for composting	1.1 Confirm composting technology, recipe and method to be used are as appropriate to raw material types and farm enterprise needs 1.2 Define compost quality requirements for end product 1.3 Identify composting site requirements and prepare the composting area 1.4 Identify and implement measures are to manage drainage, dust, noise and odours 1.5 Select and check for serviceability and safe operation machinery, equipment and materials appropriate to the job 1.6 Identify and assess potential work health and safety hazards and take action to minimise risk to self and others 1.7 Select, fit, use, suitable personal protective equipment (PPE) 1.8 Maintain and store according to work requirements, manufacturer specifications and enterprise procedures 1.9 Comply with enterprise work health and safety guidelines
2. Prepare raw materials and compost on farm	2.1 Identify and collected raw materials and additives for composting, check to ensure compliance with enterprise procedures or organic standards if applicable; including assessment of physical or chemical contamination 2.2 Pre-process raw materials into suitable forms for composting if required 2.3 Mix raw materials are into suitable compost mixtures for composting according to documented recipes 2.4 Handle feedstock mixtures for composting according to technology, appropriate method, and industry best practice and enterprise procedures 2.5 Assign batch numbers or codes, and create batch documentation to enable tracking of batch through compost production cycle if required
3. Manage and monitor the composting process	3.1 Manage compost batches as required through the composting cycle 3.2 Monitor composting batch by observation or by use of field testing equipment to maintain effective composting process through the compost cycle 3.3 Maintain records for process control indicators through the compost production cycle 3.4 Identify problems observed at any stage of the composting

Element	Performance criteria
	<p>process are and take remedial action to maintain effective and consistent compost production</p> <p>3.5 Follow site quarantine, biosecurity protocols and farm and personal hygiene requirements are as required by enterprise guidelines</p>
4. Inspect compost quality and maintain site	<p>4.1 Inspect and assess finished compost is to determine if quality indicators have been met</p> <p>4.2 Maintain and clean loading-shifting machinery and other processing equipment as required to avoid contamination between batches</p> <p>4.3 Store raw materials and finished compost products in designated areas and kept processing site clean</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - No equivalent.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG408 Manage on farm composting

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- implement and manage an on farm compost system
- manage composting processes
- manage a composting site
- evaluate compost quality and implement remedial actions if required
- implement enterprise work health and safety policies
- follow site quarantine and biosecurity protocols

Knowledge Evidence

The candidate must demonstrate knowledge of:

- compost quality standards
- basic principles of composting
- different methods of composting
- characteristics of a range of raw materials
- fundamental characteristics of compost quality
- steps in pre-processing compost materials
- batch documentation techniques
- site and equipment requirements for on farm composting
- key process control stages critical to consistent compost production
- overview of systems and technologies used in compost production, particularly as relevant to farm
- characteristics and categories of a range of compost products.
- relevant environmental, work health and safety legislation and regulations

- record keeping requirements
- site quarantine and biosecurity protocols
- agro-ecological principles
- principles, practices and inputs allowable under the National Standard for Organic and Biodynamic Produce if applicable

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG503 Design and document an organic farm landscape

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design and document an organic farm landscape that will be used as the basis for an organic farm enterprise.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within know parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Source legislative requirements which	1.1 Identify and access applicable legislative documents and codes of practice relevant to the design and planning of an organic farming

Element	Performance criteria
impact on the management of an organic farm	enterprise 1.2 Investigate work practices and procedures which follow industry standards 1.3 Identify and interpret key clauses and requirements which apply to organic production and marketing 1.4 Identify relevant work practices and procedures which comply with regulatory requirements and codes of practice
2. Audit the natural resources and infrastructure of the property	2.1 Identify and record property physical and biological characteristics and landscape features 2.2 Develop a farm soil map 2.3 Determine land capability 2.4 Conduct a risk analysis of the farm and adjoining land-use to determine potential compliance issues with organic standards, legislative and environmental requirements
3. Develop an organic landscape plan	3.1 Identify key design parameters to meet financial, social and sustainability goals 3.2 Develop and document key farm rules 3.3 Investigate short term and long term uncertainties for the farm system 3.4 Investigate design options which impact on these long term changes 3.5 Identify and use appropriate design tools 3.6 Develop a concept framework
4. Document the organic landscape plan	4.1 Review the draft plan against the financial, social and sustainability goals 4.2 Document the plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG503A Design and document an organic farm landscape.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG503 Design and document an organic farm landscape

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- source and interpret legislative requirements industry standards and codes of practice
- identify compliant work practices and procedures
- conduct an audit of the natural resources and infrastructure of the property
- identify physical and biological characteristics and landscape features of the property
- develop farm soil map and determine land capability
- develop an organic landscape plan using appropriate development tools
- revise a draft plan and document the final organic landscape plan

Knowledge Evidence

The candidate must demonstrate knowledge of:

- applicable legislative documents and codes of practice relevant to farm landscape planning
- landscape types
- habitat and plant communities on farm
- relationship between land shape and soil type
- soil types
- different categories of cultural sites
- organic certification requirements
- landscape hydrology
- landscapes for agro-ecosystems
- native habitat requirements
- the requirements of the organic standard and agro-ecological principles

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG504 Develop and manage a community based marketing supply chain

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop and manage a community based marketing supply chain.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to rural enterprise managers who develop and manage marketing strategies and systems within a community based marketing scheme to meet desired production and business outcomes.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within know parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Evaluate the suitability of different community marketing options for farm products	1.1 Research and document non traditional selling options 1.2 Identify different community marketing models applicable to the farm system 1.3 Identify key input supply chain steps and stakeholders and relevant certification requirements 1.4 Evaluate different options
2. Determine the marketing chain processes to participate in the selected community marketing schemes	2.1 Research and identify applicable legislative, environmental, and certification requirements relevant to managing a community based marketing chain 2.2 Document specifications for the various components of the marketing chain management system in line with organisational and legislative requirements 2.3 Document traceability requirements of the marketing chain
3. Determine appropriate community marketing strategies for farm products	3.1 Identify communities that have a potential relationship with the farm system 3.2 Document the characteristics and values of the identified communities 3.3 Match community characteristics and values to farm system 3.4 Establish and document market specifications to meet community expectations 3.5 Identify and document appropriate community marketing strategies 3.6 Identify and assess risks in strategy
4. Establish product marketing chain requirements to meet marketing options	4.1 Map required steps in marketing chains to supply identified market 4.2 Establish farm business requirements for each step in marketing chain 4.3 Establish compliance requirements at each step in marketing chain 4.4 Develop record keeping requirements for each step in marketing chain
5. Develop and document a community based marketing plan	5.1 Document required processes for the chosen enterprises and production systems 5.2 Identify and document marketing targets 5.3 Identify the key factors that differentiate product 5.4 Develop and document a promotion plan

Element	Performance criteria
	5.5 Collate customer feedback and use to improve market outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG504A Develop and manage a community based marketing supply chain.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG504 Develop and manage a community based marketing supply chain

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research and evaluate the suitability of different community marketing options for farm products
- research and identify applicable legislative, environmental, and certification requirements relevant to managing a community based marketing chain
- document specifications for the various components of the marketing chain management system in line with organisational and legislative requirements
- establish and document market specifications meet community expectations
- establish product marketing chain to meet marketing options
- establish farm business requirements for each step in the marketing chain
- establish compliance requirements at each step in the marketing chain
- conduct record keeping requirements for each step in the marketing chain
- develop and document a community based marketing plan
- develop and document a promotion plan
- collate customer feedback and use to improve market outcomes

Knowledge Evidence

The candidate must demonstrate knowledge of:

- applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes in selling produce through community based markets
- relevant legislation and regulations relating to work health and safety
- organic certification systems and standards
- rural produce marketing and presentation

- organisation policies and procedures related to supply chain management, purchasing, and contracting and tendering
- characteristics and composition of farm business marketing plans
- characteristics of community marketing schemes and the steps within a farm produce supply chain
- product knowledge related to goods and services required by the organisation
- ways to build trust and collaboration as opposed to competition
- business terms and conditions for purchasing, tendering and contracting
- ethical behaviour
- established communication channels and protocols
- procedures for operating electronic communications equipment
- procedures for recording and reporting workplace information and completing relevant documentation

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG505 Develop and monitor a sustainable production plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop and monitor a sustainable production plan for an organic and/or agro-ecological farming system.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within know parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify personal and	1.1 Identify and record personal goals

Element	Performance criteria
enterprise goals	1.2 Identify and document physical, biological, social and financial resources under management 1.3 Identify and analyse the values, expectations and personal goals of customers, stakeholders and employees 1.4 Identify and document sustainability goals using current and historical industry data and organisational records
2. Research and evaluate available sustainable production systems	2.1 Identify and document potential enterprises and evaluate against identified goals and resources 2.2 Research and evaluate applicable sustainable production systems information from a range of sources for identified enterprises 2.3 Identify and document a selected production system that meets sustainability and enterprise management goals of the farm 2.4 Compare the elements of the selected system with the systems and production processes that currently exist on the farm 2.5 Assess the selected system against enterprise goals and sustainability principles and record the findings
3. Develop a sustainable production plan	3.1 Document required modifications to existing farm system processes and infrastructure for the chosen enterprises and production systems 3.2 Identify and document optimal production targets 3.3 Identify inputs and system design elements required to achieve the production targets 3.4 Establish risk management strategies 3.5 Identify record keeping requirements 3.6 Develop and document a sustainable production plan for the selected enterprises and production systems
4. Monitor and evaluate effectiveness of the sustainable production systems	4.1 Establish farm system monitoring procedures and performance indicators 4.2 Monitor performance indicators and against production and sustainability targets 4.3 Evaluate production and sustainability data against the sustainable production plan goals 4.4 Modify the enterprise mix or production system where differences between the sustainable production plan and actual results are identified 4.5 Identify, monitor and assess environmental impacts and work health and safety hazards relating to the production processes throughout the production cycle
5. Record and manage information and data	5.1 Create and maintain records and documents in line with the production plan, the work health and safety requirements, and machinery and equipment management programs

Element	Performance criteria
	5.2 Maintain record keeping systems and data to enterprise and industry standards and requirements 5.3 Prepare and assess recommendations for future sustainable production plans 5.4 Document revised plans and note changes in organic management plan (OMP), if applicable

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG505A Develop and monitor a sustainable production plan.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG505 Develop and monitor a sustainable production plan

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify personal and enterprise goals
- identify and document physical, biological, social and financial resources under management
- research and evaluate sustainable production systems and select and document a production system that meets sustainability and enterprise management goals
- develop a sustainable production plan
- match land capacity with production system design
- monitor and evaluate effectiveness of the sustainable production system
- modify the enterprise mix or production system where differences between the sustainable production plan and actual results are identified
- record and manage farm system information and data

Knowledge Evidence

The candidate must demonstrate knowledge of:

- applicable federal, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes in developing and monitoring a sustainable production plan
- relevant legislation and regulations relating to work health and safety, contractor engagement, animal health and welfare, chemical use and application, vehicle and plant use and soil and water degradation issues
- environmental protection requirements and codes of practice, including the safe disposal of products and waste material, available to the organisation

- organisational policies and procedures, standards and site requirements for risk management and hazard identification
- sustainable land use principles and practices applicable in the region
- farm planning processes

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCORG506 Manage an agroecology production system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to use agroecology principles in managing all elements of a farm ecosystem including the soil ecosystem, vegetation, animals, pests and diseases to achieve and maintain overall ecological and economic health of the farm ecosystem and farm production.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters and use discretion and judgment in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Organic Production (ORG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Identify the farm agroecosystem functions at a systems level	1.1 Identify and map energy flows through a farm agroecosystem 1.2 Identify and map nutrient cycles through different parts of a farm ecosystem 1.3 Identify disturbance points in the farm ecosystem succession 1.4 Develop a model of the farm ecosystem and its elements 1.5 Identify areas of complexity and simplicity within the farm ecosystem 1.6 Identify ecosystem functions that can be used to replace the use of external inputs in the farm production systems 1.7 Identify interactions between elements of farm ecosystem 1.8 Assess health of existing farm ecosystems
2. Develop plans to enhance farm agroecosystem	2.1 Identify areas within the agroecosystem that require enhancement 2.2 Identify methods that encourage niche development, increase complexity in the farm agroecosystem and improve interactions between different components of farm agroecosystem 2.3 Document the implementation plan
3. Manage Farm Agroecosystems	3.1 Identify and monitor appropriate parts of the ecosystem 3.2 Set up monitoring system 3.3 Comply with requirements for monitoring determined by organic standards and legislative requirements 3.4 Review measured ecosystem and farm production performance with expected performance and adjust plan in response to differences

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCORG506A Manage an agro-ecology production system.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCORG506 Manage an agroecology production system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify the farm agro ecosystem functions at a systems level
- assess the health of existing farm ecosystems
- develop plans to enhance farm agroecosystem
- manage and monitor the development of a farm ecosystem
- review ecosystem and farm production performance

Knowledge Evidence

The candidate must demonstrate knowledge of:

- advantages of ecological agriculture
- ecosystem processes, energy flows, nutrient cycles, biological succession, predator and prey relationships, ecological niche
- relationships between ecosystems and agricultural production
- application of ecosystem processes to a production system

Assessment Conditions

Competency is to be assessed in the workplace and/or a simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM202 Collect, prepare and preserve plant specimens

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to collect, prepare and preserve plant specimens for recording or identification purposes.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well-known parameters, providing solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plants culture and management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect plant specimens	1.1 Collect plant specimen according to workplace requirements 1.2 Ensure the sample includes sufficient plant parts required for positive identification

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Observe plant characteristics and record observations according to workplace procedures 1.4 Ensure congruence of specimens and observations by accurate labelling according to workplace procedures
2. Preserve plant specimens	2.1 Store collected plant specimens to prevent degradation until they can be preserved according to workplace procedures 2.2 Identify and select an appropriate preservation technique according to workplace requirements 2.3 Prepare and arrange specimens for preserving according to preservation technique and workplace procedures 2.4 Preserve the specimen according to selected preservation technique 2.5 Arrange and mount the preserved specimen and observation records according to workplace procedures 2.6 Package the specimens and submit for identification according to workplace procedures
3. Record and catalogue specimen	3.1 Record and catalogue specimen information according to workplace procedures 3.2 File records appropriately according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Uses clear and appropriate language and terminology to ensure clarity of meaning when recording data and characteristics of plant specimens
Navigate the world of work	<ul style="list-style-type: none"> Complies with explicit policies and procedures.
Get the work done	<ul style="list-style-type: none"> Plans and implements routine tasks and workload seeks assistance in setting priorities

Skill	Description
	<ul style="list-style-type: none"> • Uses the main features and functions of digital tools to record plant data

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM202 Collect, prepare and preserve plant specimens Release 2	AHCPCM202 Collect, prepare and preserve plant specimens Release 1	Changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCPM202 Collect, prepare and preserve plant specimens

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have collected and preserved plant specimens for identification, including:

- collected representative parts of plant specimens and recorded and labelled specimens with characteristic data for identification purposes
- stored labelled plant specimens ready for preservation
- determined a plant preservation technique
- arranged and preserved plant specimens according to procedures
- arranged and mounted preserved specimens with observation records ready for identification
- packaged specimens with observation data and submitted for identification
- recorded and catalogued specimen information according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic botanical requirements for plant identification purposes
- principles and practices of collecting plant materials
- characteristics of plants to be collected and recognising suitable specimens for collection
- storing plant specimens before preservation to maintain specimen integrity
- plant preservation techniques and the agencies and organisations that use them
- records and recording systems for plant collections and plant data.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live plant materials to be collected from the field
 - equipment and materials required for preserving and mounting plant specimens
 - records and recording systems for plants
- specifications:
 - workplace procedures and processes for preserving plants
 - workplace instructions and specifications for preserved plants.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPCM303 Identify plant specimens

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to inspect plant specimens and describe the features and attributes of a plant for the purpose of plant identification and providing information to a client or organisation.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plants culture and management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Inspect plant morphological characteristics	1.1 Observe morphological, tactile and sensory characteristics of the plant specimens 1.2 Record observations and characteristics according to workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	procedures 1.3 Identify the plant division by comparing plant specimen's characteristics with taxonomic classification
2. Determine status of health and effect on characteristics	2.1 Inspect the plant specimen for health conditions that affect plant characteristics 2.2 Recognise and record health characteristics indicative of plant that support identification
3. Identify the specimen	3.1 Use reference material to compare plant specimen's characteristics to taxonomic levels (categories) 3.2 Obtain and compare known images or samples to plant specimens 3.3 Analyse plant specimens for specific characteristics and identify to lowest level (category) of classification
4. Report on the process results	4.1 Compile observations and analysis of plant specimen's morphology according to workplace procedures 4.2 Record plant specimen's identity, observations, analysis and identifying characteristics according to workplace procedures 4.3 Report identification to client according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Analyses and consolidates data of plant characteristics with reference materials to determine plant identity
Writing	<ul style="list-style-type: none"> Accurately records information and prepares reports using clear and accurate language and terminology
Numeracy	<ul style="list-style-type: none"> Performs basic mathematical calculations to measurements of plant features for comparison to reference materials
Oral Communication	<ul style="list-style-type: none"> Clearly explains detailed information using language, tone and pace appropriate to audience

Skill	Description
Navigate the world of work	<ul style="list-style-type: none"> • Takes responsibility for following explicit and implicit policies, procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM303 Identify plant specimens Release 2	AHCPCM303 Identify plant specimens Release 1	Changes to Elements and Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMB03 Identify plant specimens

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have identified plant specimens, including:

- identified and recorded key characteristics of plant morphology and identified to division level
- determined plant health and assessed effect on characteristics indicative to identification
- used reference materials to compare characteristics to taxonomic classification
- identified plant specimen to lowest level of taxonomic level (category)
- compiled identification data and recorded the identification and process according to workplace procedures
- reported outcomes to client according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of plant identification, including:
 - plant health problems indicative of plant species
 - basic physiology and life cycle of pests and diseases
 - botanical terms for plant morphology, physiology
- symptoms of plant pests and diseases that mask characteristics for identification
- methods of data capture
- plant identification techniques
- problem-solving techniques
- soil characteristics particularly in relation to the local region

- plant characteristics including tactile and sensory
- levels (categories) of taxonomic classification.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live plant specimens
 - tools and equipment necessary for plant observations
 - botanical reference materials, plant data bases, plant keys
- specifications:
 - workplace documents including procedures and processes for recording data and preparing reports
 - workplace instructions, specifications or client briefs
- relationships:
 - real clients.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER101 Observe permaculture principles and work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to follow workplace directions and instructions while observing permaculture principles and practices.

Permaculture work can be carried out in the community, home, school and permaculture or community gardens and farms.

This unit applies to individuals who work alongside a supervisor in most situations and exercise limited autonomy within established and well known parameters. They identify and seek help with simple problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to work in a permaculture environment	1.1 Meet with supervisor, observe conditions and receive work tasks for the day 1.2 Identify required materials, tools and equipment 1.3 Check materials, tools and equipment and tell supervisor if there are insufficient or faulty items 1.4 Use correct manual handling techniques when loading and unloading materials 1.5 Identify hazards and tell supervisor 1.6 Use suitable personal protective equipment (PPE) and ensure correct fit
2. Identify permaculture work practices	2.1 Identify good environmentally sustainable practices, and seek clarification when necessary 2.2 Adopt work practices which maximise productivity and time efficiency and minimise waste and resource use 2.3 Follow instructions and directions and ask for clarification when necessary
3. Contribute to improved permaculture practices	3.1 Gather information about permaculture and support the development of improved permaculture practices 3.2 Discuss environmental issues, community issues and their relationship to permaculture practices with supervisor and colleagues 3.3 Contribute to the review of permaculture practices in a permaculture environment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD841PPP01B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER101 Observe permaculture principles and work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- communicate with supervisors and workplace colleagues
- recognise basic environmental influences
- contribute to improved permaculture work practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture
 - ethics – earth care, people care, fair share
 - principles – at this level, limited to the trainer/supervisor’s interpretation and simplification of those contained in the two seminal permaculture text books (Mollison 1988 and Holmgren 2002)
- good practice approaches to minimising environmental hazards and risks
 - producing no waste
 - thinking globally and acting locally
 - observing nature and learning from her patterns
 - responding to change creatively and with consideration for the needs of all users of and/or elements in the system
 - learning from mistakes and developing successes
- factors to improve environmental performance in regard to water catchments, ecosystems, habitat, efficient use of resources, sustainability and waste minimisation
- factors to improve community issues, especially in regard to caring for people, sharing surpluses and setting limits to growth

- environmental issues and their potential impacts
 - sustainability of land use and agricultural work practices
 - reduction and disposal of waste
 - improvements to water quality
 - improvements to air quality
 - energy efficiency
 - biodiversity and habitat protection
 - conservation of natural resources
 - wild-fire management and mitigation
 - food, water and energy security
 - human rights and right livelihood

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER102 Support resource conservation practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to support resource conservation practices in a permaculture system under supervision, including preparing materials, tools and equipment for resource conservation, undertaking resource conservation activities, storing and stockpiling materials, and cleaning up on completion of work.

This unit applies to individuals who work alongside a supervisor in most situations and exercise limited autonomy within established and well known parameters. They identify and seek help with simple problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare materials, tools and equipment for resource conservation	1.1 Identify and check the required materials, tools and equipment and prepare according to lists provided and/or supervisor's instructions

Element	Performance criteria
	1.2 Adopt work practices which maximise productivity and time efficiency and minimise waste and resource use 1.3 Follow instructions and directions provided by supervisor and seek clarification when necessary
2. Undertake resource conservation practices as directed	2.1 Gather information on resource conservation in a permaculture system 2.2 Carry out resource conservation work in a safe and environmentally appropriate manner 2.3 Observe workplace policy and procedures in relation to workplace practice, handling, re-use and disposal of materials 2.4 Report problems or difficulties in completing work to required standards or timelines
3. Store and stockpile materials	3.1 Store all usable and re-usable materials in a designated area 3.2 Prepare and process all usable and re-usable materials
4. Clean up on completion of resource conservation work	4.1 Clean, maintain and store tools and equipment 4.2 Maintain a clean and safe work site while completing resource conservation activities 4.3 Complete any reporting requirements at the end of the job

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD841RES02B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER102 Support resource conservation practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- cooperate with team members
- store and stockpile materials
- clean up on completion of work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices
- tools and equipment used
- principles of resource conservation including:
 - reduce, reuse, recycle, repair, repurpose, restore
 - minimal impact living
 - sustainable food production
 - energy efficiency
 - the following types of appropriate energy: solar and wind power
 - the following types of appropriate technology: composting toilets, grey water re-use
 - water catchment, storage and re-use
 - seed collection and seed banking
 - mulching and soil conservation
 - revegetation
- community and social interaction and support, such as:
 - resource banking

- seed banking
- co-operatives
- Local Energy Trading Systems (LETS)
- Skill-Share
- techniques used in resource conservation, such as:
 - stock piling resources
 - the following types of processing requirements for resources which cannot be stock-piled: composting, fermentation, drying
 - water storage and treatment
 - capture and storage of energy (heat capture in mass, basic turbine function)
- making connections between everyday living and sustainable use of resources

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER103 Support plant care in a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to support plant care in a permaculture system.

This unit applies to individuals who work alongside a supervisor in most situations and exercise limited autonomy within established and well known parameters. They identify and seek help with simple problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify common features of Zone 1 permaculture gardens	1.1 Identify key characteristics of a Zone 1 permaculture garden 1.2 Compare and contrast common features of Zone 1 permaculture gardens with traditional home gardens 1.3 Identify functions and yields of plants in a Zone 1 permaculture garden

Element	Performance criteria
2. Demonstrate safe and efficient work practices	2.1 Identify and check the required materials, tools and equipment and prepare according to lists provided and/or supervisor's instructions 2.2 Adopt work practices which maximise productivity and time efficiency and minimise waste and resource use 2.3 Follow plant care instructions and directions provided by supervisor and seek clarification when necessary
3. Undertake bed preparation and planting activities	3.1 Prepare beds for planting of plants, seeds or seedlings 3.2 Plant the plants, seeds or seedlings 3.3 Follow instructions in relation to workplace practices, handling and disposal of materials 3.4 Report problems or difficulties in completing work to required standards or timelines to supervisor
4. Maintain plants	4.1 Determine watering regime for different plants in conjunction with supervisor 4.2 Determine nutrient requirements for plants in conjunction with supervisor 4.3 Clarify additional requirements of different plants in conjunction with supervisor
5. Harvest plants and plant yields	5.1 Identify potential yields from different species to be harvested 5.2 Harvest plants and plant yields 5.3 Store plants and plant yields 5.4 Complete any reporting requirements at the end of the job

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD841IPA03B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER103 Support plant care in a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- Identify common features of permaculture Zone 1 gardens
- identify and check the required materials, tools and equipment
- prepare a garden area for planting plants, seeds or seedlings
- determine the appropriate watering regime and nutrient requirements for the plantings
- harvest plant yields
- store the plant yields

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the characteristics of permaculture Zone 1 gardens
 - how permaculture gardens differ from conventional gardens
 - functions and yields of plants in a Zone 1 garden
 - observing nature and learning from it
- principles of planting in permaculture systems, such as:
 - aspect
 - planting patterns
 - companion planting
 - the soil-water-plant relationship
- plant care techniques and plant nutrition, such as:
 - the role of composts, worm castings, green manures, animal manures and support species in permaculture plant care
 - when to leave weeds, chop-and-drop and mulching

- simple pest protection (cages, rings, stakes and nets)
- simple climate protection (sun/frost/wind)
- how to reuse and recycle excess products of plant care

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III qualification (or higher) in Permaculture and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER201 Work effectively in permaculture

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to work effectively on an individual basis and with others in permaculture.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Obtain information about permaculture	1.1 Identify and access sources of information about permaculture 1.2 Collect information to assist effective and safe work performance within a permaculture work site 1.3 Identify workplace terms and conditions 1.4 Identify work and career options for permaculture practice

Element	Performance criteria
2. Observe requirements of a permaculture workplace	2.1 Ensure work practices comply with enterprise work requirements 2.2 Recognise faults and abnormalities in workplace practices and take remedial action 2.3 Observe punctuality in work attendance 2.4 Complete work routines and specific instructions to meet workplace expectations
3. Work effectively in a permaculture workplace	3.1 Plan work tasks in consultation with team members and supervisor 3.2 Follow instructions from supervisor 3.3 Cooperate with others as part of a team with consideration of special needs of co-workers and others 3.4 Accept responsibility for quality of own work
4. Contribute to a productive permaculture workplace	4.1 Fulfil commitments to undertake work or assist co-workers 4.2 Share knowledge and skills with co-workers through conversations and demonstrations 4.3 Recognise and seek out contributions from individuals of different gender and social and cultural backgrounds, if appropriate 4.4 Ensure work is consistent with workplace standards relating to anti-discrimination and workplace harassment 4.5 Recognise and resolve conflict through personal communication if possible and reference to supervisor for support 4.6 Undertake responsibilities and duties so as to promote cooperation and good workplace relationships

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD842PPP01B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER201 Work effectively in permaculture

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- access and collect information about permaculture
- interpret workplace schedules
- accept responsibility for own work
- promote workplace cooperation
- contribute to a productive workplace environment

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture
 - different sectors within a permaculture system
 - relationships between sectors and the whole
 - permaculture services available in the area as listed in available references including:
 - media reports
 - reference books
 - industry journals
 - internet sites
 - libraries
 - observation of nature
 - personal observation and experience
 - relationships between the permaculture enterprise and other industries
 - legislation that affects permaculture enterprises

- unions and industry associations
- career opportunities within permaculture
- work ethic required to work in permaculture enterprises
- ethics of permaculture
 - care for the earth
 - care for all people
 - sharing the surplus
 - setting limits to growth
- permaculture practices and procedures, such as:
 - cooperation over competition
 - respecting and celebrating all ethnicities, religions, ages, genders and abilities
- wwoofing and other labour exchange programs
- lifestyle as a conserver
- workplace expectations and communication channels

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER202 Harvest, treat and store seed

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to harvest, treat and store seed.

All work is carried out to comply with workplace requirements.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for harvesting of seed	1.1 Discuss work requirements with supervisor and seek clarification where necessary

Element	Performance criteria
	1.2 Clean seed harvesting and handling equipment and transport to seed collecting site 1.3 Determine seed that is to be collected 1.4 Prepare locations for treatment and storage of seed
2. Harvest seed	2.1 Collect seed using selected method complying with any conditions of permit or agreements with land holders, if applicable 2.2 Protect the health of parent plants during seed collection, if required 2.3 Place seed in clean containers and label
3. Treat and store seed	3.1 Separate seeds from other materials using available separation methods 3.2 Treat seeds, if required, according to harvesting plan 3.3 Record all appropriate data regarding collected seed on the seed container according to the harvesting plan 3.4 Pack and store seeds

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD842RES02B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER202 Harvest, treat and store seed

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare to harvest seed
- harvest seed
- treat and store seed

Knowledge Evidence

The candidate must demonstrate knowledge of:

- seed harvesting techniques
- characteristics of mature healthy seed
- diseases and pests likely to affect the seed
- the following types of seed extraction:
 - hand selection
 - winnowing
 - sieving
 - vibration
 - flotation and fermentation
 - drying
 - heat-assisted dehiscing
 - crumbling of husks
- the following permaculture practices relating to seed harvesting and storage:
 - appropriate containers including re-used jars, boxes and packets
 - cool, dry location

- freezer or refrigerator
- pest deterrent mechanisms
- light exclusion mechanisms
- non-chemical protection against pathogens
- the following data included in seed saving:
 - genus, species, family, variety and cultivar information
 - provenance – where the seed came from
 - weight or number
 - date collected
 - place collected
 - collector
 - cultural advice or growing conditions
 - seed pre-treatment advice
 - longevity information
 - growing-out trial information
 - storage location information or record locator

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER203 Record information about the local bioregion

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to record information about the local bioregion.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to work	1.1 Discuss work requirements with supervisor and seek clarification where necessary 1.2 Identify materials required for the work and collect and prepare them
2. Collect information	2.1 Determine the boundaries and extent of bioregion according to

Element	Performance criteria
	community and geophysical and biological guidelines 2.2 Identify key plant and animal species of the ecosystem by local or common name 2.3 Identify special features and sites of the bioregion and relate to ecological information 2.4 Investigate knowledge on plants and animals relationships from a permaculture perspective 2.5 Investigate information on land uses and land management practices in the bioregion 2.6 Outline the history of bioregion from community sources and available literature 2.7 Define simple food chains and energy flows relevant to the local bioregion
3. Review changes	3.1 Identify environmental changes from land use and the impacts of these changes on current and future land uses 3.2 Document environmental trends and their potential impacts on the bioregion 3.3 Record land and water management practices that can repair environmental changes
4. Document information	4.1 Document information about the local bioregion 4.2 Recognise and record ownership of information used in an appropriate manner 4.3 Document any conditions and parameters defining use of information

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD842BIO03B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER203 Record information about the local bioregion

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- collect information about the local bioregion
- review the information
- document the information

Knowledge Evidence

The candidate must demonstrate knowledge of:

- designated areas and features of a bioregion, such as:
 - a bioregion, as a land and water territory whose limits are defined not by political boundaries, but by the geographical limits of human communities and ecological systems.
 - water catchment, as one of the key identifiers of the bioregion
 - the vegetation on the catchment, as also an essential feature of a bioregion
- local and common names for plants and animals
- ecological concepts, such as:
 - niche
 - habitat
 - community
 - ecosystem
 - energy flows
 - food webs/chains
 - water cycles
 - species and species relationships

- plant and animal succession
- Permaculture perspectives, such as:
 - seeing connections between elements in a system
 - supporting ecological and community co-existence
 - valuing renewable resources and energy
- alternative strategies of trade such as barter and local exchange trading systems (LETS)
- community resources including local skills, public transport options, contractors and facilities

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER204 Check and operate permaculture water systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to check and operate permaculture water systems.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for working with permaculture	1.1 Discuss work requirements with supervisor and seek clarification where necessary

Element	Performance criteria
water systems	1.2 Assess requirements for water and natural water flows 1.3 Conduct checks on tools and equipment to be used 1.4 Prepare materials required for water systems work
2. Set up water systems equipment	2.1 Handle water systems equipment 2.2 Position water systems equipment 2.3 Check pumps, bores and other water delivery mechanisms and report any issues 2.4 Position and secure water control devices
3. Carry out water systems operations	3.1 Operate water systems as required 3.2 Check required head and water levels are achieved and maintained in active systems to ensure sufficient water flow 3.3 Monitor progress of water flow in passive systems 3.4 Carry out water system changes and record 3.5 Shift water system equipment
4. Clean and store water system equipment	4.1 Clean equipment and prepare for storage 4.2 Load equipment for transport 4.3 Store equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD842WAT04B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER204 Check and operate permaculture water systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare to set up a permaculture water system
- set up water systems
- monitor water flows
- place system components in a way that gives most effect and greatest yield
- inspect earthworks for passive water catchment, storage and movement

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices in relation to water systems
- behaviour of water in the natural environment
- reading natural water flows
- operation of permaculture water systems, such as:
 - irrigation systems
 - water collection and storage containers (tanks, dams)
 - recycling
 - waste-water systems
 - water conservation approaches
 - swales
 - contour banks
 - mulch pit and path systems
 - dams

- chinampas
- free-flowing water (streams, rivers)
- aquaculture systems
- aquaponics systems
- productive water bodies (lakes, the sea)
- earthworks for passive water catchment, storage and yield
- components of a water system and their cleaning and storage requirements
- water conservation and management principles and practices including working with passive systems, swales, terraces, dams and other earthworks
- passive harvesting, movement and nutrient adding systems including appropriate earthworks
- biological filtering of water into and out of a permaculture water system

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER205 Prepare and store permaculture products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out routine preparation and storage of products on a permaculture property. It covers the grading, labelling, treatment and storage of harvested products.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for working with permaculture	1.1 Select materials, tools, equipment and machinery

Element	Performance criteria
products	1.2 Conduct check on tools, equipment and machinery 1.3 Identify products to be prepared and stored
2. Transport harvested products	2.1 Handle products and their containers safely 2.2 Transport products with care to preparation area 2.3 Ensure containers are maintained in good condition
3. Grade, label and treat products	3.1 Grade and label harvested products 3.2 Identify products that do not meet the standards and dispose of them 3.3 Apply treatments to products within permaculture guidelines 3.4 Clean and maintain tools, equipment and machinery used in product treatment
4. Pack products	4.1 Identify and confirm packaging materials, containers, filling techniques and labelling requirements with supervisor 4.2 Select packaging materials and container for the product 4.3 Use filling techniques for specific containers and products
5. Store products	5.1 Transport products and arrange in the storage facility 5.2 Check the condition of stored products 5.3 Remove damaged products and containers from the storage facility and repair or re-pack if possible 5.4 Clean the storage facility and packing containers

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD842RES05B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER205 Prepare and store permaculture products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- handle products and their containers safely
- maintain containers in good condition
- maintain product storage areas and containers
- grade and label products
- pack and store products
- check stored products for damage, repacking or other treatments

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices in relation to product preparation and storage, such as:
 - the range of products produced by permaculture enterprises and their yields
 - parts of products stored
 - preserving the harvest
- correct handling, preparation and treatment techniques for a range of products, such as:
 - observation and identification of harvest readiness
 - storage methods for different products
 - pests and diseases likely to affect storage
 - hygiene issues in the handling and storage of permaculture products

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER206 Plant and maintain permaculture crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plant and maintain plants in a permaculture cropping system under routine supervision and involves a range of planting tasks, including site preparation, the handling and planting of a range of planting materials, and the maintenance of crops in the field.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to plant permaculture crops	1.1 Confirm instructions about planting with supervisor 1.2 Select and prepare tools and equipment 1.3 Identify plant materials to be planted 1.4 Select, use and maintain personal protective equipment
2. Prepare the site for planting	2.1 Remove or slash old plants, weeds and other residual materials if required 2.2 Apply soil treatments or amendments according to supervisor's instructions 2.3 Implement plant protection 2.4 Follow the permaculture planting plan and mark out the planting pattern
3. Carry out planting operations	3.1 Select appropriate planting material 3.2 Maintain planting material under conditions that ensure maximum viability 3.3 Handle and transport planting material to the site 3.4 Carry out planting according to permaculture planting plan
4. Maintain plants	4.1 Apply treatments to plantings according to the permaculture plan 4.2 Water plantings according to the irrigation schedule 4.3 Train and protect plants according to the permaculture plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD842IPA06B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER206 Plant and maintain permaculture crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- select plant material, tools and equipment for planting
- prepare site for planting
- plant according to permaculture planting plan or pattern
- support, train, guard or protect plants
- follow plans and schedules
- water plantings
- apply treatments to soil

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to planting operations, such as:
 - planting in natural groupings or guilds
 - utilising plant partnerships such as vines on corn crops
 - planting mixed species and interplanting with companion species
 - avoiding soil compaction or disturbance
 - utilising chickens to plough and prepare ground for planting
 - avoiding water, seed or weed leakages from the system
- principles of sustainable horticultural practices
- planting techniques
- basic plant nutrition
- soil improvement and nutrient maintenance, such as:
 - minerals, including rock dusts

- organic matter
- manures, appropriate fertilisers and composts
- foliar feeds or fertigation
- vermicompost and worm castings
- planting of a temporary green manure or cover crop
- legume plantings or interplantings
- sheet mulches
- companion planting
- plant growth and development
- methods of waste disposal causing minimal impact on the environment

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER207 Care for animals in a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to care for the health and welfare of animals in a permaculture system through providing the optimal environment for them, caring for animals common in permaculture systems, animal behaviour and handling and maintaining basic records. This unit is applicable to both farm animals and companion animals.

All work is carried out to comply with workplace procedures, including animal welfare, quarantine and work health and safety policies and procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to

Element	Performance criteria
essential outcomes.	demonstrate achievement of the element.
1. Monitor and assess animal health and welfare	1.1 Check animals regularly 1.2 Recognise and report symptoms of ill health, common diseases or parasite infestations in animals 1.3 Remove and dispose of any dead animals
2. Provide an optimal environment for animals	2.1 Assess animal's needs in conjunction with work team and supervisor 2.2 Install equipment and housing 2.3 Monitor welfare of animals and report any issues
3. Establish and maintain quality of animal housing	3.1 Follow health and safety procedures, practices, policies and precautions, including the use of personal protective equipment 3.2 Maintain cleanliness and hygiene of animal housing 3.3 Follow any quarantine procedures as instructed by supervisor 3.4 Maintain personal hygiene in all animal handling activities 3.5 Dismantle and clean equipment and correctly replace fittings 3.6 Control pest and vermin when necessary 3.7 Dispose of all waste and debris, and deal with run off 3.8 Conduct routine disease or parasite infestation prevention procedures
4. Implement and record control strategies	4.1 Report any disease incidence or animal losses to the supervisor 4.2 Implement preventative strategies and quarantine measures as instructed by the supervisor 4.3 Maintain and enter records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD842IPA07B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER207 Care for animals in a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess animal health and welfare
- provide an optimal environment for animals
- feed and water animals
- handle animals safely and humanely
- move animals to different housing or pastures when necessary
- implement and record animal health and welfare control strategies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to animal care in a permaculture system
- animals common to permaculture systems in a given region or system
- role or niche of animals in system and interrelationship with other animals, plants or systems
- principles of animal feeding and nutrition
- principles of animal health, welfare and care
- symptoms of ill-health in animals
- legislation and regulations relating to animal health and welfare
- signs of animal fear, aggression and stress
- handling of animals
- safe handling of sick and dead animals

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER208 Harvest permaculture crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit provides the skills and knowledge required to harvest permaculture crops. It requires knowledge of common crops used in permaculture systems, recognition of the maturity parameters of crops, grading characteristics, maintaining quality of produce, and the effect of adverse weather conditions.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Assess plants for harvest	1.1 Identify crops to be harvested according to the harvesting plan 1.2 Determine crop maturity 1.3 Confirm conditions are right for harvesting
2. Prepare equipment for harvesting	2.1 Select tools, equipment and machinery appropriate to the task being undertaken 2.2 Carry out pre-operational and safety checks on tools, equipment and machinery according to manufacturer specifications 2.3 Select, use and maintain suitable personal protective equipment (PPE)
3. Harvest the crop	3.1 Harvest the crop carefully and safely 3.2 Sort and grade the crop as needed 3.3 Clean and maintain harvesting tools, equipment and machinery
4. Complete crop harvesting work	4.1 Employ safe manual handling techniques when handling containers 4.2 Move and stack containers in such a way as to minimise damage to the crop 4.3 Maintain temperature of the crop at the levels set by the harvesting plan 4.4 Transport crop from the field to the processing or storage area 4.5 Maintain containers in good working order

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD842IPA08B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER208 Harvest permaculture crops

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess plants for harvest
- prepare for harvest
- carry out harvest operations
- maintain harvesting equipment

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles related to harvesting
- principles of sustainable horticultural practices
- crops common in permaculture systems
- harvesting techniques, such as:
 - selective picking or hand picking ripe from unripe
 - tree shaking
 - picking leaves rather than whole plants
 - cutting plants and allowing to regrow (eg leeks, spring onions)
 - thinning or removing weak or diseased plants from among healthy ones
 - end of season crop extension harvesting (such as hanging tomato plants to ripen indoors)
- equipment and machinery used in harvesting
- sorting and grading, such as:
 - removing out-of-type plants
 - removing physically damaged, unhealthy, rotten or immature fruit and vegetables

- grading of the crop according to variety, size, length, colour, maturity, blemishes, bud count and quality, being subject to seasonal and market forces
- storage, transportation and grading of crops
- methods of waste disposal causing minimal impact on the environment

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER209 Recognise characteristics of integrated plant and animal systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to recognise integrated plant and animal systems and their roles in permaculture design.

All work is carried out to comply with workplace procedures, including animal welfare, quarantine and work health and safety policies and procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Recognise plants and animals	1.1 Describe plant and animal habits, plant characteristics, animal characteristics and significant features and record appropriately 1.2 Recognise and name plants and animals used in permaculture systems according to their identifiable characteristics 1.3 Describe interconnectedness of plants and animals in permaculture systems using permaculture principles and practices
2. Describe functions of integrated systems in permaculture	2.1 Describe inputs, outputs and intrinsic features of plants and animals in integrated permaculture systems 2.2 Describe functions of integrated systems using a permaculture plan 2.3 Maintain records on integrated plant and animal systems

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD842IPA09B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER209 Recognise characteristics of integrated plant and animal systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- recognise animals and plants
- name animals and plants by common name
- read a permaculture plan
- identify plants and animals commonly encountered in a permaculture system
- identify plants with useful properties (food, fuel, fibre, medicinal, dyes, shade, habitat etc)
- describe animals with functions in the system
- produce a simple report

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to integrated plant and animal systems, such as:
 - practices which conserve energy and resources
 - protecting water, soil and other resources
 - obtaining a yield
 - preserving heritage or heirloom varieties (biodiversity)
 - re-using or adapting materials for other functions
 - making use of vertical space
 - creating multiple functions for the same thing
 - using nature as the model
 - seed-saving
- animals and plants common to permaculture systems in a given region or bioregion

- the role or niche of animals in system and interrelationship with other animals, plants or systems, such as:
 - native or wild animals and plants
 - pest and feral plants and animals
 - insects, fish, birds and reptiles, both friend and foe
- principles relating to integrated plant and animal systems

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER214 Propagate plants for a permaculture garden system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to propagate plants for a permaculture garden system including small scale nurseries, school nurseries and systems where sales and profit are not the main drivers. It requires knowledge of propagation techniques, basic plant nutrition and potting media suitable for the home propagation system.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to propagate plants	1.1 Collect and wash containers and trays 1.2 Prepare containers with suitable potting mix for the propagation process being undertaken 1.3 Have tools, water and labelling materials on hand
2. Propagate plants using garden techniques	2.1 Take cuttings, sow seed or divide plants as required 2.2 Place new plants into prepared containers to required level and give water, cutting treatment or fertiliser as needed 2.3 Label the new plant accurately 2.4 Place containers in trays or in propagation area to grow on
3. Maintain health of plants during propagation	3.1 Monitor new plants and take remedial action as needed 3.2 Check for disease or pests and treat according to permaculture principles 3.3 Check for root growth and pot into larger container if required 3.4 Water, shelter or shade depending on prevailing weather conditions, size of container and needs of species 3.5 Harden off in a sheltered area before planting out
4. Maintain garden propagation system year round	4.1 Check propagation area between seasonal propagation activities and clean or tidy to avoid disease 4.2 Maintain health of mother plants for propagation purposes 4.3 Maintain stocks of containers, labels, stakes and ties for future use 4.4 Maintain stocks of potting materials and nutrient additives 4.5 Keep propagation system clean and weed free at all times

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER214 Propagate plants for a permaculture garden system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare for plant propagation
- propagate plants using garden techniques
- maintain healthy new plants and mother plants

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to propagation, such as:
 - using reclaimed or reused containers (suitably cleaned to avoid cross-contamination)
 - labelling systems using reclaimed materials
 - maintaining rare and unusual varieties
 - using edges and valuing marginal or unusual plants in micro-climates
 - sharing and swapping to increase biodiversity and mutual wellbeing
 - preserving provenance of locally indigenous species
 - testing and trialling for new plants or resistant varieties
 - global food plant preservation including seed saving
- principles of sustainable horticultural practices
- propagation techniques, such as:
 - soft wood cuttings
 - hard wood cuttings
 - tip and root cuttings
 - layering and division

- grafting (whip and tongue, saddle and wedge)
- seed sowing
- basic plant nutrition
- potting mixes suitable for propagation in a garden setting, such as:
 - compost and worm casting mixes
 - sieved and graded sands
 - blends used for different purposes or different times of year
 - sphagnum moss
- basic plant growth and development
- small-scale glass, shade or poly house structures
- methods of waste disposal causing minimal impact on the environment

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER215 Assist with garden soil health and plant nutrition

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to assist with garden soil health and plant nutrition using simple methods and without costly equipment. It requires knowledge of simple soil testing techniques and how to improve soil health and plant nutrition organically.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Undertake simple soil assessment tests	1.1 Prepare soil samples for testing 1.2 Use simple techniques to check the texture, pH, organic matter and soil life in the soil samples 1.3 Use simple techniques to read the probable soil condition using plant growth and insect or animal activity
2. Add organic or allowable nutrients to improve soil	2.1 Determine needs of soil for improvement 2.2 Add allowable additives such as compost, rock dust, manure and compost tea to improve soil 2.3 Use planting techniques such as green manures, companions, guilds and nurse plants to improve soils and plant nutrition 2.4 Protect the soil with mulch to maintain moisture and discourage unwanted growth
3. Monitor soil health	3.1 Monitor the health of the soil through the seasons 3.2 Ensure soils are not over dry or over wet 3.3 Avoid salting or greywater sodicity if watering with reused water 3.4 Regularly check for health of soil organisms, nutrient deficiency in leaves, and signs of pathogen fungal, bacterial or viral action on plants 3.5 Monitor soil improvement and plant nutrition over time

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER215 Assist with garden soil health and plant nutrition

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- undertake simple soil assessment tests
- add organic or allowable nutrients to improve soil
- Protect soil to maintain moisture and overall soil health

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to soil health and plant nutrition, such as:
 - working with natural soils rather than importing soil
 - soil as an ecosystem
 - soil as biomass and carbon capture and storage
- principles of sustainable horticultural practices
- soil testing techniques, such as:
 - jar test for texture
 - ribbon test and ball test
 - pH testing
 - surface evaporation test
 - worm count
- basic plant nutrition
- allowable additives to improve soils, such as:
 - compost and worm castings
 - compost teas

- rock dust
- gypsum
- green manures
- manures/animal bedding materials
- leaf mould
- plantings – green manures, nurse plants
- companion planting
- dynamic accumulators
- chop and drop
- nutrient trapping systems
- greywater use
- organically certified products
- methods of waste disposal causing minimal impact on the environment

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture to assess this unit of competency and/or have completed a Permaculture Design Course (PDC) and/or have completed the Permaculture Demonstrator Skill Set.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER301 Research and communicate information on permaculture principles and practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to research permaculture principles and practices, develop research techniques to gather general information on permaculture and non-permaculture systems and appropriately communicate information within culturally diverse groups.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Research general information on	1.1 Identify sources of information about permaculture 1.2 Interpret written sources of information and extract the

Element	Performance criteria
permaculture	required information 1.3 Access and investigate information from sources other than written 1.4 Interpret information from non-written sources and extract the required information
2. Document application of permaculture principles to a site	2.1 Identify an appropriate site to study 2.2 Research site, using primary data sources and secondary data sources 2.3 Document examples of how permaculture principles have been practically applied on the site
3. Compare permaculture design approach and practices with those of other food production systems	3.1 Identify a range of food production systems 3.2 Identify key characteristics of each system in relation to management of soil, energy, water, nutrient flow, crop rotation and harvesting 3.3 Compare permaculture practices with those of other systems
4. Communicate general information with others on permaculture	4.1 Discuss and share knowledge with colleagues to increase awareness of permaculture principles and practices 4.2 Prepare and deliver permaculture information to small groups 4.3 Respond to questions about permaculture within a small group 4.4 Communicate responses in a culturally appropriate manner

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843PPP01B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER301 Research and communicate information on permaculture principles and practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research general information on permaculture
- identify differences between permaculture and other land management or land use practices
- share general information with others on permaculture

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices
- similarities and differences between other land use and management practices and permaculture, such as:
 - conventional broad-acre farming
 - battery chicken farms
 - intensive meat production facilities (e.g. feedlots, piggeries)
 - fish farming
 - biodynamic agriculture
 - organic mixed farms
- culturally appropriate speech and behaviour
- basic research techniques
- using primary data sources, such as:
 - original data gathered by the researcher
 - measurements

- photographs
- maps or sketches
- soil tests
- observations of light, shade, sun angle
- flora and fauna present at the site
- slope and contour information
- observation of site and adjoining landscape features (e.g. sector analysis)
- weather observations
- using secondary data sources, such as:
 - data provided by government departments and agencies, local groups (such as Landcare) or individuals (such as neighbours)
 - survey documents, maps and plans
 - official weather data
 - photographs, such as Google Earth
- communication techniques

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER302 Develop recommendations for integrated plant and animal systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop recommendations for integrated plant and animal systems and requires the application of sound knowledge of permaculture and a broad range of plant-related and animal-related skills.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Identify scope of integrated plant and animal system required	1.1 Identify client needs and the nature of the job by gathering all relevant information from the client 1.2 Assist client to understand the concept of an integrated plant and animal system 1.3 Define client needs using research and observation
2. Develop options for preferred solutions	2.1 Identify options or devise strategies using research and experiential awareness, permaculture principles and enterprise work procedures 2.2 Examine options or evaluate strategies using problem-solving techniques 2.3 Determine the options based on appropriate evidence, availability of resources, energy, sound cultural principles, permaculture practices, and enterprise work procedures
3. Recommend the preferred solution	3.1 Recommend the integrated plant and animal method of establishment and probable outcomes to the client 3.2 Refer to the origin of the plant and animal species and their cultural requirements in an integrated system where necessary 3.3 Respond appropriately to client requests for clarification or expansion 3.4 Prepare drawings and tables to show how the systems integrate to increase yields, reduce work and eliminate waste 3.5 Record recommendations and report to client appropriately

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD844IPA02B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER302 Develop recommendations for integrated plant and animal systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify client needs and the nature of the job
- determine options for developing an integrated plant and animal system
- communicate with clients, work team members, supervisors, suppliers, contractors and consultants
- identify plants
- provide information on the characteristics, needs and functions of plants and animals in integrated systems
- interpret site designs, maps, ground plans and specifications
- prepare drawings and tables showing how the systems integrate

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles related to integrated plant and animal systems
- permaculture practices, such as:
 - minimising effort for maximum effect
 - multiple uses for each element in the system
 - more than one way of providing important functions
 - re-using and valuing resources and energy
 - encouraging productivity of the system
 - seeing solutions not problems
 - using vertical space and other edges and connections
 - preventing waste and loss of resources from the system

- methods of design, such as planning spatially and allowing for overhead and underground structures, shadow, slope and sun angle
- an understanding of the place of permaculture topics sometimes relevant to integrated plant and animal systems, such as:
 - pattern understanding
 - ecological principles
 - climate and weather
 - water
 - soils
 - earthworks
 - aquaculture
 - species identification and selection information
 - plants in integrated systems
 - animals in integrated systems
- local plant suppliers, animal suppliers, consultants, services, products and contractors and availability of local resources
- patterns in permaculture design, such as:
 - patterns in space, such as planting patterns, naturally occurring patterns in nature (radial and bilateral symmetry, spirals, circles, dendritic and mandala patterns)
 - patterns in time, such as succession planting, breeding cycles, seasonality
 - patterns in human culture, such as gardening systems
 - nature as the model for design, such as stacking or layering as with a natural forest
 - gravity as a force for design, such as using contours in design
 - nutrient, water and energy capture, storage and re-use according to the inputs, outputs and intrinsic features of the system

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER303 Maintain integrated plant and animal systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain integrated plant and animal systems, undertake maintenance, and maintain records of activities. Maintaining integrated plant and animal systems requires a knowledge of permaculture activities appropriate to climate and soil types, plants and animals commonly found on permaculture properties, permaculture principles and practices and typical permaculture solutions for water catchment and storage and soil maintenance and improvement for plant and animal systems.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan maintenance of integrated plant and animal systems	1.1 Assess maintenance requirements for the integrated plant and animal system 1.2 Consult stakeholders about maintenance activities where required 1.3 Determine and source the required equipment, machinery and materials for maintenance activities 1.4 Read and interpret permaculture design specifications for the property and follow any specific directions on maintenance approaches and strategies 1.5 Plan movement through production areas to minimise disturbance and degradation during maintenance activities
2. Undertake maintenance activities	2.1 Maintain a clean and safe work area 2.2 Take appropriate measures to avoid degradation and disturbance to soil, plants, animals, waterways and other parts of the ecosystem 2.3 Monitor activities of personnel and visitors to reduce risks to the productive systems undergoing maintenance
3. Complete maintenance activities	3.1 Make site good on completion of maintenance activities 3.2 Clean and store equipment and machinery appropriately on completion of maintenance activities 3.3 Remove or store excess materials 3.4 Maintain records of maintenance activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843IPA03B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER303 Maintain integrated plant and animal systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan maintenance activities for integrated plant and animal systems
- undertake maintenance
- record and report on completion of activities

Knowledge Evidence

The candidate must demonstrate knowledge of:

- Integrated plant and animal systems, such as:
 - gardens, orchards, organic farms, woodlots and forests that include animals in free range or rotational systems
 - balanced ecosystems where the needs of all species are met
 - systems where poultry provide fertility, pest control and other services to plants, such as:
 - chicken-orchard systems
 - duck-rice systems
 - poultry used as tractor
 - frogs, birds and other wild creatures attracted to the garden to maintain ecological balance
 - patterns seen in nature, such as stacking and layering of plants in a forest, used in deliberate design
- plants and animals commonly found on permaculture properties
- plant groups and vegetation structures
- permaculture practices, such as:

- composting of weeds
- chop and drop practices
- feeding weeds to animals
- soil support and enhancement strategies
- animal husbandry strategies
- permaculture design information, such as:
 - permaculture site plan
 - components of integrated plant and animal systems
- the role of animals in improving soil, recycling nutrients, managing ‘weedy’ plants and controlling pests and diseases
- plants as indicators and improvers
- typical permaculture solutions to water catchment and storage for integrated plant and animal systems
- recycling of materials and waste

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is NOT sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER305 Implement crop maintenance and harvesting programs for permaculture systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement crop maintenance and harvesting programs for permaculture systems. Crop maintenance methods may include, thinning, spacing, selective harvesting, training, summer and winter pruning, hedging, skirting, topping and trimming. Crop harvesting methods may include manual and machine-assisted harvesting.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to

Element	Performance criteria
essential outcomes.	demonstrate achievement of the element.
1. Plan for maintenance and harvesting of permaculture crops	1.1 Identify requirements of the site and crop maintenance program 1.2 Select materials, tools, equipment and machinery 1.3 Carry out pre-operational and safety checks on tools, equipment and machinery 1.4 Identify work health and safety hazards, assess risks, implement controls and take appropriate action 1.5 Select, use and maintain appropriate safety and personal protective equipment
2. Maintain permaculture crops	2.1 Implement maintenance tasks in sequence to the crop maintenance program 2.2 Instruct personnel or work team members to undertake required maintenance operations 2.3 Ensure tasks are undertaken according to work health and safety requirements and environmental considerations 2.4 Monitor maintenance of crop and take corrective action where required 2.5 Maintain a clean and safe work area throughout maintenance operations
3. Harvest permaculture crops	3.1 Implement harvesting tasks in sequence to the crop maintenance program 3.2 Instruct personnel or work team members to undertake harvesting operations 3.3 Ensure compliance with work health and safety requirements and observe environmental considerations 3.4 Monitor harvesting of crop and take corrective action to ensure standards are met 3.5 Maintain a clean and safe work area throughout harvesting operations
4. Complete maintenance and harvesting activities	4.1 Re-use or dispose of waste material 4.2 Clean, maintain and store tools, equipment and machinery appropriately 4.3 Record harvesting outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843IPA05B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER305 Implement crop maintenance and harvesting programs for permaculture systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- interpret site plans and crop maintenance and harvesting schedules
- harvest or maintain crops correctly and without damaging produce
- coordinate work group, contractors and own activities

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to obtaining a yield
- principles of maintaining crops and the methods used to maximise crop yields
- maintenance techniques for a range of crops, such as:
 - manual thinning
 - selective harvesting
 - training
 - summer and winter pruning
 - hedging
 - skirting
 - topping
 - trimming
 - picking
 - bagging
 - trellising
- maturity or ripeness properties of crops when ready for harvest

- effects of maintenance operations on plant growth, habit and production levels of maintenance operations
- maintenance of soil health and impact on production
- enterprise quality procedures and characteristics of a crop relative to varying market requirements

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER306 Use weedy plants in a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to control and make use of weedy plants in a permaculture system. It also includes permaculture practices, such as use of succession in a permaculture system and the use of harvest as a means of control.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess the implications of weedy plants in the	1.1 Assess the scope and size of the weedy plant population

Element	Performance criteria
system	1.2 Investigate the soil properties, water availability and terrain of the affected areas 1.3 Investigate the history of the previous land use and management strategies of the site 1.4 Identify weedy plants and associated organisms and record in field notes 1.5 Identify weedy plant populations tolerated by the client, market or environment according to the permaculture management plan 1.6 Identify weedy plant population levels above which plant health or growth objectives are compromised 1.7 Obtain professional advice as required according to permaculture management plan
2. Plan the implementation of permaculture weedy plant management plan	2.1 Identify uses for weedy plants, waste materials and debris for fodder, mulching or composting 2.2 Select tools, equipment, machinery, and other control measures for each part of the weedy plant management work, according to the permaculture management plan 2.3 Select, use and maintain suitable safety equipment and personal protective equipment (PPE)
3. Implement the permaculture weedy plant management plan	3.1 Coordinate the enterprise work team, contractors and/or control animals in a sequential manner according to the permaculture weedy plant management plan 3.2 Implement the permaculture weedy plant management plan 3.3 Maintain records appropriately
4. Monitor the permaculture weedy plant management plan	4.1 Monitor progress of the permaculture weedy plant management plan to identify side effects to other plants, animals or the environment 4.2 Assess effectiveness of the permaculture weedy plant management plan 4.3 Adjust the permaculture weedy plant management plan where necessary to meet expectations

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843IPA06B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER306 Use weedy plants in a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- recognise a range of weedy plants and associated organisms within a particular permaculture enterprise
- identify uses of weedy plants in a permaculture system
- identify control methods used in permaculture weedy plant management plan
- implement a permaculture weedy plant management plan
- assess progress and effectiveness of the permaculture weedy plant management plan

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices in relation to the management of weedy plants
- weedy plant recognition
- strategies used in weedy plant management plans, such as:
 - organic chemical, biological and cultural control methods and treatments available to the enterprise within the parameters of a permaculture weedy plant management plan
 - range and use of tools, equipment and machinery available to the enterprise for implementing a permaculture weedy plant management plan
 - animal systems to use the weedy plant as a food source
 - plants and planting strategies to out-compete weedy plants or to be used as a follow up to successful treatment
- site monitoring and analysis techniques that may be used to implement a permaculture weedy plant management plan
- roles that weeds play within an ecological system, such as:

- soil stabilisers
- fodder for wild and domestic animals
- nutrient traps
- nutrient mining from subsoil
- identification of a range of edible weedy plants
- uses for weedy plants including commercial uses, such as:
 - animal fodder
 - basket making
 - compost teas
 - food and medicinal products, such as nettles as cheese wraps or herbal teas

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Certificate is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER307 Establish a rural permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to establish a rural permaculture system from a permaculture design, as well as knowledge of a broad range of integrated plant and animal systems, earth shaping skills, soil improvement, water harvesting and work site coordination skills.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to establish a rural permaculture system	1.1 Read and interpret the design for the permaculture system 1.2 Identify the site, planting methods and system features 1.3 Select materials, tools, equipment and machinery
2. Coordinate establishment of the rural permaculture system	2.1 Coordinate work tasks in a sequential, timely and effective manner 2.2 Establish the permaculture system according to work health and safety requirements and with due consideration for environmental implications 2.3 Maintain a clean and safe work area throughout
3. Prepare the area	3.1 Undertake earthworks if required 3.2 Select and apply additives to the soil as required 3.3 Mark out patterns or positions of elements on site according to permaculture design
4. Undertake positioning of elements in the rural permaculture system	4.1 Inspect elements prior to planting, introduction or installation and remove elements with major defects 4.2 Trim or treat plants with minor defects to maintain health and vigour 4.3 Position elements to enable them to develop their full potential according to zone and sector analysis, pattern understanding and the permaculture design 4.4 Provide elements with post-installation care
5. Monitor establishment of the rural permaculture system	5.1 Monitor the system and take corrective action as needed 5.2 Identify situations which will prevent elements from reaching their full potential 5.3 Complete works for the permaculture design
6. Complete establishment of the rural permaculture system	6.1 Remove or dispose of waste material from the site 6.2 Clean, maintain and store tools, equipment and machinery 6.3 Report work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843DES07B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER307 Establish a rural permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- communicate with work team members, supervisors, contractors and consultants
- utilise recording, reporting, analysis and work procedure documents
- read and interpret the permaculture design
- prepare the area for installation of elements of design
- install elements progressively over an appropriate period of time to establish the rural permaculture system

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles of permaculture and practices in a rural context
 - rural permaculture system design for a farm or small holding where permaculture is practiced
- zone and sector analysis, for example:
 - consideration of the frequency of use and intensity of need of elements in the system
 - consideration of the spatial requirements of elements in the system
 - mutual benefit and connections between zones
 - consideration of the specific needs of the location of the system in terms of climate, access, slope, potential for wild fire, flood, tsunami or other catastrophic force
 - Consideration of the neighbouring or local environment, its need, products and intrinsic features
- Establishment of permaculture elements:
 - Elements which together form a system

- species chosen for their functions in the overall system including plants, animals and objects
- elements chosen for mutual benefit
- elements which address important functions such as energy, water, food and fuel
- elements which support the needs of the system within the overall design
- the objectives of the plant system establishment program, including finished plant system forms, site appearance, end use and time constraints
- the interactions between plants and animals and how to maximise the benefits
- cultural requirements, planting procedures and follow-up care for plants
- environment and habitat requirements of animal species
- the identification of pests, diseases, parasites, and deficiencies that are likely to affect plants and animals and the use of appropriate treatments
- soils and appropriate soil amelioration techniques
- the ecology of the native species, and their value in a permaculture system

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER308 Establish an urban permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to establish an urban permaculture system from a permaculture design, as well as knowledge of a broad range of integrated plant and animal systems, urban retrofitting skills, soil improvement, water harvesting and work site coordination skills.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to establish an urban permaculture system	1.1 Read and interpret the design for the permaculture system 1.2 Identify the site, planting methods and system features 1.3 Select materials, tools, equipment and machinery
2. Establish the urban permaculture system	2.1 Coordinate work tasks 2.2 Establish the permaculture system 2.3 Maintain a clean and safe work area
3. Prepare the area	3.1 Undertake site retrofitting as required 3.2 Select and apply additives to the soil as required 3.3 Follow the permaculture design and mark out patterns or positions of elements on site
4. Position elements in the urban permaculture system	4.1 Inspect elements prior to planting, introduction or installation and remove plants with major defects 4.2 Trim or treat plants with minor defects to maintain health and vigour 4.3 Position elements to enable them to develop their full potential according to zone and sector analysis, pattern understanding and the permaculture design 4.4 Provide elements with post-installation care
5. Monitor establishment of the urban permaculture system	5.1 Monitor the system and take corrective action as needed 5.2 Identify situations which will prevent elements from reaching their full potential 5.3 Complete works for the permaculture design
6. Complete establishment of the urban permaculture system	6.1 Remove or dispose of waste material appropriately from the site 6.2 Clean, maintain and store tools, equipment and machinery 6.3 Report work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843DES08B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER308 Establish an urban permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- Communicate with work team members, supervisors, contractors and consultants
- utilise recording, reporting, analysis and work procedure documents
- interpret the permaculture design
- install elements progressively to establish the urban permaculture system (over an appropriate period of time)

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles of permaculture and practices in an urban context
- Urban permaculture systems, such as:
 - houses and gardens where permaculture is practiced, or a productive section of it
 - community gardens or city farms where permaculture is practised
 - school gardens where permaculture is practised, or productive sections of them
 - Chicken, rabbit, guinea pig or other tractor systems
 - continuous worm farm systems
 - chicken dome pattern systems
 - tyre pond and mandala aquaculture systems appropriate to an urban permaculture system
 - aquaponics systems
 - duck and rice systems and other integrated systems appropriate to an urban permaculture system which utilise an animal, fish or bird species to generate a yield in association with plant species

- Zone and sector analysis
 - Consideration of the frequency of use and intensity of need of elements in the system
 - Consideration of the spatial requirements of elements in the system
 - Mutual benefit and connections between zones
 - Consideration of the specific needs of the location of the system in terms of climate, access, slope, potential for wild fire, flood, tsunami or other catastrophic force
 - Consideration of the neighbouring or local environment, its needs, products and intrinsic features
- Elements in permaculture elements
 - Elements which together form a system
 - species chosen for their functions in the system, including plants, animals and objects (built or existing)
 - elements which are chosen for mutual benefit
 - each important function (energy, water, food, fuel etc.) is supported by many elements
 - elements support the needs of the system within the overall design
- the interactions between plants and animals and how to maximise the benefits
- plant and animal species and their cultivars or breeds and what they contribute to the system
- cultural requirements, planting procedures and follow-up care for plants
- environment and habitat requirements of animal species
- the identification of pests, diseases, parasites, and deficiencies that are likely to affect plants and animals and the use of appropriate treatments
- soils and appropriate soil amelioration techniques
- the ecology of the native species, and their value in a permaculture system
- site retrofitting for urban permaculture systems:
 - constructing soil retainers
 - installing irrigation and drainage systems including swales, diversion drains, mulch-pit paths
 - establishing integrated plant and animal systems
 - collection and storage of nutrients or water
 - solar passive modifications to structures

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER309 Install and maintain permaculture water systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit provides the skills and knowledge to install and maintain permaculture water systems, organise resources for installation work, set out and prepare site, install water system components, complete installation work, commission water system systems and communicate with work team members, supervisors, contractors and consultants.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Organise resources for	1.1 Identify the construction site and construction method for the

Element	Performance criteria
installation work	<p>permaculture water system according to the permaculture plan</p> <p>1.2 Select materials, tools, equipment and machinery, water storage, movement and filtering systems according to the permaculture design requirements</p> <p>1.3 Check parts and equipment delivered to the site according to system drawings and specifications on the permaculture plan</p> <p>1.4 Check water supply to ensure that it is compatible with system specifications</p> <p>1.5 Carry out pre-operational and safety checks on tools, equipment and machinery according to manufacturer's specifications</p> <p>1.6 Select, use and maintain suitable safety and personal protective equipment</p>
2. Set out and prepare site	<p>2.1 Measure and mark out permaculture water system lines or lay out in accordance with the permaculture plan</p> <p>2.2 Dig trenches, where required, at the specified depth without damage to services, facilities, features and established plants</p> <p>2.3 Ensure that equipment operation and work practices conform with OHS requirements</p> <p>2.4 Observe any regulations and legislative requirements relevant to the situation</p> <p>2.5 Consider the needs of other stakeholders while setting out and preparing the site for permaculture water systems</p>
3. Install permaculture water systems	<p>3.1 Interpret the permaculture plan and, where applicable, supervise and monitor work by contractor</p> <p>3.2 Assemble and connect parts of irrigation systems, where used, according to manufacturer's specifications and the permaculture plan</p> <p>3.3 Install and adjust pump fittings and valves, where used according to manufacturer's specifications and the permaculture plan</p> <p>3.4 Maintain a clean and safe work area while installation work is carried out</p> <p>3.5 Check that works can be carried out without a licensed plumber and direct work to licensed individuals where required.</p>
4. Complete installation work	<p>4.1 Finish off earthworks to permaculture plan specifications</p> <p>4.2 Check the system configuration and capacity matches the installation plan</p> <p>4.3 Remove or dispose of waste material from the site, and restore site to original state in an environmentally aware and safe manner</p> <p>4.4 Clean, maintain and store tools, equipment and machinery</p>

Element	Performance criteria
5. Commission permaculture water systems	5.1 Prime, start up and flush irrigation and pump systems, where installed, in accordance with the operation manual 5.2 Identify and correct any operating faults according to operations manual 5.3 Test, calibrate and monitor equipment, where used, according to manufacturer's specifications 5.4 Record or report work outcomes, where appropriate
6. Monitor and maintain permaculture water systems	6.1 Regularly check permaculture water systems and monitor for optimum performance 6.2 Carry out routine maintenance procedures on permaculture water systems 6.3 Carry out repairs on permaculture water systems as required 6.4 Install erosion and sediment control measures, if required, in accordance with manufacturer's recommendation and the permaculture plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843WAT09C.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER309 Install and maintain permaculture water systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- organise resources for installation work
- set out and prepare site
- install permaculture water systems materials and components, excluding works requiring a licensed plumber.
- commission a permaculture water system
- monitor and maintain permaculture water systems
- communicate with work team members, supervisors, contractors and consultants

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture practices regarding water including natural flows, rainwater and wastewater, storage, movement and retention of water in the system
- permaculture water systems, such as:
 - swales
 - contour banks
 - terraces
 - mulch-pit paths
 - diversion channels and other passive installations
 - mains pressure systems
 - low pressure or gravity systems
 - below-ground systems
 - above-ground systems

- spray, dripper and capillary irrigation systems
- water tanks
- guttering and first-flush diversion system
- water supply components, such as:
 - mains
 - dam
 - bore
 - windmill
 - tank
 - channel
- understanding of contours
- installation methods and techniques for permaculture water systems
- components of permaculture water systems
- characteristics and operation of joints, valves and sprinkler components
- operation of pumps and water flow rates
- behaviour of water on varying terrain and soil types
- soil water retention testing techniques
- water quality and water filtration techniques
- calculations for installing permaculture water systems
- soil characteristics
- regulations and legislative requirements, such as:
 - permits for pruning or removal of large trees
 - connecting to water systems
 - licences for operating specialised machinery, such as chainsaws, skid steer loaders and forklifts
 - setting up traffic and pedestrian barriers
 - digging near services (phone, gas, power, water, sewerage and drains)
 - installing dams or diverting water in catchments
 - installing tanks
 - planning acts and codes
 - earth movement and digging guidelines and legislation
 - environmental legislation
 - land restoration codes
 - water conservation guidelines and legislation
 - soil movement regulations
 - habitat and wildlife protection legislation

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER310 Install structures for permaculture systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to install permaculture structures and features. These structures and features may include fences, trellises, animal housing, sheds, pergolas, appropriate technologies and other constructed features.

All work is carried out to comply with workplace procedures. Manufacturer's specifications are observed and operating instructions are followed when using tools and equipment.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Plan and prepare for	1.1 Interpret plans and clarify specifications with the manager,

Element	Performance criteria
structural work	client or owner 1.2 Check the quantity and quality of materials to ensure they conform to permaculture design drawings and specifications 1.3 Select and check tools and equipment 1.4 Identify work health and safety hazards, assess risks, implement controls and take appropriate action 1.5 Identify environmental implications of installing permaculture structures
2. Set out the site for the structure	2.1 Determine the location of services from site plans and from local knowledge 2.2 Mark out the position of the structure or feature using permaculture design drawings and specifications 2.3 Excavate and prepare any footings or post holes appropriate to the type of structure to be installed
3. Prepare and cut materials	3.1 Lay out materials ready for assembly 3.2 Mark out the length of materials and the positions of joints according to designated specifications in the permaculture design drawings 3.3 Select, use and maintain cutting and other tools 3.4 Cut and join materials in preparation for assembly
4. Assemble and erect structure	4.1 Assemble materials into position and fix into place 4.2 Finish structure to ensure all materials are secure and complete 4.3 Apply any required coatings
5. Check quality of work and clean-up site	5.1 Inspect quality of finished works and ensure the standard of the finished structure or feature is appropriate to the permaculture design drawings and specifications 5.2 Clean up debris from structure and site 5.3 Dispose of waste material 5.4 Store or recycle unused materials for future re-use 5.5 Clean and store tools and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843BUI10B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER310 Install structures for permaculture systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- interpret permaculture design drawings and specifications
- measure and mark lengths of materials accurately
- join and cut materials using different techniques and methods
- install and check permaculture structure

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles regarding structures and the built environment
- Permaculture design drawings and specifications, such as:
 - Permaculture design including construction detail drawings
 - measured drawing of structure in accordance with permaculture principles
- measuring principles and techniques
- typical permaculture structures, such as:
 - garden structures and features
 - fences and trellising
 - animal housing and shelters
 - netting structures and protective devices for plants
 - paving and landscaping
 - composting and worm-farming structures
 - retaining walls, observing relevant regulatory conditions
 - sheds or small outbuildings, observing relevant regulatory conditions)

- components of houses or other buildings, observing relevant regulatory conditions
- the correct use of hand and power tools and other work health and safety requirements associated with installing structures and features
- comparative environmental implications associated with excavation and construction activity
- safe lifting and transporting techniques
- appropriate use of personal protective clothing and equipment (PPE)
- appropriate use and installation of safety signs and barriers
- site access points
- implication of alteration to water flow during and after construction

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER312 Plan organic garden and orchard systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan organic garden and orchard systems. It requires the application of horticultural and permaculture knowledge including permaculture principles, plant types, conditions and requirements to establish orchards for optimum production.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Assess site for organic garden and orchard system	1.1 Inspect the site for environmental and physical attributes 1.2 Research site characteristics, using a range of information sources 1.3 Test soil and analyse the results 1.4 Identify site constraints and opportunities 1.5 Define location of existing structures and services 1.6 Prepare site plan and zone and sector plan of site, based on information collected
2. Select plants for organic garden and orchard system	2.1 Select suitable plant varieties and types 2.2 Determine preferred type of plant materials for planting 2.3 Determine number and size of plants and plant materials
3. Develop planting plan for organic garden and orchard system	3.1 Identify zone and sector details from the site plan 3.2 Identify and place plants to be installed 3.3 Record required actions, timelines and specific information on the plan 3.4 Investigate availability of plants, materials and services for the system

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843IPA12B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER312 Plan organic garden and orchard systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess site for planting
- test soil and analyse the results
- select plants
- identify zones and sectors of site to ascertain best planting locations
- identify structures and services and how these may impact on the plan
- develop planting plan to include at least 5 fruit trees or shrubs

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and ethics
- permaculture site planning
 - boundaries of sites drawn at an appropriate scale
 - direction of North (or sunward)
 - location of plants
 - other information relevant to a permaculture garden and orchard system drawn in clear and accurate graphic style
 - planting schedules and timelines, including Gantt charts
- zone and sector planning, such as:
 - zones for garden and orchard systems (Zones 1 and 2)
 - sector information such as prevailing winds, fire aspect, winter and summer sun angles, best locations for sun-loving and shade-tolerant species
 - microclimate information

- zone and sector plans drawn as overlays to a site plan
- garden and orchard systems, such as:
 - an orchard with 5 to 10 or more assorted fruit trees or shrubs
 - integrated plant and animal systems
 - consideration of and design for plant ecosystem relationships
- soil structure, types and function, including soil tests for agricultural purposes
- soil maintenance and improvement techniques
- aims and purposes of building organic garden and orchard systems
- design principles for organic garden and orchard systems
- features and characteristics of plants used in organic garden and orchard systems
- growing requirements of plants used in organic garden and orchard systems
- biosecurity policies and principles

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER313 Coordinate preparation and storage of permaculture products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit provides the skills and knowledge of permaculture product preservation techniques; planning for the preparation of permaculture products; handling and storage requirements of permaculture products and their treatment, storage and presentation requirements.

All work is carried out to comply with workplace procedures. Individuals observe manufacturer's specifications and follow operating instructions when using tools and equipment.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to

Element	Performance criteria
essential outcomes.	demonstrate achievement of the element.
1. Plan for preparation of permaculture products	1.1 Identify permaculture products to be prepared 1.2 Select materials, tools, equipment and machinery 1.3 Carry out pre-operational and safety checks on tools, equipment and machinery in accordance with manufacturer's specifications 1.4 Select, use and maintain suitable safety and personal protective equipment (PPE)
2. Co-ordinate preparation of permaculture products	2.1 Prepare permaculture products in sequence according to the product preparation plan 2.2 Ensure that all assistants are familiar with the plan 2.3 Maintain clean, safe and hygienic work area throughout and on completion of work
3. Treat permaculture products	3.1 Grade and label products in accordance with the product preparation plan 3.2 Identify and dispose of products that do not meet specifications, according to best environmental practice 3.3 Select treatments according to product requirements and the product preparation plan 3.4 Treat permaculture products in an economical, methodical, and efficient manner that minimises damage to products
4. Pack and present permaculture products	4.1 Implement packing and presentation requirements as specified in the product preparation plan 4.2 Label and date products as required 4.3 Monitor packing and presentation of products and take corrective action to ensure that packing and presentation meet required standards
5. Store permaculture products	5.1 Identify available storage area so that product can be moved there quickly and efficiently 5.2 Adhere to storage requirements specified in the product preparation plan 5.3 Monitor storage processes and facilities and take corrective action, when required, to maintain product quality

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843RES13B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER313 Coordinate preparation and storage of permaculture products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan for preparation of permaculture products
- process and preserve permaculture products
- pack, present and store permaculture products
- coordinate the work of others in the preparation and storage process

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles related to product preservation and storage
- seasonal availability cycles
- products suitable for storage
- the following plant products:
 - fruits
 - vegetables
 - seeds
 - herbs
 - flowers
 - foliage
 - grains
 - bulbs
 - tubers
 - nuts

- mushrooms
- wild harvest plants
- oils
- firewood
- bamboo
- timber
- legumes and pulses
- mulch
- straw
- hay
- sawdust
- sap
- the following animal products:
 - meat
 - eggs
 - milk and dairy products
 - honey and bee products
 - young animals
 - fish fingerlings
 - feathers
 - wool
 - manure
 - bones
- storage methods appropriate to particular products
- treatment methods appropriate to particular products,:
 - removal of dirt and foreign material
 - stripping excess leaves and/or trimming
 - brushing
 - washing/hydration
 - drying
 - applying preservatives
 - dipping
 - observing quarantine requirements
 - storing in a controlled environment
 - comply with organic standards, if appropriate
- the importance of maintaining the quality of products including handling and storage requirements
- correct storage conditions for products:
 - specifications for storage facilities
 - environmental conditions such as temperature, humidity and light

- length of storage
- position in the storage facility: shed, cellar, root cellar, pantry, barn, refrigerator, freezer, drying room
- cleaning processes to ensure a level of hygiene that protects the quality and health status of the stored products
- hygiene issues in the handling and storage of biological products

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER314 Read and interpret property maps and plans

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to read and interpret property maps and plans, take information from maps and use maps in field situations.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Recognise maps and plans	1.1 Define different types and uses of maps and plans 1.2 Recognise features and characteristics of different maps and

Element	Performance criteria
	plans 1.3 Identify scale 1.4 Define and locate North 1.5 Recognise mapping conventions and common symbols
2. Take off information from maps	2.1 Determine distances and areas from maps and plans 2.2 Identify topographic features from maps and plans 2.3 Recognise site boundaries and site structures from maps and plans
3. Use maps in field situations	3.1 Locate current position in the field using landmarks and key geographical features 3.2 Recognise hazards and potential hazards in traversing from location to destination and interpret these from maps or plans, field observations and local knowledge 3.3 Check accuracy of maps or plan content against site features 3.4 Set out contour lines on site from maps or plans 3.5 Locate keylines and key points on map and in the field 3.6 Set out zones or property boundaries using grid system from maps or plans

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843DES14B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER314 Read and interpret property maps and plans

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- define maps and plans
- determine distances and areas
- identify topographical features
- identify site boundaries and site structures
- use maps to take-off information
- use maps in field situations

Knowledge Evidence

The candidate must demonstrate knowledge of:

- maps and plans
 - paper
 - electronic
 - 3D models of sites, including sand-box models
 - contour models
 - elevations and cross-sections
 - aerial photographs
- the following mapping conventions: symbols, distance and scale, direction, coordinate systems, line and area symbols, true North, grid North and magnetic North
- land survey systems, map projections, colour and symbol systems
- contours, slopes and slope profiles
- keyline and key point locations, as described in *Water for Every Farm* by P.J. Yeomans
- topographic features

- curved planes on flat surface distortions
- means of locating current position in the field, such as:
 - GPS
 - other positioning systems such as the sun, moon and stars
 - compass bearings

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER315 Coordinate community projects

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to coordinate small-scale community projects and small groups of people working on a permaculture-related project.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for community project	1.1 Clarify requirements of the community project after community consultation and design

Element	Performance criteria
	1.2 Identify personnel, equipment and material resource requirements appropriate to the scope of the project 1.3 Identify on-site, off-site, purchased, traded or scavenged resources 1.4 Identify and document the order of activities and allocate time to carry them out 1.5 Identify the environmental implications of proposed community projects and assess likely outcomes 1.6 Identify work health and safety hazards, assess risks, implement controls and take appropriate actions 1.7 Select, use and maintain personal protective equipment appropriately (PPE)
2. Organise resources	2.1 Acquire materials, equipment and resources 2.2 Apply for external agency permits in the correct order where required 2.3 Notify affected parties of works to be undertaken where required 2.4 Organise delivery of materials, equipment and resources to site 2.5 Organise personnel to be on site when they are required
3. Coordinate and report on activities	3.1 Coordinate all resources to suit the scope of the project and the project plan 3.2 Direct personnel in activities for each period of work 3.3 Monitor personnel, activities, timelines and resource usage and document 3.4 Recognise contingency situations and take corrective action as appropriate 3.5 Select and train teams to take over the running of the project to ensure the long-term survival of the project, if required 3.6 Write a project report to inform the community and other stakeholders

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD843COM15B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER315 Coordinate community projects

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- read and interpret documentation associated with community projects
- organise field staff and volunteers
- represent and support community organisations
- calculate material and resource requirements
- coordinate project activities
- document and report results

Knowledge Evidence

The candidate must demonstrate knowledge of:

- community projects, such as:
 - small or short-term projects
 - projects that form part of larger projects
 - arranging social events
 - carrying out fundraising and sponsorship
 - representing a community group or project
- environmental awareness associated with undertaking project works to ensure minimal impact on the environment
- work schedule programming
- hiring and subcontracting of labour
- attracting volunteers
- possible causes of disruption to work activities and contingency situations, such as:
 - delay in delivery and/or breakdowns with equipment and machinery

- poor weather conditions
- poor quality materials
- unforeseen problems
- provision for providing other work on the site or away from the site while problems are fixed
- delaying a project if possible and necessary
- responsibilities and requirements for obtaining external agency permits as necessary
- the range, use and availability of materials, equipment and resources required for a project
- work health and safety issues, legislative requirements and Codes of Practice
- community consultation
- project coordination principles
- meeting and committee protocols
- project reporting
 - the project name
 - author name and date
 - project description
 - progress of activities
 - promotions and publicity
 - OHS issues
 - expenditure
 - future project-related activities that require planning

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER316 Select plant and animal species for permaculture systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to select plant and animal species for permaculture systems. It requires knowledge of permaculture needs analysis and bioregional analysis and plant and animal species and their interrelationships.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess the system needs	1.1 Undertake a needs analysis of the permaculture system and its main elements 1.2 Identify possible plant and animal combinations to suit the

Element	Performance criteria
	permaculture system design 1.3 Compile a list of possible plants and animals to suit the design
2. Research plant and animal systems	2.1 Research the plants and animals and any varieties or breeds that the needs analysis has identified 2.2 Observe other working systems that may inform the new design 2.3 Assess local availability of chosen varieties and breeds
3. Select plant and animal species for the permaculture system	3.1 Determine appropriate combinations of plant and animal species for the permaculture system 3.2 Ensure ancillary needs such as housing, prepared ground, shelter and fodder are available and in place before establishing the new plant and animal systems 3.3 Obtain plants and animals elements for the permaculture system 3.4 Monitor plant and animal systems during the establishment phase

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER316 Select plant and animal species for permaculture systems

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess permaculture system needs
- research plants and animals to inform the new permaculture system design
- select plant and animal species for a permaculture system
- monitor plant and animal systems during the establishment phase

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to species selection
- permaculture needs analysis
- bioregional analysis
- plant and animal species and their interactions and interrelationships, such as:
 - permaculture combinations – guilds, companions, nurse plants and animal companions
 - EVCs (Ecological Vegetation Classes)
 - indigenous animals and plants
 - what grows or thrives locally – plants, animals, birds, insects, fish, frogs, reptiles
 - food, fodder and medicinal plant species suitable for chosen animals
 - integrated plant and animal systems such as chicken tractors, cell grazing, aquaculture systems
- basic research techniques
- using primary data sources, such as:
 - original data gathered by the researcher
 - local wisdom

- weather observations
- flora and fauna observations
- using secondary data sources, such as:
 - data provided by government departments and agencies
 - publications
 - reference books, websites and journals
 - official weather data
- communication techniques

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER318 Plan propagation activities for a permaculture system

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to plan propagation activities for a permaculture system. It requires the application of permaculture principles, seasonal propagation opportunities, organic principles and plant growth science.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research propagation requirements for the permaculture system	<p>1.1 Assess propagation needs according to garden needs or permaculture design</p> <p>1.2 Consider opportunities for propagation from local area, such as seed banks, tree or shrub prunings, unusual varieties to be traded or varieties purchased for propagation</p> <p>1.3 Determine numbers of new plants to be produced for the needs of the system and/or for swapping, selling or community needs</p>
2. Develop the propagation plan	<p>2.1 Prepare a propagation plan according to research undertaken</p> <p>2.2 Ascertain best methods for species to be propagated and include them in the propagation plan</p> <p>2.3 Construct a seasonal or monthly timeline or calendar to keep track of propagation requirements</p> <p>2.4 Maintain the propagation plan as an active document through the seasons</p>
3. Implementing the propagation plan	<p>3.1 Consult the propagation plan when planning monthly activities</p> <p>3.2 Clear space in the propagating area for the activity to be undertaken</p> <p>3.3 Set up materials and equipment for propagation work</p> <p>3.4 Organise propagules and apply pre-treatments if required</p> <p>3.5 Create new plants in prepared containers or the garden area according to the propagation plan</p> <p>3.6 Water, fertilise, label, mulch, stake and tie new plants as required</p>
4. Maintaining propagated plants to end use	<p>4.1 Maintain new plants by watering, sheltering and checking for pest or disease attack</p> <p>4.2 Remove any new plants that have failed to thrive to avoid cross-contamination</p> <p>4.3 Apply allowable organic treatments to new plants if required</p> <p>4.4 Harden off new plants in a protected place before planting, selling or swapping</p>
5. Maintain a healthy and orderly propagation area	<p>5.1 Maintain tidiness and orderliness of propagating area</p> <p>5.2 Store propagating materials, potting media and containers for future use</p> <p>5.3 Remove any weed or moss growth regularly to ensure basic</p>

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	hygiene of the propagating and hardening off spaces

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPER318 Plan propagation activities for a permaculture system Release 2	AHCPER318 Plan propagation activities for a permaculture system Release 1	Minor typographical error corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER318 Plan propagation activities for a permaculture system

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research propagation requirements for the permaculture system
- develop a propagation plan
- implement a propagation plan
- maintain propagated plants to maturity or end use.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to propagation:
 - using reclaimed or reused containers (suitably cleaned to avoid cross-contamination)
 - labelling systems using reclaimed materials
 - maintaining rare and unusual varieties
 - using edges and valuing the marginal – unusual plants in micro-climates
 - sharing and swapping to increase biodiversity and mutual wellbeing
 - preserving provenance of locally indigenous species
 - testing and trialling for new plants or resistant varieties
 - global food plant preservation, including seed saving
- propagation plan including such considerations as:
 - seasonal activities
 - seed saving

- needs of the system for plants
- mother plant location and frequency of use
- schedules and timelines
- principles of sustainable horticultural practices
- propagation techniques, such as:
 - cuttings – softwood, hardwood, semi-hardwood, root and tip
 - layering – stool, aerial and runner
 - division
 - grafting – whip and tongue, saddle, wedge, approach and bench
 - budding – shield and patch
 - seed sowing
- potting media suitable for propagation in a garden setting, such as:
 - compost and worm casting mixes
 - sieved and graded sands
 - blends used for different purposes or different times of the year
 - sphagnum moss
 - water (hydroponics or aquaponics)
- plant growth, development and nutrition
- botany and physiology
- maintaining moisture levels in simple systems without causing disease
- systems for protecting new plants and seedlings, such as:
 - polyhouse or shade-house systems, including hoop systems on garden beds
 - systems using reclaimed materials, such as bag-and-frame cloches, bottle protectors for seedlings, tyre stacks, birdcages and wire baskets
 - glass houses
 - shade houses
 - naturally occurring or planned microclimates
- minimal environmental impact waste disposal and composting systems which destroy pathogens.

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER319 Test, improve and maintain healthy soil in a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to test, improve and maintain healthy soil in a permaculture system. It requires knowledge of soils and their components, testing methods, nutrient action and soil improvement systems.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Take soil samples from a number of places in the permaculture system	1.1 Obtain samples from several places over a site 1.2 Prepare the samples for testing 1.3 Label containers accurately with location identifier, date, soil test and tester
2. Test soil for range of plant and structural needs	2.1 Carry out soil tests for texture, organic matter, structure, pH, water infiltration and compaction 2.2 Have samples tested by a laboratory for nutrient levels and deficiencies if concerned or if particular requirements exist for the crops and livestock in the permaculture system 2.3 Re-test in a different season or soil temperature
3. Analyse soil improvement requirements	3.1 Determine requirements for soil improvement from tests carried out 3.2 Determine requirements for soil improvement from the laboratory test results, if taken 3.3 Identify soil biota in soil and ascertain how to optimise biodiversity 3.4 Research soil improvement options, including discussing with neighbours and experienced practitioners appropriate options for soil improvement
4. Implementing soil improvement plan	4.1 Develop a plan for soil improvement over time and vary it depending on the location on the site and the crop or livestock being grown 4.2 Calculate required quantities of allowable additives and supplements to improve soil health 4.3 Use products at recommended rates and according to any existing certification system applying to the land 4.4 Protect soil biota present in soil, including using appropriate mulches for perennial and annual plants
5. Maintain health of soil according to organic guidelines	5.1 Observe changes over time and record using tables and photographic records 5.2 Avoid practices that can cause deterioration in soil health such as over- or under- watering, over-grazing, over-cultivating and off-contour ploughing 5.3 Follow organic and permaculture guidelines to increase soil carbon

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER319 Test, improve and maintain healthy soil in a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- take soil samples
- test soils
- analyse soil improvement requirements
- implement soil improvement plan according to permaculture guidelines
- maintain soil health

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to soil health and plant nutrition
 - working with natural soils rather than importing soil
 - soil as an ecosystem
 - soil as biomass and carbon capture and storage
- principles of sustainable horticultural practices
- how to read a laboratory soil test
- soil testing techniques, such as:
 - jar test for soil structure
 - ribbon test and ball test for soil texture
 - infiltration or permeability test
 - pH testing
 - compaction test
 - non-wetting soil test

- air-filled porosity test
- worm count
- microscopic biota in soils
- plant nutrient uptake and mineral action
- soil chemistry
- science of composting
- fungal and bacterial action and mulches appropriate to different plants
- additives to improve soils, such as
 - compost and worm castings compost teas
 - biochar
 - green manures
 - organic mulch
 - manures/animal bedding materials
 - leaf mould
 - plantings – green manures, nurse plants
 - companion planting
 - chop and drop
 - nutrient trapping systems
 - greywater use
 - organically certified products
 - amendments that may include rock dust, gypsum, dolomite, lime, zircon, sulphur and other minerals
- plant growth and development
- soil life, including microscopic life
- methods of waste disposal causing minimal impact on the environment
- the effects of conventional agricultural chemicals on soils and soil ecosystems

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER320 Manage plant pests, diseases and disorders in a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage plant pests, diseases and disorders in a permaculture system. It requires knowledge of healthy permaculture systems and the pests, diseases and disorders that might need management. It includes focussing on solutions in an integrated design, rather than reacting to infestations.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Identify existing and potential pests, diseases and disorders in the permaculture system	1.1 Using observation of plants in the permaculture system, identify existing or potential for pest attack, disease or disorders 1.2 Using climatic data and weather observations, identify existing or potential for pest attack, disease or disorders 1.3 Monitor balances within the system such as pest and predator balances 1.4 Maintain a record of observations
2. Research pest, disease and disorder prevention methods	2.1 Research pests, diseases and disorders using both primary and secondary sources 2.2 Consult widely and use both electronic and conventional reference material 2.3 Establish prevention methods for maintaining a healthy balance 2.4 Research possible negative effects of treatments on other elements of the permaculture system
3. Develop a pest and disease management program	3.1 Develop a plan based on the research conducted and the observations made 3.2 Include information about weather conditions, time of year, cycle of pests or disease vectors in the management program
4. Implement the pest and disease management program	4.1 Provide solutions that address the interactions of many elements in the system rather than spot treating outbreaks 4.2 Avoid practices that spread disease, such as propagating using diseased plants, or using un-sanitised tools when pruning orchard trees 4.3 Provide habitat and microclimate conditions for useful insects, plants, birds and animals 4.4 Carry out permaculture practices that minimise the risk of pest and disease problems 4.5 Update the management program regularly so that it is active and useful to the permaculture system
5. Monitor and record the management of plant pests, diseases and disorders over time	5.1 Keep records of pest and disease control operations, noting weather conditions and times of year 5.2 Use records to enable predictions of or responses to possible disease and pest recurrences in similar weather or times of the year 5.3 Maintain records over time to build a history of the permaculture system

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER320 Manage plant pests, diseases and disorders in a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify existing and potential pests, diseases and disorders in the system
- research methods of managing pests, diseases and disorders in a permaculture system
- develop a pest and disease management plan
- implement a pest and disease management plan
- monitor pest and disease managements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to managing plant pests, diseases and disorders
- principles of maintaining healthy permaculture crops, such as:
 - companion planting
 - increasing diversity
 - providing habitat and food for pests' natural predators
 - healthy, balanced soil
 - minimal use of soluble fertilisers
- allowable control methods in organic systems, such as
 - deterrent organic sprays
 - pheromone traps and lures
 - predatory and/or parasitic insects, mites and other organisms as part of biological control
 - nutrient additives

- crop rotation
- covers and netting
- BT (*Bacillus thuringiensis*) and other action-specific micro-organisms
- symptoms of disease and disorders in plants
- care needed to avoid transferring infections (such as through grafting and pruning practices)
- stages of development of pest organisms and signs of pest presence on plants and animals
- planting for insectivorous birds, lizards, frogs and microbats
- fungal, bacterial and viral infestations and their symptoms
- disease vectors and plants that harbor them
- companion planting
- succession planting

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER321 Demonstrate permaculture practices to small groups of learners

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to demonstrate permaculture practices to small groups of learners. Demonstration of techniques related to animals, plants, structures, energy, resources and community development are covered in a non-threatening and experiential setting. It is intended for school teachers and those who demonstrate permaculture skills to small groups of learners in different situations and contexts.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify audience for demonstration	1.1 Identify characteristics of audience to cater to their needs 1.2 Confirm numbers and, if possible, names of individuals 1.3 Identify time allowed for demonstration 1.4 Identify location and facilities where demonstration will take place
2. Identify topic for demonstration	2.1 Identify topic/s for demonstration 2.2 Research topic/s and clarify best demonstration location and facilities 2.3 Develop order of demonstration, from patterns to details
3. Develop demonstration methods and resources	3.1 Develop participatory planning activities for the sessions 3.2 Develop participatory learning activities for each topic 3.3 Prepare materials and equipment, including enough of everything for the audience size 3.4 Develop review and revision activities for longer sessions 3.5 Confirm all materials, tools and equipment is present and in working order, including safety equipment for the demonstration
4. Conduct demonstration	4.1 Conduct a site and safety briefing 4.2 Conduct a group introduction session for names and stories of participants 4.3 Clarify the planning of sessions for the participants 4.4 Clarify each learning activity and then conduct it 4.5 Conduct review and revision activities as required 4.6 Close the session and clean up in a participatory way that includes session participants
5. Take feed-back from audience	5.1 Conduct a review of the demonstration/s 5.2 Collect feed-back information and address any issues identified 5.3 Use feed-back in future demonstration planning

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER321 Demonstrate permaculture practices to small groups of learners

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify audience for demonstration
- identify topic/s for demonstration
- prepare resources for demonstration
- conduct demonstration
- collect and use feed-back to address immediate issues or for future demonstration planning

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and ethics
- Permaculture practices, such as:
 - minimising effort for maximum effect
 - multiple uses for each element in the system
 - using more than one way to provide important functions
 - re-using and valuing resources and energy
 - encouraging productivity of a permaculture system
 - seeing solutions, not problems
 - using vertical space and other edges and connections
 - preventing waste and loss of resources from a permaculture system
- participatory planning and learning activities for topics such as:
 - methods of design
 - pattern understanding and integrated systems

- animal and plant species selection methods
- ecological principles
- climatic and geological influences
- water in the system
- soils
- earthworks for capturing nutrients
- permaculture structures and features
- different appropriate technologies that can be used
- resource use and reuse
- energy

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate III (or higher) in Permaculture. Completion of a Permaculture Design Course (PDC) is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER401 Provide advice on permaculture principles and practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide advice on permaculture principles and practices. It requires knowledge of permaculture principles and practices. It also requires skills in identifying client needs and requirements, providing advice on permaculture practices and in researching and relating detailed permaculture information and advice to clients.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to

Element	Performance criteria
essential outcomes.	demonstrate achievement of the element.
1. Identify client requirements for advice	1.1 Initiate contact with the client to determine the scope and type of the permaculture advice required 1.2 Clarify the needs and requirements of the client 1.3 Determine client's resources 1.4 Determine the needs and potential of the site or project
2. Provide information on permaculture	2.1 Provide the client with a written brief outlining the requirements for advice 2.2 Supply the client with information on permaculture design principles and practices 2.3 Respond to client requests for clarification or expansion of information 2.4 Outline relevant literature on permaculture and other sources of information to client 2.5 Record information given to the client
3. Undertake permaculture research	3.1 Research specific applications of permaculture principles and practices related to client needs and requirements 3.2 Determine research strategies and sources 3.3 Research and investigate latest developments in permaculture principles and practices
4. Provide advice on permaculture principles and practices	4.1 Prepare advisory documentation or presentation based on the client brief 4.2 Explain contents of advisory documentation to the client 4.3 Include a statement of limitations of advice 4.4 Respond to client requests for clarification or expansion of permaculture principles and practices 4.5 Take feedback from client

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124PPP01B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER401 Provide advice on permaculture principles and practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify client needs and requirements for information and advice
- propose a selection of permaculture practices and strategies that best suit the needs and resources of the client and the potential of the site
- provide information on permaculture principles
- provide advice on permaculture practices and strategies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles of permaculture based on 12 principles in David Holmgren *Principles and Pathways Beyond Sustainability* and the work of Mollison and Slay
- ethics of permaculture: care for the earth, care for all people, fair share of surpluses, setting limits to biophysical growth (population, resource use and waste)
- permaculture practices and strategies, such as
 - personal, household, community and bioregional strategies
 - sustainable agriculture, horticulture, aquaculture and organic gardening
 - economic alternatives that support sustainable living
 - low energy and low embodied energy building and manufacturing
 - appropriate technology
 - restoration ecology and maintenance of biodiversity
 - sustainable community development, bioregional development and relocalisation
 - Reuse and return of products in manufacturing cycle and waste utilisation, waste water, grey water, sewage and resource treatment for re-use and recycling

- Sustainability education
- elements of permaculture systems
- functions of permaculture systems
- permaculture design techniques
- innovation in plant, animal and technology selection, use and performance
- recent practice in bioregional community development and local energy descent planning
- client communication techniques, record keeping and listening techniques
- preparation of reports and presentations for clients
- uses of Statements of Limitation in the giving of advice

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER402 Design a rural permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design a rural permaculture system. It requires the ability to negotiate with clients to develop a permaculture design brief, undertake a site analysis, develop design concepts and produce final design documentation.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Develop a design brief for a rural permaculture system	1.1 Initiate or respond to contact with the client 1.2 Consult with the client to establish purpose, needs and requirements of design 1.3 Develop a design brief in consultation 1.4 Negotiate cost structures and timelines
2. Undertake design analysis	2.1 Obtain existing maps, geospatial data and aerial photographs of property 2.2 Survey area included in Zones 1, 2 and 3 using suitable survey tools and equipment 2.3 Prepare a base plan 2.4 Record site assessment data on the base plan 2.5 Carry out bioregional analysis of the site 2.6 Carry out research into potential permaculture design elements 2.7 Choose permaculture design elements 2.8 Revise brief with client in relation to completed research and analysis
3. Prepare a design concept	3.1 Evaluate and determine a permaculture system concept 3.2 Prepare conceptual design drawings to illustrate conceptual themes and patterns informing the location and layout of proposed design elements 3.3 Develop and compile a bill of quantities 3.4 Prepare a list of plant and animal species and varieties suitable for the chosen concept 3.5 Prepare a preliminary budget for the conceptual design 3.6 Present the concept plan in a graphic style 3.7 Consult the client and agree on options and approaches for design development 3.8 Review and revise concepts, elements and the design brief after taking feedback from the client
4. Produce final design	4.1 Design the rural permaculture system in accordance with the design brief, research, analysis, chosen elements and concepts 4.2 Produce detailed rural permaculture design documents 4.3 Present design plans, drawings and documents to the client 4.4 Take feedback from the client and revise or modify the design as required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124DES02B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER402 Design a rural permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop a design brief for a rural permaculture system
- draw permaculture and landscape plans
- identify rural permaculture design solutions
- develop permaculture system concepts
- develop planting schedules, budget and bills of quantity
- develop a final design
- present design to client

Knowledge Evidence

The candidate must demonstrate knowledge of:

- elements of rural permaculture design
 - representation of up to 5 zones
 - detailed representation of Zones 1 to 3
 - sector analysis
 - bioregional analysis
 - superimposing of design over commercial aerial photograph or other geospatial representation
- principles of permaculture
- strategies in rural permaculture design, such as:
 - land shaping including contour ploughing, swaling, keyline dam systems, berms and terraces
 - integrated plant and animal systems that suit the bioregion and the land

- natural system preservation and incorporation into overall design
- soil and water preservation
- forest ecology and recharge plantings for maximum water and nutrient cycling
- innovative agricultural systems such as cell grazing, inter-cropping, commons and food forests
- preservation of old and rare breeds of animals
- biodiversity and habitat preservation and enhancement strategies
- design brief
 - statement of scope of design
 - statement of client needs and requirements
 - listing of project elements
 - listing of assessable tasks
 - options for dealing with client needs and requirements
- design analysis and research
 - investigation of permaculture books and publications, online material, audio and video material, maps, plans, charts and tables
 - searches in libraries and databases
 - viewing maps
 - searching geospatial data
 - talking to people in the local area or neighbours
- plan interpretation and map reading
- site analysis
 - initial on-site estimations of soil type, pH, texture
 - topography
 - aspect
 - zone and sectors planning
 - existing vegetation
 - climatic factors
 - indicator species or other landscape-reading notes
- site surveying methods and tools
 - surveying instruments for taking vertical measurements on site
 - surveying instruments for measuring angles on site
 - surveying instruments for measuring distance and horizontal measurements on site
- design concept, such as:
 - preliminary conceptual sketches
 - bubble diagrams
 - preliminary plan, section and elevation design drawings
 - use of design drawing and drafting conventions
 - presentable and legible design drawings for client use
- rural permaculture design

- integration of brief requirements, analytical information and conceptual planning
- rational justification for placement of design elements
- integration of elements to produce an efficient and functional rural permaculture system
- conventional design symbols and those to convey permaculture elements
- design drafting and drawing conventions
- plant and animal selection
- final design
 - rendered plan, elevation and section drawings to scale
 - use of design drawing and drafting conventions
 - use of consistent graphic style
 - supporting legends and keys of elements
 - supporting materials lists, tables, bills of quantity, timelines, installation plans and management plans
 - construction detail drawings
- methods of design
 - zone and sector planning
 - slope planning
 - patterns in space and time

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER403 Design an urban permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design an urban system. It requires the ability to negotiate with clients to develop a permaculture design brief, undertake site analysis, develop design concepts and produce final design documentation.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Develop a design brief for an urban permaculture system	1.1 Initiate or respond to contact with the client when appropriate 1.2 Consult with the client to establish purpose, needs and requirements of design 1.3 Develop a design brief for an urban permaculture system in consultation with the client 1.4 Negotiate cost structures and timelines with the client
2. Undertake design analysis	2.1 Obtain existing maps, geospatial data and aerial photographs of property 2.2 Survey area included in Zones 1 and (if present) 2 to provide information not on existing maps using suitable survey tools and equipment 2.3 Prepare a site plan 2.4 Record site assessment on the site plan 2.5 Undertake bioregional analysis of the site 2.6 Undertake research of potential permaculture design elements 2.7 Choose appropriate permaculture design elements 2.8 Revise brief with client using completed research and analysis
3. Prepare a design concept	3.1 Determine an appropriate permaculture system concept 3.2 Prepare conceptual design drawings to illustrate conceptual themes and patterns informing the location and layout of proposed design elements 3.3 Compile a bill of quantities 3.4 Prepare a list of plant and animal species and varieties suitable for the chosen concept 3.5 Prepare a preliminary budget for conceptual design 3.6 Present the concept plan in a consistent graphic style 3.7 Consult the client and agree on options and approaches for design development 3.8 Review and revise concepts, elements and the design brief after taking feedback from client
4. Produce final design	4.1 Design an urban permaculture system based on the design brief, research, analysis, chosen elements and concepts 4.2 Produce detailed urban permaculture design documents 4.3 Present design plans, drawings and documents to the client 4.4 Take feedback from the client and revise or modify design as required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124DES03B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER403 Design an urban permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- draw permaculture and landscape plans
- identify urban permaculture design solutions
- analyse zones and sectors of site
- develop design concepts
- develop detail and construction drawings
- develop planting schedules, budget and bill of quantities
- develop a final design
- present a design to a client

Knowledge Evidence

The candidate must demonstrate knowledge of:

- elements of urban permaculture design
 - Zones 1 and 2, as the furthest areas represented on the plan (otherwise it is a rural design)
 - needs supplied by other zones, even if they are supplied off site
 - sector analysis
 - bioregional analysis
 - design which may utilise existing architects' drawings or local maps and plans
- principles of permaculture
- strategies in urban permaculture design
- edible landscapes and aesthetics in design
- public landscapes and community garden design

- design brief
 - statement of scope of design
 - statement of client needs and requirements
 - list of project elements
 - list of assessable tasks
 - options for dealing with client needs and requirements
- design analysis and research techniques
- plan interpretation and map reading
- site analysis
 - onsite measurement of site boundaries
 - mapping of boundaries to scale to a plan drawing
 - mapping of contour lines to a scale plan drawing
 - measurement and location of existing infrastructure and features on site
 - mapping of existing infrastructure and features to a scale plan drawing
 - measuring and plotting location of services (power, water, sewer, gas)
 - measuring and plotting location of meters or access points
- site surveying methods and tools
 - surveying instruments for taking vertical measurements on site
 - surveying instruments for measuring angles on site
 - surveying instruments for measuring distance and horizontal measurements on site
- design concepts
 - preliminary conceptual sketches
 - bubble diagrams
 - preliminary plans, sections and elevation design drawings
 - use of design drawing and drafting conventions
- presentable and legible design drawings for client use, such as:
 - domestic systems for urban and suburban properties
 - rooftop, balcony and courtyard gardens
 - public landscapes such as streets, parks, car parks, commercial premises, industrial estates and community centres
 - school gardens and learnscapes
 - community gardens and city farms
 - Community Supported Agriculture systems, urban market gardens and peri-urban small holdings
 - urban forestry
- conventional design symbols and those to convey permaculture elements
- design drafting and drawing conventions
- plant and animal selection
- final design
 - rendered plan, elevation and section drawings to scale

- use of design drawing and drafting conventions
- use of consistent graphic style
- supporting legends and keys of elements
- supporting materials lists, tables, bills of quantity, timelines, installation plans and management plans
- construction detail drawing
- methods of design
 - zone and sector planning
 - slope planning
 - patterns in space and time

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also hold a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER404 Plan and implement permaculture works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan and implement permaculture works through preliminary planning, scope of works, work health and safety policies and procedures, equipment and materials, works schedules, specifications and environmental impacts. Activities also include organising and directing works implementation.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to

Element	Performance criteria
essential outcomes.	demonstrate achievement of the element.
1. Prepare for permaculture works	1.1 Confirm and verify client preferences and contract requirements 1.2 Verify scope of works 1.3 Verify specific statutory obligations 1.4 Conduct a site visit to confirm details of permaculture works plan 1.5 Identify safety hazards and work health and safety obligations associated with the permaculture works 1.6 Verify the availability, quantity and costs of plants and other materials listed in the project schedules 1.7 Verify resources and tools and equipment required for permaculture works 1.8 Confirm availability with suppliers, contractors and appropriate personnel 1.9 Verify site access and establishment issues and follow plan for environmental impacts
2. Follow a permaculture works plan	2.1 Follow safety plan for permaculture works 2.2 List tools and materials required, including amounts and their sources 2.3 Follow the staged program of works to provide a sequential allocation of material resources and works tasks with specifications to meet determined project timelines 2.4 Determine the establishment period and maintenance period of works 2.5 Incorporate seasonal factors and impacts in the staging strategy to allow for planting supply and care, wet day access, machinery use, fire hazards and establishment period
3. Implement the permaculture works	3.1 Take delivery of materials and equipment 3.2 Assemble human resources on site and allocate team leaders 3.3 Undertake works briefing and safety briefing 3.4 Supervise permaculture works 3.5 Complete permaculture works according to the permaculture works plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124BUI04B

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER404 Plan and implement permaculture works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- write reports for supervisors, clients and contractors
- assess a site for opportunities and constraints associated with implementation of permaculture works
- implement a staged permaculture works plan
- determine tools and equipment required
- calculate amounts of materials required

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices
- permaculture works, such as
 - implementing permaculture designs
 - following a permaculture works plan as part of a permaculture project
 - constructing permaculture structures and features
 - implementing permaculture earthworks
- practical understanding of the environmental issues associated with undertaking permaculture works, such as:
 - use of materials that come from sustainable sources
 - duty of care in conserving site's natural values
 - work practices
 - the use and movement of machinery, storage of materials, removal of weeds and movement of soil and other materials into, across and beyond the site

- principles of ecology, including specific plant and animal relationships and habitat requirements
- statutory compliance and obligations, such as:
 - compliance with legislation, ordinances, regulations or bylaws relating to the works or the work site
 - Site responsibilities include OHS, industrial relations and equal opportunity and employment
- site evaluation techniques including methods of analysing soils, waterways and their condition
- practical understanding of the advantages and disadvantages of a range of permaculture procedures
- selection and use of appropriate combinations of machinery and tools
- work health and safety hazards associated with undertaking permaculture works and the controls necessary to remove or minimise risks associated with them
- contract documentation including specifications, plans of permaculture works, services, supplies and surveyors documents
- scope of works determination
- works' breakdown into tasks
- scheduling and time line generation
- task specifications and evaluation

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER405 Select appropriate technology for a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to select appropriate technologies for permaculture systems. It includes identification, research, evaluation, selection and communication of sustainable technology for permaculture applications.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Investigate appropriate technology for permaculture systems	1.1 Review design needs and requirements for potential applications of appropriate technology 1.2 Identify relevant sources and locations of information on appropriate technology 1.3 Determine required scale of appropriate technology 1.4 Identify permaculture principles and practices relevant to the appropriate technology
2. Research appropriate technology for permaculture systems	2.1 Research potential appropriate technology options for the project 2.2 Determine unique characteristics of different appropriate technology options 2.3 Research applications of alternative technologies 2.4 Research requirements for integrating new technology with existing permaculture systems 2.5 Determine capital cost of installation 2.6 Determine training and maintenance required for operation of the different options
3. Evaluate appropriate technology for permaculture systems	3.1 Evaluate potential for integrating new appropriate technologies in the permaculture system design 3.2 Compare potential alternative technologies against cost and efficiency criteria 3.3 Evaluate risks and obstacles of potential appropriate technology options
4. Select appropriate technology for permaculture systems	4.1 Select suitable appropriate technology for the design use 4.2 Determine availability of appropriate technology 4.3 Confirm cost and mode of delivery
5. Communicate appropriate technology for permaculture systems	5.1 Report on research, evaluation and selection of appropriate technology 5.2 Communicate location and detail of selected appropriate technology option on the permaculture design using appropriate drafting and drawing techniques 5.3 Explain appropriate technology and reason for selection to client

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124BUI05B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER405 Select appropriate technology for a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- investigate appropriate technologies for permaculture systems
- evaluate permaculture systems capabilities in relation to the use of new technologies
- evaluate suitability of new technology solutions to the permaculture application
- communicate information and options

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and ethics
- appropriate technologies, such as:
 - technologies involving solar, wind, wood, biomass and water driven equipment for generating power, performing pumping duties, heating hot water and biochar production
 - alternative and resource conserving technologies such as rainwater collection, waste water treatment, composting toilets, cooking stoves, cob ovens, space heating and cooling, household appliances, pedal-powered appliances, enterprise plant and equipment
 - building technology such as natural and resource conserving building materials and techniques including passive solar design strategies and features
 - tools and implements employed in gardening and farming operations such as electric fencing, hand vs. power tools, shredders, mulching machines and use of animal power
 - lifestyle choices and behavioural adjustments to conserve energy and resources to meet sustainability objectives

- smaller scale and lower cost solutions such as maintaining and riding a bicycle, using a refillable pen, using a razor with replaceable blades and substituting other non-disposable items where disposables are normally used
- low energy devices
- ingenuity applied to complex problems to develop simple solutions such as solar powered street lighting
- criteria for determining appropriateness of energy and resource conservation technologies
- principles of passive solar design, embodied energy and carbon emission reduction
- innovations in energy and resource conservation technologies
- role of appropriate technology in energy descent planning and greenhouse gas emission reduction
- types of appropriate technology systems commonly available and applied to the design of energy and resource conscious houses, farms, offices and community projects
- the benefits from combining a number of different appropriate technologies and the limitations of each different technology
- design of systems integrating appropriate technologies

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER406 Identify and analyse bioregional characteristics and resources

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to research, extract and provide information on bioregional characteristics and resources. It requires the ability to process a request for information on bioregional characteristics and resources, identify information sources, organise self and others, ensure information meets request, prepare and finalise reports.

For indigenous contexts, the delivery and assessment against this competency standard must comply with community protocols and guidelines and be supported by elders and custodians of country.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify sources of information on bioregional characteristics and resources	1.1 Identify the need, or respond to a request, for bioregional analysis 1.2 Research relevant sources and locations of information about the bioregion 1.3 Access identified sources and information
2. Organise self or others to obtain information on bioregional characteristics and resources	2.1 Locate information relevant to the particular request 2.2 Coordinate and monitor team work to obtain required information 2.3 Discuss resolutions to problems accessing information with designated person and implement where appropriate
3. Ensure information meets request	3.1 Assess information for its validity and reliability 3.2 Seek clarification and assistance from client group or individual where information is unclear or difficult to understand 3.3 Obtain additional information where available information is inadequate 3.4 Combine different types of information where appropriate, to provide a response to the request
4. Report on bioregional analysis	4.1 Develop a report format, plan and structure 4.2 Compile report using clear and concise language, and edit as appropriate 4.3 Produce report in format required by client
5. Finalise reporting process	5.1 Arrange to review and sign off on report with designated person where required 5.2 Present report to community group or client 5.3 Make a record of report

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124BIO06C.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER406 Identify and analyse bioregional characteristics and resources

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify sources of information on bioregional characteristics and resources
- organise self or others to extract information on bioregional characteristics and resources
- ensure information meets requests
- employ appropriate media to present a report
- prepare, finalise and present a report

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and ethics
- bioregional characteristics and resources, such as:
 - a bioregion as a land and water territory whose limits are defined not by political boundaries, but by the geographical limits of human communities and ecological systems
 - a town or a segment of a city as typical as the main node of a bioregion, as was the pattern of most settlement and economic development until the 20th century
 - water catchment as one of the key identifiers of the bioregion, with the water catchment, storage, use/treatment of effluent and the water quality of rivers and creeks as essential to permaculture design
 - The Ecological Vegetation Class (EVC) of the area or the population of endemic species, as well as the suitability of any other species to grow or breed in the area
 - history, social make-up, land use and population information that go towards understanding an area

- bioregional resources, including the human and social capital or culture of an area, its capacity to produce its own needs and supply surplus to others and its resilience in responding to change or catastrophe
- the natural (biophysical), built, social and cultural elements of the area, including water supply and catchment management systems, transport systems, local exchange trading systems (LETS) and cooperatives, food supply systems, fuel and fibre supply systems
- data held by local councils, community groups, historical societies, individuals and organisations that adds value to a study of the bioregion
- the following bioregional issues: transition initiatives, local food and water security and bioregional self-reliance regarding other components of daily life from local sources as opposed to importing basic needs from long distances at a high cost to the environment
- embodied energy, including how to measure it and compare it with energy output over the life of the item, and consideration of the waste disposal of an item as part of its energy 'cost'
- types of information sources
- methods and means of accessing data
- methods of presenting and formatting information
- means of validating information

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER407 Design harvesting and storage systems for permaculture products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design harvesting and storage systems for products to meet year round supply of fresh and stored produce. It requires the ability to determine harvesting and storage system requirements, identify requirements for maintaining optimum condition of permaculture products and preparing a harvesting and storage plan.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others. They use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to

Element	Performance criteria
essential outcomes.	demonstrate achievement of the element.
1. Determine harvesting and storage system requirements	1.1 Define the range and type of permaculture products to be harvested and stored and negotiate needs and budgets with client 1.2 Determine seasonal requirements for products 1.3 Define optimum harvesting, processing and storage techniques for the products 1.4 Determine opportunities and constraints in respect to site location, cost and layout of storage facilities
2. Identify requirements for maintaining optimum condition of permaculture products	2.1 Carry out research to determine maintenance requirements of products 2.2 Describe treatment requirements for products 2.3 Determine appropriate preservation techniques and processes for products 2.4 Describe preparation requirements for storage of products
3. Prepare harvesting and storage plan	3.1 Describe growing and harvesting schedule and quantities in the harvest and storage plan 3.2 Set out layout of storage area in the harvest and storage plan 3.3 Record the requirements for treatment, preparation and preservation of products in the harvest and storage plan
4. Complete plan for harvesting and storage system	4.1 Evaluate training needs for the harvesting and storage system 4.2 Present the harvesting and storage system plan to client or team

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124RES07B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER407 Design harvesting and storage systems for permaculture products

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine harvesting, post-harvest and storage system requirements
- identify requirements for maintaining optimum condition of products from a permaculture system
- prepare a harvesting and storage plan
- communicate harvesting and storage plan to clients and others

Knowledge Evidence

The candidate must demonstrate knowledge of:

- products from a permaculture system commonly harvested and stored, such as:
 - vegetables where the whole plant is harvested
 - vegetables where part of the plant is harvested
 - perennial plants where fruit/nuts are harvested
 - forests where timber, fuel and fibre crops are selectively removed
 - forests where a range of other medicinal and craft crops are harvested
 - harvest from wild systems (e.g. fruit, nuts, fungi and seeds), where a clear abundance of product has been identified
 - animal products such as eggs, feathers, hides, bone, milk and meat
 - Products may also include those derived from insects (such as honey)
 - fish (such as roe), and other organisms, such as fungi, algae and moss
- design systems for meeting year-round supplies of fresh and stored produce, such as:
 - growing requirements and crop regulation strategies calendar or seasonal chart with planting times of crops

- selection of early, mid- and late season varieties to extend harvest
- number of plants and area to be planted
- crop regulation and maintenance program involving tipping, mounding, thinning, staking
- sequential planting and/or harvesting schedules
- climatic conditions for harvesting crop such as appropriate time of day
- harvest and post-harvest factors influencing plant metabolism and quality
- post-harvest treatment and preparation techniques, such as:
 - flow chart of harvest, treatment, preservation and storage process
 - harvest and post-harvest treatment timelines and schedules
 - design or plans of processing and storage area
 - design of processing technology or equipment such as solar food dryer
 - lists of materials, tools, equipment and ingredients
 - manuals and operating instructions for equipment
 - recipes and instructions
 - anticipated shelf-life of product
 - labelling and recording systems
 - work health and safety, food safety, hygiene and other relevant enterprise and work practices
- preservation methods and processes for products from a permaculture system, such as:
 - drying and dehydrating
 - bottling
 - cheese-making
 - extraction (honey, cold-pressed and distilled oils)
 - culturing or fermenting
 - preserving with vinegar, oil, brine, sugar, salt and other natural agents
 - air exclusion (sealing with fats, wax, vacuum seal)
 - cellaring and root-cellaring
 - other processes that use minimal fossil fuel energy while maintaining the integrity of the harvested crop
- technologies used in crop processing, treatment, preservation and storage systems
- design of storage areas, such as:
 - buildings such as sheds
 - cupboards
 - shelving and racks
 - work benches
 - store rooms
 - pantry
 - cool store
 - cellar

- root cellar
- bins and containers
- developing planting and harvesting schedules for products from a permaculture system
- identifying training needs for harvest and storage workers, such as:
 - work health and safety, and other relevant enterprise and work practices
 - food safety and hygiene standards
 - appropriate clothing and personal protective equipment (PPE)
 - harvest and post-harvest handling, processing and storage practices
 - food preserving techniques
 - operation and maintenance of tools and equipment
 - reporting, recording and labelling procedures
- preparing plans and reports
- food safety, health and hygiene requirements for preservation and storage of products for human consumption

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER408 Implement and monitor animal health and welfare programs for a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit provides the skills and knowledge to implement and monitor animal health and welfare programs for a permaculture system. It requires the ability to provide information to clients and animal owners about animal welfare, facilitate the participation of others in complying with animal health and welfare guidelines, implement and monitor enterprise programs for animal care, deal with animal emergencies and maintain animal health records.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Provide information about animal care in a permaculture system	1.1 Accurately and clearly explain to the client relevant permaculture practices towards animal health and welfare 1.2 Provide readily accessible information on animal care and maintenance and accurately and clearly explain this to clients and animal owners 1.3 Regularly provide information about identified animal health and welfare requirements and accurately and clearly explain this to clients and animal owners
2. Facilitate the participation of workers in animal care and maintenance in a permaculture system	2.1 Follow the permaculture plan for animal care and maintenance 2.2 Monitor animal health and welfare compliance with workers and others 2.3 Ensure adequate resource allocation and monitor to ensure effective animal health and welfare programs continue
3. Implement and monitor animal health and welfare procedures in a permaculture system	3.1 Identify and report existing and potential hazards to animal health and welfare so that effective remedial measures are implemented 3.2 Carry out animal health and welfare induction and training for workers and others 3.3 Establish strategies to maintain routines for animal health and welfare in the permaculture system 3.4 Monitor the procedures for animal health and welfare implemented by workers and others, to ensure consistency and adherence to the permaculture plan
4. Implement workplace procedures for dealing with animal health and welfare emergencies	4.1 Implement workplace procedures for dealing with animal health and welfare emergencies where necessary to ensure that prompt and effective control action is taken 4.2 Report animal health and welfare emergencies in accordance with established procedures 4.3 Implement measures to prevent recurrence and minimise risk of animal health and welfare emergencies
5. Implement and monitor enterprise procedures for maintaining animal health and welfare records	5.1 Complete animal health and welfare records accurately and legibly in accordance with permaculture procedures and legislative requirements 5.2 Identify potential hazards to animal health and welfare by using aggregate information from animal health and welfare records 5.3 Provide regular training to workers and others so that records are understood and used for the health and welfare of animals

Element	Performance criteria
	in the permaculture system

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124IPA08B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER408 Implement and monitor animal health and welfare programs for a permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- provide information to clients, workers or animal owners about animal health and welfare
- implement animal health and welfare procedures
- monitor animal health and welfare procedures performed by others
- maintain animal health and welfare records
- provide training in understanding and using records for the health and welfare of animals in a permaculture system

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles, ethics and practices relating to integrated animal systems, such as:
 - minimising effort for maximum effect
 - multiple uses for each element in the system
 - using more than one way to provide important functions
 - re-using and valuing resources and energy
 - animal welfare and freedom from cruelty as part of care for the earth
 - encouraging productivity of the system
 - seeing solutions not problems
 - preventing waste and loss of resources from the system
- animal health and welfare requirements, practices and procedures, such as:
 - maintenance of animal housing, enclosures and fencing, covering hygiene and welfare

- ensuring availability of suitable forage, fodder and supplementary feedstuffs, and adjusting stocking rates, ranging and rotation schedules to suit
- Coordinating the following integration of animal ranging and maintenance with plant production systems: ranging in orchard to manure trees, reducing weeds, controlling pests, eating windfall fruit, tractor systems, composting manures and housing litter and maintaining firebreaks
- researching, assessing, implementing and monitoring supplementary stock feed requirements, feeding quantities and schedules
- researching and applying organic alternatives for treating stock in compliance with organic certification authorities, which may include herbal and homoeopathic treatments, mineral and vitamin supplements and permitted medications
- developing appropriate handling procedures to reduce stress
- harvesting, sourcing and handling the following useable products: milking, collecting eggs
- providing range areas for shade and shelter from climatic extremes through appropriate planting, including forage and fodder plants.
- equipment, including feeders and waterers, and back-up systems and alarms in case of equipment failure.
- lighting
- ventilation including fresh air, dust filters, humidity, and noxious gases.
- temperature, including cooling and heating, extreme weather conditions
- protection from predators, vermin, fires and floods.
- food with diet containing adequate nutrients
- water, including sufficient drinkable water to meet livestock requirements and monitoring water quality.
- health and distress, with signs of ill-health or distress in animals (as evidenced by behavioural changes) including reduced food and water intake, reduced production, changes in the nature and level of their activity, abnormal condition or changed physical features.
- prevention of infectious disease and internal and external parasitism.
- transport of growing and adult livestock
- animal physiology
- animal emergencies, such as:
 - injury
 - disease
 - failure of feeding or watering systems
 - poisoning
 - tick fever
 - birthing difficulties
 - escapement from housing or enclosures
 - predator attack
 - natural disasters such as bushfire, flooding, severe storm, other extreme weather event

- relevant animal welfare legislation and codes of practice
- animal health and welfare records, such as:
 - farm livestock records
 - daily harvest/yield records (eggs, milk)
 - feeding schedules and rosters
 - rotation schedules and successional grazing regimes
 - accident and emergency reports
 - entries into data base or other management software
 - worker records and reports
 - emergency reports
 - animal morbidity
 - work procedures and practices
 - seasonal factors and weather records
 - questioning client and/or workers
 - observations from inspecting animal systems
 - operational practices such as bedding change rotation, cell grazing, alternating flocks
- industry animal health requirements
- legislative requirements, such as:
 - compliance with council ordinances
 - planning approval
 - licence from government agency
 - animal welfare legislation
 - workplace legislation and awards

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER409 Manage a permaculture seed bank

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage a permaculture seed bank. It requires the ability to plan seed collection, implement seed collection and maintain a seed collection in storage. Managing a permaculture seed bank requires knowledge of plant biology, handling and extraction of seed, treatment and documentation, collecting ethics, protocols and legislative parameters and storage techniques.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to

Element	Performance criteria
essential outcomes.	demonstrate achievement of the element.
1. Plan seed collection for a permaculture seed bank	1.1 Analyse requirements for seed collecting, and interpret them for required seed characteristics and implementation issues 1.2 Identify opportunities for seed collection from field observation and liaison with other specialists in this field 1.3 Identify and mark on a plan suitable areas and plants for seed collection 1.4 Select method of seed collection appropriate to the geography of the local area, size and type of plants and available resources 1.5 Determine and document quantity of seed to be collected from each provenance 1.6 Liaise with relevant authorities or owners and seek approvals where required
2. Implement seed collection program	2.1 Coordinate and schedule people, materials and equipment required by the seed collection program 2.2 Identify and obtain any permits and approvals required for the seed collection 2.3 Identify the seed and complete the required documentation
3. Maintain a seed collection	3.1 Check the quantity, quality and provenances of the collected seed 3.2 Check and monitor the health of seed collected and take remedial action where required 3.3 Control pests and conditions detrimental to seed health 3.4 Dispose appropriately of seeds that are non-viable owing to age or pest attack 3.5 Supply true to type and appropriately labelled seed to others 3.6 Record up to date details of seeds held in storage

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124RES09B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER409 Manage a permaculture seed bank

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan seed collection
- implement a seed collection program
- maintain a seed collection

Knowledge Evidence

The candidate must demonstrate knowledge of:

- flowering biology of the target species
- biological signs which indicate that the seed crop is ready to be collected
- seed banks, such as:
 - community seed banks and networks
 - private seed collections
 - organic food production enterprises such as market gardens
 - community supported agriculture seed sources
 - community garden and city farm seed banks
 - supply of vegetative propagation for perennial plants
 - heritage and non-hybrid seed distributors
 - heritage and non-hybrid seed producers
 - permaculture plant and seed nurseries
 - community seed swaps
- methods of seed collection, such as:
 - hand-picking seeds or seed capsules

- harvesting whole plant
- collecting and ripening fruit
- collecting after felling
- using ladders
- climbing
- shaking
- high-powered rifles (licensed operators only)
- elevated platforms
- extraction of the seed from the collected material
- handling of the seed crop after picking
- storage of seed, such as:
 - bags or envelopes
 - appropriate containers
 - cool, dry location
 - dehumidifying agents (silica gel, wood ash)
 - oxygen exclusion techniques
 - freezer or refrigerator
 - pest deterrent mechanisms
 - light exclusion mechanisms
- documentation of the extracted seed, such as:
 - information on provenance
 - botanical name: family, genus, species, variety and/or cultivar
 - common names
 - brief plant description
 - identity of collector
 - date collected or use by date
 - quantity (by weight or number of seeds)
 - viability test results
 - organic certification of grower
 - growing instructions such as recommended season and spacing
- provenances of seed, such as:
 - location and growing conditions of parent plant
 - sub-catchment identification of seed from endemic native plant populations
 - species and/or varieties adapted to local conditions
- collecting ethics, protocols and legislative parameters, such as:
 - limits on quantity allowed for collection
 - limits on time period for collection
 - particular use or destination for seed
 - indigenous plant regulatory conditions

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER410 Recommend approaches for sustainable community and bioregional development

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to recommend approaches for sustainable community and bioregional development. It requires the ability to identify the potential for sustainable community and bioregional development, develop processes to consult and to communicate with stakeholders.

For indigenous contexts, the delivery and assessment against this competency standard must comply with community protocols and guidelines and be supported by elders and custodians of country.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify potential for sustainable community and bioregional development	1.1 Broadly scope opportunities and constraints for sustainable community and bioregional development 1.2 Identify potential involvement of individual and group stakeholders 1.3 Source information on the community and bioregion
2. Develop processes to consult stakeholders	2.1 Identify cultural protocols to ensure contacts with individuals and communities are successful 2.2 Identify key people who may influence relationships 2.3 Formulate steps to develop and maintain contacts with community groups 2.4 Develop processes that are inclusive of an equitable involvement of various sections of the community and their perspectives 2.5 Adjust processes and communication modes for culturally diverse groups
3. Communicate potential and support for sustainable community and bioregional development	3.1 Consult with community groups and individuals in development of options 3.2 Discuss and evaluate options in consultation with community using agreed parameters 3.3 Develop preferred option and communicate its implications to community stakeholders 3.4 Facilitate links between individuals and community groups to ensure good community relationships and development of the program

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD124COM10B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER410 Recommend approaches for sustainable community and bioregional development

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify and modify procedures and processes
- write materials appropriate to audience
- identify cultural protocols
- consult with community groups

Knowledge Evidence

The candidate must demonstrate knowledge of:

- sustainable community and bioregional development, such as:
 - local food security initiatives
 - community gardens and city farms
 - climate action and energy descent initiatives
 - transition towns programs
 - community education and outreach
 - local economy and trade including complementary currencies
 - sustainable enterprise and business development
 - social wellbeing and welfare services
 - renewable energy production
 - landcare and environment programs
 - sustainable agriculture and land use
 - sustainable forestry and reforestation

- catchment and water resources management
- sustainable development and housing
- waste reduction and recycling
- principles governing sustainable community and bioregional development
- sources of relevant materials and verbal information
- cultural protocols and perspectives, such as:
 - beliefs, religion & taboos
 - world views (mythological, political, social, biological)
 - acceptable modes of communication/language
 - body language
 - concepts of family and community
 - community leadership
 - relationships between community members, ages and sexes
 - acceptable modes of dress
- relevant legislation and guidelines
- principles of equal opportunity and affirmative action
- community governance, financial systems, legal and health systems
- current relationships between culturally diverse groups in the area
- understanding of the role of various sections of the community in historical and relationship terms

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER411 Operate within a sustainable community and bioregional development program

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to operate within a sustainable community and bioregional development program. It requires knowledge of community energy descent planning, group dynamics, community and bioregional issues. It requires the ability to communicate with a diverse group of people and to think sympathetically and laterally to support change in the community.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research the community and the bioregion	1.1 Obtain information about the community by reading and discussion 1.2 Obtain information about the bioregion and make connections between this and the community 1.3 Listen sympathetically and think laterally to understand the issues that could affect the program
2. Work within the community or bioregional development program	2.1 Become familiar with issues being tackled by the program 2.2 Become familiar with policies, procedures and strategies already adopted by the program 2.3 Work collaboratively within the program guidelines to support or effect change as needed 2.4 Communicate with all members of the community
3. Participate in the growth of the community or bioregional development program	3.1 Use permaculture design skills and lateral thinking processes to support ongoing development of the program 3.2 Forge links with like-minded organisations and groups within the bioregion according to the energy descent action plan, or the policies of the program 3.3 Maintain contacts and communications and solve conflicts in a spirit of cooperation and not competition 3.4 Maintain records according to program guidelines

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPER411 Operate within a sustainable	AHCPER411 Operate within a sustainable	Minor typographical error	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
community and bioregional development program Release 2	community and bioregional development program Release 1	corrected	unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER411 Operate within a sustainable community and bioregional development program

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research a community and a bioregion
- work within an existing sustainable community or bioregional development program
- participate in ongoing development of the sustainable community or bioregional development program.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices related to sustainable community and bioregional development
- sustainable community and bioregional development programs, including:
 - Transition Towns group activities or programs
 - climate change programs
 - peak oil or peak resource programs
 - alternative economic systems, such as local exchange trading systems
 - environmental, water catchment and natural resource conservation projects
 - social and cultural programs
 - housing and community development programs
 - community supported agriculture, organic and sustainable primary production and consumer networks and programs
 - energy descent action planning

- local food and water security projects
- renewable energy and appropriate technology projects
- greenhouse emission reduction and sequestration projects
- community profile development
- community consultation and facilitation methodologies, including:
 - team and community building activities
 - community forums and discussion
 - open space events
 - cultural mapping processes
 - creative problem solving processes
 - visualisation and experiential processes
 - information gathering processes
- group dynamics and conflict resolution strategies.

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER413 Evaluate suitability of species as solutions for permaculture applications

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to evaluate suitability of species as solutions for permaculture applications.

It requires knowledge of botany, zoology, ecology and climate science and the ability to research species in detail and make recommendations for a particular scenario. All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to

Element	Performance criteria
essential outcomes.	demonstrate achievement of the element.
1. Research species in detail and assess for usefulness	1.1 Carry out research into species for use in the permaculture project 1.2 Assess the usefulness of species for the roles or functions required in the system 1.3 Document research and include photographs or illustrations for correct identification
2. Assess the needs of the permaculture system	2.1 Undertake a complex needs analysis of the permaculture system 2.2 Confirm that the species selected will provide the solutions needed 2.3 Undertake further research if needed
3. Recommend species as solutions for permaculture applications	3.1 Prepare a report recommending species as solutions to permaculture applications 3.2 Support the recommendations with evidence from the research 3.3 Explain species interactions and inter-relationships
4. Evaluate suitability of species in a permaculture design	4.1 Review the permaculture design once species are in place 4.2 Evaluate suitability of the species in the design 4.3 Re-assess any species that are not performing the function as expected 4.4 Research alternatives or additional species to support the function

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER413 Evaluate suitability of species as solutions for permaculture applications

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- research species for use in a permaculture project
- assess the usefulness of species in a permaculture project
- assess the needs of a permaculture system
- recommend species as solutions for permaculture applications
- evaluate the suitability of species in a permaculture design

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of permaculture related to needs of species and systems
- botany and zoology fundamentals
- research methodology
- complex needs analysis
- permaculture design strategies for species selection and inter-relationships
- Comparative analysis techniques
- Critical evaluation techniques for both written and graphic representations of permaculture design

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Certificate IV or Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER501 Carry out permaculture field research

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to undertake field research relevant to permaculture systems and projects. It requires the ability to design technical and social field research, prepare for field research, conduct field research, assess research outcomes and report on research relevant to permaculture systems and projects.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Scope permaculture field research	1.1 Identify challenges and opportunities in permaculture projects or systems that elicit research questions 1.2 Identify and justify the purpose of field research 1.3 Define and justify field research topic, question or hypothesis 1.4 Assess suitability of field research subject in relation to permaculture principles, practices and ethics
2. Design permaculture field research	2.1 Design field research plan 2.2 Identify relevant information sources and review relevant and credible literature related to the research topic 2.3 Determine appropriate research methods for data collection 2.4 Identify reference groups for field research, if applicable 2.5 Locate field research sites according to design requirements 2.6 Identify site factors where appropriate and incorporate into research 2.7 Create a budget for field research plan 2.8 Identify and obtain approvals and permits required
3. Prepare to conduct field research	3.1 Identify work health and safety hazards associated with the implementation of field research 3.2 Identify and document social and environmental implications associated with field research 3.3 Identify materials, tools, equipment and machinery required for field research, confirm cost and availability with suppliers, contractors and appropriate personnel 3.4 Establish and prepare field work sites for implementation of field research using the specifications of the field work design 3.5 Organise access to field research subjects at times and places suitable for data collection
4. Conduct field research	4.1 Undertake data collection throughout the course of field research according to the specifications of research design plan and chosen methodologies 4.2 Monitor field research for accuracy and compliance to research design 4.3 Record all research data accurately using the specifications of the research design
5. Assess practical application of research outcomes	5.1 Analyse research data for categories, themes, trends, patterns and significant information 5.2 Create quantitative and qualitative records of research data analysis 5.3 Synthesise research findings and draw conclusions based on evidence and reasoned arguments

Element	Performance criteria
	5.4 Assess the meaning of research outcomes for practical application, based on conclusions drawn from the field research
6. Report field research findings	6.1 Determine desired actions from field research 6.2 Determine target audience for field research reporting 6.3 Draft research report and obtain feedback 6.4 Publish and circulate field research report

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD125RCH01B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER501 Carry out permaculture field research

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- formulate and justify research questions
- design a field research plan
- conduct research and evaluate information
- enter, analyse and organise data quantitatively and qualitatively in charts, tables and graphs
- produce written reports on research outcomes and provide conclusions based on appropriate evidence and reasoned arguments

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles, practices and ethics, such as:
 - topics for field research
 - people or groups of people participating in or related to permaculture projects
 - people or groups of people participating in or related to other topics which themselves relate to permaculture
 - systems and/or technical elements of permaculture systems
 - animals-related studies (including insects, reptiles, birds and fish)
 - plant-related studies
 - studies of integrated plant and animal systems
 - appropriate technologies or technological solutions
 - appropriate energy generation, storage and capture
 - water treatment, catchment and storage systems

- natural systems
- environmental issues
- product comparisons
- field research methods, such as:
 - group and individual interviews
 - dialogue and storytelling
 - use of communications technology
 - records and testimonials
 - electronic recordings
 - questionnaires
 - statistical sampling
 - observation
 - surveys
- research methodologies, such as:
 - action research
 - needs studies
 - case studies
 - statistical sampling
- field research plan design – a staged sequence of steps and accompanying methodologies for obtaining answers to research questions
- permaculture systems implementation and management techniques and practices
- growth habits, physiological properties and taxonomic specification of animals and plants involved in permaculture
- participants and stakeholders of permaculture systems and projects, such as:
 - those who will use the research to influence decision making and policy
 - those who will benefit from the research
 - the researchers
 - ethics committees
 - anyone who is researched
- scientific and mathematical research approaches, data collection, processing and analytical techniques and procedures
- auditing and reporting procedures
- research planning and budgeting

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER502 Design an integrated permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design integrated permaculture systems in a range of contexts including developing a design brief, undertaking a site analysis, developing conceptual designs and producing a final design. It includes knowledge of landscape, building and settlement design and working with specialists and professionals. It includes drawing plans and projections by hand as well as using computer aided drafting and design.

The preparation of an integrated permaculture system design requires detailed knowledge of permaculture design principles, the ability to transfer concepts to novel permaculture situations, strong evaluation and planning skills, landscape design skills and research capacities.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop a design brief	1.1 Initiate contact with the client when appropriate 1.2 Establish purpose, needs and requirements of design by consulting with client 1.3 Evaluate integrated permaculture design context and consider impacts of design stages, elements, functions and relationships 1.4 Develop a design brief in consultation with the client 1.5 Negotiate cost structures and timelines with the client 1.6 Evaluate and document cost structures and plan for budgeting limits and possibilities
2. Undertake design analysis and base plan	2.1 Obtain existing maps, geospatial data and aerial photographs of site 2.2 Survey and obtain social research data relevant to integrated permaculture design 2.3 Undertake field research supporting integrated permaculture design contexts and specific fields of inquiry, where required 2.4 Include Zones 1, 2, 3, 4 and 5 in the survey area using survey tools and equipment 2.5 Prepare a base plan 2.6 Record site assessment factors on the base plan 2.7 Carry out analysis of the site and bioregional analysis of the local area
3. Interpret site in permaculture terms	3.1 Carry out research of potential permaculture design elements to assess their suitability for the site 3.2 Identify functional interconnections between elements to increase yield and minimise resource use 3.3 Choose permaculture design elements on the basis of research 3.4 Work with architects, builders and planners or other contractors who may be involved in the project 3.5 Revise brief with client in relation to research and analysis
4. Prepare design concepts	4.1 Determine appropriate concepts 4.2 Prepare concept design drawings to illustrate conceptual themes and patterns informing the location and layout of proposed design elements 4.3 Present chosen concepts in a consistent graphic style 4.4 Compile lists of materials and quantities 4.5 Prepare a list of plant and animal species and varieties suitable

Element	Performance criteria
	for chosen concepts 4.6 Prepare a preliminary budget for conceptual design
5. Review the design concepts	5.1 Review the concepts against permaculture principles and ethics 5.2 Prepare presentations of draft design concept options for the client 5.3 Undertake consultation with the client to agree on options and approaches for design development 5.4 Review and revise concepts, elements, budget and the design brief after taking feedback from the client
6. Produce final design and integrated permaculture report	6.1 Design integrated permaculture system appropriate to the design brief, available budget, research, analysis, chosen elements and concepts 6.2 Produce detailed permaculture design documents 6.3 Present design plans, drawings and permaculture design report documents to the client 6.4 Obtain feedback from the client and revise design as required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD125DES02C.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER502 Design an integrated permaculture system

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- demonstrate drafting and drawing techniques
- negotiate with clients
- undertake a site analysis and site survey
- provide urban and rural permaculture design solutions
- analyse zones and sectors of a site
- develop concepts
- develop planting schedules and bills of quantity
- develop a design budget
- develop final design drawings including elevations and projections
- design presentations

Knowledge Evidence

The candidate must demonstrate knowledge of:

- elements of integrated permaculture design
- principles of integrated permaculture design
- strategies for urban and rural permaculture design
- strategies for building design and working with builders and architects
- strategies for settlement design and working with planning authorities
- design brief elements
 - statement of scope of design
 - statement of client needs and requirements
 - food production

- system efficiency
- system production
- fibre, energy and building material production
- water harvesting
- waste treatment
- energy planning and design
- biodiversity habitat
- soil carbon building
- soil fertility
- establishment of financial budget
- establishment of time budget
- maintenance of financial budget
- maintenance of time budget
- design of establishment documents
- maintenance planning
- sustainable commercial enterprises
- social amenities
- cultural considerations
- list of project elements
- list of assessable tasks
- design analysis and research techniques
- plan interpretation and map reading
- site surveying methods and tools
 - onsite measurement of site boundaries
 - mapping of boundaries to scale to a plan drawing
 - onsite layout of 1m contour
 - mapping of contour lines to a scale plan drawing
 - measurement and location of existing infrastructure and natural features on site
 - mapping of existing infrastructure and natural features to a scale plan drawing
 - dumpy level or equivalent surveying instrument for taking vertical measurements on site
 - dumpy level or equivalent surveying instrument for measuring angles on site
 - GPS, satnav
 - measuring tapes for measuring distance on site.
- design concepts and detailed design drawings
 - property boundaries, scale and north point
 - authors of plans, contact details
 - address of site
 - date plan drawn
 - existing infrastructure and natural features

- drawing to scale
- relevant overlays and drawing numbers
- large format planning (at least A1 or A2)
- overlays such as fire, flora and fauna, soil and geology, local planning ordinances, buffer and riparian zones, use zones
- contour lines or other appropriate indication of slope direction and gradients
- drainage features
- Lot, DP, landowner address and contact details
- permaculture design methods
- conventional design symbols
- design drafting and drawing conventions
- computer-aided drafting and design
- plant and animal selection

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is NOT sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER503 Develop a strategic plan for a permaculture project or enterprise

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop a strategic plan for a permaculture project or enterprise. It requires the ability to prepare a strategic plan brief, research and analyse planning information, develop strategic plan stages, document a strategic plan, and review a strategic plan against desired outcomes. Developing a strategic plan for a permaculture project requires knowledge of permaculture principles and practices, climate change and peak oil impacts, sustainable community development practices, research methods and strategic planning methodologies.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop a strategic plan brief for a permaculture project or enterprise	1.1 Evaluate the current context of the permaculture project or enterprise 1.2 Determine core values of the project or enterprise 1.3 Define project vision statement, aims and objectives 1.4 Establish project or enterprise goals in consultation with stakeholders 1.5 Evaluate strategic plan values, goals and vision statement with respect to permaculture principles and ethics 1.6 Document strategic planning brief 1.7 Develop protocols on cultural respect and sensitivity 1.8 Review and revise strategic plan brief at appropriate project development intervals
2. Research and analyse strategic planning information	2.1 Determine information needed for strategic plan with reference to plan brief 2.2 Identify key elements and themes 2.3 Determine research subjects 2.4 Compose research plan and methodologies 2.5 Review local, state and national government legal and planning acts and codes relevant to project or enterprise 2.6 Review and revise strategic plan brief in relation to research findings
3. Identify strategic planning stages	3.1 Identify strategies required to achieve planning goals in consultation with relevant parties 3.2 Determine action plans required to execute strategies 3.3 Order strategies and action plans into a series of strategic planning stages 3.4 Determine planning benchmarks for future stage completion review 3.5 Review and revise plan brief with reference to strategic planning stages
4. Document and distribute strategic plan	4.1 Produce a clear, concise and consistently formatted written strategic planning document 4.2 Distribute strategic plan to all relevant parties to ensure effective communication of project or enterprise planning 4.3 Take feedback on plan documentation and review and revise documentation as required

Element	Performance criteria
5. Review strategic plan	5.1 Determine mechanism for evaluation of strategic plan 5.2 Determine timeframes for evaluation 5.3 Evaluate with reference to permaculture principles and practices 5.4 Evaluate feedback from all relevant parties on implementation issues and outcomes 5.5 Identify problems and revise as required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD125PLA03C.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER503 Develop a strategic plan for a permaculture project or enterprise

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop a strategic plan brief
- acquire project resources
- undertake stakeholder consultation
- document a strategic plan
- evaluate the vision statement
- interpret feedback on the strategic plan
- demonstrate group leadership

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles, ethics and practices
 - The two main summaries of permaculture principles are found in Bill Mollison and Reny Mia Slay *Introduction to Permaculture* (1991) and David Holmgren *Permaculture: Principles & Pathways Beyond Sustainability* (2002)
 - sustainable agriculture
 - garden agriculture
 - sustainable horticulture
 - sustainable aquaculture
 - soil restoration
 - bush regeneration
 - biodiversity regeneration
 - sustainable community development

- sustainable project and enterprise development
- bioregional development
- relocalisation
- sustainable design
- sustainability education
- earth care
- people care
- return of surpluses and setting limits to growth
- permaculture values
 - environmental restoration
 - sustainable food production
 - sustainability education
 - environmentally sustainable human habitation
 - sustainable community development
 - sustainable community transition
 - right livelihood
 - social justice
 - ecological economics
 - universal human rights
 - cultural recognition
- permaculture projects or enterprises
 - community gardens
 - permaculture workshops, training and education
 - sustainable agricultural systems
 - urban permaculture systems
 - community sustainable transition initiatives
 - climate change initiatives
 - conservation organisations
 - sustainability not-for-profits, NGOs, businesses, companies, trusts and incorporated community associations
 - permaculture design consultancies
 - permaculture system implementation services
 - alternative community finance and economic systems
 - permaculture information and communication services
- strategic planning
 - vision statement
 - statements of where project or enterprise would like to be in future
 - imagined futures
 - statements of possible futures for world outside of project
 - project or enterprise goals

- environmental targets
- community development targets
- food production
- design criteria
- happiness indicators
- sustainability indicators
- strategies
 - human resource management
 - financial planning
 - purchases and acquisitions
 - cost cutting
 - income generation
 - promotion and marketing
 - organisational restructuring
 - project or enterprise start up
 - mentoring and education
 - new project or enterprise initiatives
 - political lobbying
 - grant applications
 - community consultation
 - research and development
- action plans - sequences of smaller steps necessary to achieve strategies
- timelines
- benchmarks, such as
 - verifiable stage completion criteria
 - numerical indicators
 - qualitative indicators
 - observable outcomes
- community development
- project management
- feasibility study methodology
- contract law
- budgetary frameworks

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER504 Manage a permaculture project or enterprise

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage a permaculture project or enterprise. It requires the ability to initiate, plan, manage, monitor and complete a permaculture project or enterprise. Managing a permaculture project or enterprise requires knowledge of permaculture principles and practices, permaculture design, bioregional and community development, community sustainable transition strategies, ecological agriculture, costing and pricing, and project management.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Initiate permaculture project or enterprise	1.1 Undertake strategic planning assessment of permaculture project or permaculture enterprise 1.2 Initiate community and bioregional assessment of project or enterprise 1.3 Determine the scope of the project or enterprise 1.4 Determine feasibility of project or enterprise 1.5 Determine stakeholders in project or enterprise
2. Cost and quote for permaculture project or enterprise start up	2.1 Prepare costings and quotations using realistic price structure 2.2 Include a contingency amount in case of need 2.3 Include allowances for work in kind and volunteers, ensuring that the right livelihood of all is considered 2.4 Prepare a detailed budget with stages of implementation 2.5 Submit quotation and cost outline to client and be prepared to justify costs
3. Manage permaculture project or enterprise	3.1 Secure human and material resources required to achieve strategies 3.2 Execute action plans to achieve strategic ends 3.3 Follow budget and project stages 3.4 Direct process outlined in action plans and timelines 3.5 Integrate project human and material resources to achieve planned project outcomes 3.6 Establish communication process including responsibilities for conflict resolution 3.7 Take feedback on management practices and processes
4. Monitor permaculture project or enterprise	4.1 Observe execution of project or enterprise action plan processes 4.2 Review and correct problematic planning processes 4.3 Measure project or enterprise activities 4.4 Measure costs against budget and communicate with client regarding any over-runs 4.5 Monitor project or enterprise variables
5. Undertake permaculture project or enterprise	5.1 Confirm completion of action plan processes 5.2 Determine success of project or enterprise strategies in relation to stage benchmarks, budget and timelines 5.3 Document permaculture project or enterprise management initiation, planning, execution, monitoring and completion or

Element	Performance criteria
	ongoing progress 5.4 Conclude permaculture project or continue to manage and monitor permaculture enterprise

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD125MAN04B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER504 Manage a permaculture project or enterprise

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- carry out strategic planning assessment of a permaculture project or enterprise
- acquire project resources
- develop project pricing and costing
- consult with stakeholders
- manage project activities
- evaluate and report on project
- manage human resources
- demonstrate group leadership

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles, ethics and practices
- permaculture projects
 - initiatives with a defined sustainability purpose and time horizon
 - sustainable community development projects
 - bioregional initiatives
 - not-for-profit projects
 - projects on public land
 - community gardens
 - community supported agriculture systems
 - land restoration and conservation works
 - alternative technology programs

- sustainability education
- social and economic development activities
- community carbon reduction and sequestration strategies
- energy descent or transition projects
- disaster preparedness, response and recovery
- permaculture enterprises
 - ethical for-profit businesses where surpluses are returned to earth care and people care
 - initiatives with a focus on right livelihood with plans for ongoing operation and/or growth
 - sustainable farming
 - community food distribution businesses
 - permaculture design and consultancies
 - energy descent planning services
 - climate change planning services
 - permaculture works implementation businesses
 - community and bioregional sustainability planning services
 - community economic and enterprise systems
 - integrated social, housing and community development programs
 - community supported agriculture
 - organic and sustainable primary production
 - local food and water security enterprises
 - greenhouse emission reduction and sequestration enterprises
 - sustainable regional transport networks and systems
- strategic planning
- project management
 - human resource management
 - financial planning
 - purchases and acquisitions
 - costing and pricing
 - income generation including issues of right livelihood
 - promotion and marketing
 - organisational restructuring
 - project or enterprise start up
 - mentoring and education
 - new project or enterprise initiatives
 - political lobbying
 - grant applications
 - community consultation
- research and development
- community development

- feasibility study methods
 - economic and financial assessment
 - legal and planning issues
 - market opportunities and challenges
 - community and cultural acceptance
 - bioregional suitability
 - operational considerations
 - resource availability
 - sustainability criteria
 - energy descent/transition strategies
 - climate change strategies
 - environmental, water catchment and natural resource conservation issues
- contract law
- budgetary frameworks
- benchmarking

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER505 Plan and supervise the implementation of permaculture project works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan and supervise the implementation of permaculture project works through preliminary planning, scope of works, work health and safety procedures, equipment and materials, works schedules, specifications and environmental impacts, organising and supervising project works implementation.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They take accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Carry out preliminary activities for permaculture project works	1.1 Confirm and verify client preferences and contract requirements for permaculture project 1.2 Determine scope of works 1.3 Identify specific statutory obligations 1.4 Conduct initial site visit to verify the biophysical and other factors of the project area, including environmental considerations and historical modifications 1.5 Analyse technical challenges and forecast required research and planning 1.6 Review scope of works and contract requirements with respect to permaculture principles and ethics 1.7 Identify work health and safety hazards and obligations
2. Investigate resource issues associated with the works	2.1 Verify the availability, quantity and costs of plants and other materials listed in the project schedules 2.2 Identify and cost material resources and tools and equipment required for permaculture works 2.3 Confirm availability with suppliers, contractors and appropriate personnel 2.4 Investigate site access and establishment issues and plan for environmental impacts
3. Prepare a permaculture project works plan	3.1 Document a statement of scope of works 3.2 Prepare a safety plan for permaculture project works 3.3 List tools and materials required for permaculture project works their amounts and their sources 3.4 Prepare a staged program of works to provide a sequential allocation of material resources and works tasks with specifications to meet determined project timelines 3.5 Evaluate program of works with respect to accepted permaculture practices 3.6 Determine the establishment period and maintenance period of works 3.7 Incorporate seasonal factors and impacts in the staging strategy 3.8 Include, where required, special project works related to habitat resource development and enhancement in the staged implementation plan 3.9 Develop and prepare a consistently formatted permaculture works plan document
4. Implement permaculture project	4.1 Supervise permaculture project works 4.2 Take delivery of materials and equipment

Element	Performance criteria
works plan	4.3 Assemble human resources on site 4.4 Undertake works briefing and safety briefing 4.5 Undertake and manage permaculture project works 4.6 Inspect works tasks for adherence to specifications, correcting and modifying as necessary 4.7 Monitor environmental impacts of project works and modify where required 4.8 Complete permaculture project works and confirm satisfactory outcome with client

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD125PLA05B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER505 Plan and supervise the implementation of permaculture project works

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine and review project scope of work
- assess a site for opportunities and constraints associated with implementation of permaculture works
- prepare schedules for implementation of permaculture works
- prepare a staged permaculture works plan
- complete a work health and safety briefing
- prepare a Statement of Environmental Effects
- supervise permaculture project works

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices
- Permaculture project works, such as:
 - food gardens
 - community gardens
 - urban permaculture systems
 - rural permaculture systems
 - aquaculture systems
 - horticultural systems
 - forest systems
 - grazing and pasture systems
 - animal systems and tractors

- integrated food, fibre and energy systems
- permaculture structures
- soil treatments
- preparation of soil surfaces
- installation of irrigation and/or drainage systems including earthworks
- planting methods such as hand sowing, direct seeding, tube planting, hand or machine assisted planting of seedlings, planting of divisions and transplanting
- natural area regeneration
- fencing of stock and pest animals
- the cultural or biological control of weeds and feral animals
- protection of plants by staking, tying and guarding
- permaculture design techniques including zone and sector planning
- biophysical factors of a site, such as:
 - location of the site
 - site boundaries
 - environmental considerations
 - access issues
 - potential hazards
 - utility service
 - availability and locations
 - adjacent landholder considerations
 - security issues
 - aspect of the site
 - rainfall
 - humidity
 - wind and sunlight intensity
 - soil types
 - nutrients and deficiencies
 - slope
 - natural and artificial watercourses
 - outcrops of rock
 - presence of indigenous or other significant vegetation, indigenous or otherwise
 - plants that may become a weed problem
 - animals that may become a management issue, feral species or otherwise
- practical understanding of the environmental issues associated with undertaking permaculture works, such as:
 - use of materials that come from sustainable sources
 - duty of care in conserving sites natural values
 - work practices

- the use and movement of machinery, storage of materials, removal of weeds and movement of soil and other materials into, across and beyond the site
- principles of ecology including specific plant and animal relationships and habitat requirements
- statutory compliance and obligations, such as
 - compliance with legislation, ordinances, regulations or by laws relating to the works or the work site
 - site responsibilities, including OHS, industrial relations and equal opportunity and employment
- site evaluation techniques including methods of analysing soils, waterways and their condition
- control techniques against unwanted plant and animal species
- soil conservation, erosion control and enhancement techniques and their advantages and disadvantages in reference to specific sites and habitats
- selection and use of appropriate combinations of machinery and tools
- work health and safety hazards and the controls necessary to remove or minimise risks associated with them
- contract documentation including specifications, plans of permaculture works, services, supplies and surveyors documents
- scope of works determination
- works breakdown into tasks
- scheduling and time line generation
- task specifications and evaluation

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER507 Research and interpret requirements for a permaculture project

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to gather and validate information in order to advise on planned permaculture projects. Researching and interpreting requirements for a permaculture project requires knowledge of permaculture principles and practices, research methodologies, consultation models, feasibility studies, information systems, report presentation, cultural analysis of information, cultural implications of research methods and legislative requirements.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate broad knowledge in an area of work with depth in areas of specialisation. They undertake functions with initiative and judgement and take personal responsibility and exercise autonomy in undertaking complex work. They have accountability for the work of others (teams) within broad parameters, analyse and synthesise information as well as analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Select appropriate research strategies	1.1 Select and justify appropriate research methods for the requirements of the permaculture project and the available resources 1.2 Develop and justify a research question or hypothesis 1.3 Select a combination of research methods to promote the validity of the outcomes 1.4 Negotiate the selection of research strategies with key people
2. Gather information	2.1 Identify relevant information sources and review relevant and credible literature related to the research topic 2.2 Assess and analyse legislative requirements impacting on the project 2.3 Identify government departments and agencies with a potential interest in the permaculture project 2.4 Collect and catalogue information from a wide range of sources
3. Consult with key people	3.1 Identify and consult a representative range of people and groups with an interest in the issues relating to the permaculture project 3.2 Review information, check for accuracy and identify the need for further information and follow-up 3.3 Liaise with key people, where required 3.4 Undertake community consultations following agreed practices and protocols
4. Organise and analyse information	4.1 Organise data generated by the research 4.2 Check the results against other available research 4.3 Look for patterns, observations and explanations and interpret them against the context 4.4 Clearly explain the concepts being analysed to key people and continue with community consultations
5. Report the findings of the research	5.1 Report complete and accurate details of the research methodology, information and analysis 5.2 Provide opportunities for the validation of the research findings using a range of different processes 5.3 Report the research findings in an accessible and useable style and format 5.4 Make the research available to all key people and those who have an interest in the project

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD125RCH07B.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER507 Research and interpret requirements for a permaculture project

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- select and justify appropriate research strategies
- gather information
- assess practical from impractical solutions
- consult with key people with an interest in the issues relating to the permaculture project
- organise and analyse information
- report the findings of the research

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices and their role in sustainable development and design
- climate change science and mitigation strategies
- research methods, such as:
 - group and individual interviews
 - dialogue and storytelling
 - libraries – digital and conventional
 - electronic recordings
 - questionnaires
 - statistical sampling
 - observation
 - surveys
- research methodologies, such as:

- action research
- needs studies
- literature searches and correct referencing
- case studies
- consultation models
- feasibility study methodologies
- information systems (conventional and electronic)
- report presentation
- cultural analysis of information
- cultural implications of research methods

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER508 Manage a permaculture aid and development project

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to manage a permaculture aid and development project in a remote community. It requires good management, communication and financial management skills. It requires knowledge of the aid and development industry, organisational structures, government and non-government functions, legal issues covering charities and working with vulnerable communities, disaster planning, relief and response issues.

For indigenous contexts, the delivery and assessment against this competency standard must comply with community protocols and guidelines and be supported by elders and custodians of country.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Obtain information on the aid project	1.1 Contact the peak aid organisation or government department to obtain information about aid projects 1.2 Research similar projects and their outcomes 1.3 Research the remote community or location to start fully informed about cultural protocols and issues
2. Develop a plan for the project in consultation with others	2.1 Ascertain the nature of the project, the issues and the key personnel at the remote location 2.2 Work with other organisations involved in the aid project and clarify chain of command 2.3 Establish clear communication channels as early as possible 2.4 Confirm budget allocations and allowances attached to the project 2.5 Document the permaculture aid and development project as a strategic plan 2.6 Distribute the strategic plan as required
3. Obtain resources and confirm logistics for transportation to remote location	3.1 Negotiate material resources, equipment and other needs with the remote community 3.2 Communicate in a culturally sensitive manner at all times and maintain correct communication sequence 3.3 Arrange transportation to remote location with full documentation, procedures and cultural protocols in place 3.4 Monitor transportation phase closely
4. Organise human resources and confirm transit and living arrangements, food and supplies for staff	4.1 Interview and engage personnel 4.2 Confirm living arrangements with contact at remote community 4.3 Confirm food and supply lines for personnel separately from aid arrangements 4.4 Document and communicate these arrangements 4.5 Brief personnel on arrangements and project ahead of departure
5. Document the emergency plan	5.1 Write up the emergency plan with the aims and objectives of the project 5.2 List strategies for achieving the aims

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.3 Allocate personnel and resources to the strategic actions 5.4 Include benchmarks and timeline for operations 5.5 Include processes, procedures and communication lines for adoption by personnel on the ground
6. Manage the permaculture aid and development project	6.1 Maintain regular communication with the team on the ground 6.2 Troubleshoot any issues that arise 6.3 Document the roll out of the plan and address any gaps or misunderstandings immediately 6.4 Reduce paperwork and stress for operatives on the ground by simplifying reporting procedures and actioning requests quickly 6.5 De-brief personnel on return, and maintain detailed records of the project

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPER508 Manage a permaculture aid and development project Release 2	AHCPER508 Manage a permaculture aid and development project Release 1	Minor typographical error corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER508 Manage a permaculture aid and development project

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- obtain information about the permaculture aid and development project
- develop a plan for project consultation
- obtain resources for the permaculture project
- obtain human resources for the permaculture project
- document the emergency plan.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles, ethics and practices related to aid and development in remote communities and overseas
- permaculture aid and development projects, such as:
 - disaster response and recovery
 - disaster planning
 - community projects in remote communities
 - social and economic development projects
 - educational projects in remote communities
 - health and wellbeing projects in remote communities
 - resource management project for remote communities
 - sustainable farming projects
 - regional autonomy projects

- strategic planning
- project management, such as:
 - human resource management
 - financial planning
 - purchases and acquisitions
 - organisational structure
 - mentoring
 - training
 - new project or enterprise initiatives
 - grant applications
 - community consultation
- research and development
- community development
- cultural protocols and taboos
- religious practices and sensitivities
- engineering issues associated with remote area power supply, water supply, sewerage and waste treatment, erosion and sediment control, structural support and emergency housing
- feasibility study methods, such as:
 - economic and financial assessment
 - legal and planning issues
 - market opportunities and challenges
 - community and cultural acceptance
 - bioregional suitability
 - operational considerations
 - resource availability
 - sustainability criteria
 - energy descent/transition strategies
 - climate change strategies
 - environmental, water catchment and natural resource conservation issues
- contract law
- budgetary frameworks
- benchmarking.

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER509 Design permaculture structures and features

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design permaculture structures and features. It requires the ability to develop a design brief, undertake a site analysis, develop a concept design, produce a final plan and prepare bill of quantities and estimates. Designing permaculture structures and features requires knowledge of permaculture design process, construction and engineering principles, drafting techniques, cost estimating, and calculations of materials, labour, machinery and equipment.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate broad knowledge in an area of work with depth in areas of specialisation. They undertake functions with initiative and judgement and take personal responsibility and exercise autonomy in undertaking complex work. They have accountability for the work of others (teams) within broad parameters, analyse and synthesise information as well as analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop a design brief	1.1 Consult client to establish the purpose and requirements of design 1.2 Develop design brief in agreement with the client 1.3 Negotiate cost structures and timelines with the client 1.4 Clarify and negotiate use of consultants and sub-contractors with client
2. Undertake a site analysis	2.1 Inspect site where the permaculture structure or feature is to be located 2.2 Record the physical elements and features of the site 2.3 Analyse and record assessment of soil, topography, aspect, existing vegetation and climatic factors 2.4 Assess and record other relevant information 2.5 Assess legal requirements and constraints on development
3. Develop a concept design	3.1 Prepare concept plan to illustrate location and layout of proposed structure or feature according to the design brief 3.2 Undertake consultation with the client to establish agreement on options and approaches for development 3.3 Present the concept plan in a consistent graphic style
4. Produce a final plan	4.1 Produce a detailed final plan according to the design brief 4.2 Prepare design to scale 4.3 Provide information on the plan that is relevant and precise and clearly communicates development works to be undertaken 4.4 Include notes and specifications on the plan to assist in plan interpretation 4.5 Apply appropriate construction and engineering principles to permaculture plan
5. Prepare documentation	5.1 Prepare bill of quantities listing scope and extent of works 5.2 Prepare cost estimate for the client covering items in bill of quantities, labour and machinery and equipment costs

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD125DES09B

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER509 Design permaculture structures and features

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop a design brief
- undertake a site analysis
- develop a concept design
- produce a final plan
- prepare a bill of quantities and estimates

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture design process including:
 - site survey
 - needs analysis
 - bioregional analysis
 - zone and sector analysis
- construction and engineering principles
- drafting techniques
- cost estimating
- environmental, resource and energy implications of building materials, such as:
 - thermal mass
 - insulation
 - embodied energy
 - embedded energy

- cradle to grave planning
- passive heating and cooling systems
- the following alternative and natural building materials and techniques: earth, straw bale, pole construction and passive solar principles

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER511 Facilitate participatory planning and learning activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to facilitate participatory planning and learning activities. It requires the ability to devise strategies for facilitating participatory planning and learning and to carry out, report on and review participatory planning and learning. Facilitating participatory planning and learning activities requires knowledge of permaculture principles and practices, a range of participatory planning and learning activities, codes of conduct and ethical behaviour and group presentation methodology.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate broad knowledge in an area of work with depth in areas of specialisation. They undertake functions with initiative and judgement and take personal responsibility and exercise autonomy in undertaking complex work. They have accountability for the work of others (teams) within broad parameters, analyse and synthesise information as well as analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Devise strategies for facilitation of participatory planning and learning	1.1 Identify and assess a range of participatory planning and learning facilitation strategies 1.2 Identify and profile client group 1.3 Clarify planning and learning objectives and outcomes 1.4 Assess resources required to conduct participatory planning and learning 1.5 Identify appropriate venue or learning environment for client group and activities 1.6 Select participatory planning and learning strategies which enable and encourage relevant groups or people to be involved 1.7 Prepare and circulate program and logistical details to interested parties 1.8 Review legislative and organisation requirements to ensure strategies meet all criteria
2. Carry out participatory planning and learning activities	2.1 Prepare learning activities information which is clear and appropriate to the needs of participants and other parties involved 2.2 Brief all participants and people involved in facilitating participatory planning and learning activities on the processes of delivery 2.3 Provide information to participants and other people involved at an appropriate time and place 2.4 Implement access and equity requirements in the participatory planning and learning activities 2.5 Carry out community participatory planning and learning activities to ensure compliance with designated timeframe 2.6 Carry out participatory planning and learning activities in a manner that ensures participation in decision-making, considers needs of participants and canvasses all points of view
3. Report on and review participatory planning and learning	3.1 Collect and collate feedback from participants to facilitate analysis 3.2 Incorporate appropriate suggestions for improvements to the activities into future participatory planning and learning activities plans 3.3 Provide summaries of responses and adopted amendments to interested parties 3.4 Direct other issues raised during participatory planning and

Element	Performance criteria
	learning to relevant people for response and follow up 3.5 Prepare an accurate report on participatory planning and learning activities 3.6 Review and evaluate the overall effectiveness of participatory planning and learning activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to QLD125COM11B.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER511 Facilitate participatory planning and learning activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- devise strategies for facilitating participatory planning and learning
- facilitate group processes in an engaging and inclusive way
- conduct participatory planning and learning activities
- communicate with people of a wide diversity of ages and socio-economic or cultural groups
- review and report-on participatory planning and learning
- coordinate and brief team members
- problem-solve and build group dynamics

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices
- learning styles and methodologies, including accelerated and experiential learning
- strategies for facilitation of participatory planning and learning
- participatory planning and learning activities and processes, such as:
 - team building – ice breakers, trust games, creative and social activities, goal-setting, celebration and cultural activities
 - creative expression – wild design, mime, performing and visual arts, story telling
 - problem solving – brainstorming, mind mapping, random-input processes, PMI, SWOT, Six Thinking Hats, theming and chunking, affinity matrix, modelling
 - experiential – visualisation, affirmation, role play, cultural mapping, 6 senses, modelling, simulations, educational and experiential games

- information gathering – group and individual research and observation activities, sharing information, questioning, resource and skills mapping, surveys, field trips
- Negotiation – open forum, active listening, prioritisation, consensus building, win-win.
- *Dynamic Groups, Dynamic Learning*TM facilitation skills and methodology (Robin Clayfield)
- conflict resolution and strategies to deal with strong personalities
- codes of conduct and ethical behaviour
- group presentation methodology

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPER512 Plan community governance and decision-making processes

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to plan community governance and decision-making processes. It requires the ability to assess future needs and, for existing groups, current community governance and decision-making processes. It requires the ability to develop options for community governance and decision-making frameworks and processes and report on preferred options for implementation. Planning community governance and decision-making processes requires knowledge of strategic planning, legal frameworks, advanced negotiation techniques, organisational change and development, group and individual goal setting techniques, risk management processes and techniques, action planning methods and information technology.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate broad knowledge in an area of work with depth in areas of specialisation. They undertake functions with initiative and judgement and take personal responsibility and exercise autonomy in undertaking complex work. They have accountability for the work of others (teams) within broad parameters, analyse and synthesise information as well as analyse, design and communicate solutions to a range of complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Permaculture (PER)

Elements and Performance Criteria

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess current community governance and decision-making processes	1.1 Identify responsibilities and duties of individuals and community groups 1.2 Investigate and define proposed or existing community governance and decision-making processes 1.3 Collate information on proposed or existing governance issues and arrangements
2. Develop options for community governance and decision-making processes	2.1 Identify opportunities and constraints for development of community governance and decision-making process options 2.2 Consult with community on options for community governance and decision-making processes 2.3 Evaluate options in consultation with community through detailing advantages and disadvantages for each
3. Report on preferred options for implementation	3.1 Select preferred options for implementation based on comparative advantages 3.2 Base options for community governance and decision-making processes on sufficient, valid and reliable information and analysis 3.3 Ensure options for community governance and decision-making processes are consistent with legal frameworks and community and group values, policies, needs, guidelines and procedures 3.4 Implement options for community governance and decision-making processes, and provide for decisions to be made in and actioned in the appropriate timeframe

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPER512 Plan community governance and decision-making processes Release 2	AHCPER512 Plan community governance and decision-making processes Release 1	Minor typographical error corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPER512 Plan community governance and decision-making processes

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess current community governance and decision-making processes
- assess community needs and plan around these needs
- demonstrate high level communication skills
- develop options for community governance and decision-making processes
- report on preferred options for implementation.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- permaculture principles and practices
- community governance and decision-making processes, such as:
 - governance of community resources, enterprises and activities
 - meeting facilitation, negotiation and mediation
 - conflict resolution procedures
 - decision-making methodologies
 - consensus processes
 - qualified decision-making processes
 - protocols
 - codes of conduct
 - recording and sorting decisions, such as *Many Baskets process* (Robin Clayfield)

- strategic planning
- community needs analysis techniques, such as:
 - SWOT analysis
 - 6 thinking hats (de Bono)
 - PMI (de Bono)
 - T.O.A.S.T. processes (Robin Clayfield)
 - L.O.V.E. processes (Robin Clayfield)
- opportunities and constraints for community development, such as:
 - seeing solutions rather than problems
 - viewing the negative in a positive light
 - modifications or extensions of existing systems to solve inherent problems
 - applying old or simple technology to new or complex problems
 - behaviour change, including organisational change and transformation
 - willingness or unwillingness to participate
 - legal framework requirements
 - vested interests and hidden agendas
- advanced negotiation techniques
- organisational change and development
- group and individual goal setting techniques
- risk management processes and techniques
- action planning methods
- information technology
- legal frameworks obligations and responsibilities.

Assessment Conditions

Assessors must satisfy current standards for RTOs. Assessors must also have a nationally accredited Diploma of Permaculture. Completion of a Permaculture Design Course (PDC) or non-accredited Permaculture Diploma is not sufficient at this level.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPGD205 Prepare a grave site

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare a gravesite.

It applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Parks and gardens (PGD)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare site for excavation	1.1 Identify work health and safety hazards, assess risks and report to the supervisor 1.2 Select and use personal protective clothing (PPE) and equipment 1.3 Select, prepare and use tools, equipment and machinery 1.4 Inspect surrounding monuments, masonry or headstones that threaten the stability of the new gravesite and remove if

Element	Performance criteria
	<p>necessary, after consultation with supervisor</p> <p>1.5 Use sludge pump to remove excess water if required</p> <p>1.6 Mark gravesite out to suit coffin dimensions</p>
2. Assist with the excavation	<p>2.1 Assist with excavation of grave</p> <p>2.2 Shore sides of grave where depth of grave exceeds 1.5 metres or as instructed</p> <p>2.3 Cover surface area for 400 mm from the edge of the excavation with an approved material to ensure the integrity and stability of the soil</p> <p>2.4 Secure gravesite with protective restraints to limit access to the site while being established and when left unattended</p>
3. Backfill and enhance the gravesite following burial	<p>3.1 Back-fill grave with soil free from large lumps, plant debris or waste material</p> <p>3.2 Use backfilling techniques to consolidate the soil, to minimise cavities and to restore the ground to its original level</p> <p>3.3 Replace surrounding monuments, masonry or headstones as necessary</p> <p>3.4 Dispose of waste material and plant debris removed from the gravesite in an environmentally safe manner</p> <p>3.5 Enhance gravesite as instructed</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPGD205A Prepare a grave site.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPGD205 Prepare a grave site

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting.

The candidate must provide evidence that they can:

- prepare site for excavation
- assist with the site excavation
- shore up sides of grave as required
- backfill and enhance the gravesite following burial

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of grave site preparation
 - safe work practices working in and around confined spaces
 - the environmental implications of pumping sludge water from an excavation site and the effects it may have on surrounding gravesites
 - work health and safety responsibilities of employees

Assessment Conditions

Assessors must satisfy current standards for RTO's.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPLY201 Collect store and handle eggs from breeder flocks

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to collect, store and handle fertile eggs from breeder flocks.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Poultry (PLY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to handle eggs	1.1 Follow biosecurity procedures

Element	Performance criteria
	1.2 Follow personal hygiene requirements including washing and sanitising hands 1.3 Identify work health and safety hazards, assess risks and implement suitable controls 1.4 Select, use and maintain suitable personal protective equipment and clothing 1.5 Check work area is clean 1.6 Check equipment is clean and working correctly
2. Collect and sort eggs	2.1 Ensure that nests and egg belts are free of sick or injured birds, carcasses and other obstructions in line with enterprise animal welfare procedures 2.2 Collect eggs from nesting system 2.3 Collect floor eggs and keep separate 2.4 Ensure that procedures are implemented to minimise floor eggs 2.5 Control flow of eggs to match handling rate 2.6 Remove very dirty, cracked, leakers or weak shelled eggs 2.7 Wash eggs as required using approved sanitisers and temperatures 2.8 Operate egg handling equipment appropriately 2.9 Sort eggs into settable and non-settable and categories within each
3. Pack and store eggs	3.1 Place eggs on appropriate trays with pointed end down 3.2 Assemble and stack trays in categories and label clearly and accurately 3.3 Transfer eggs to storage in order of age, category or dispatch order 3.4 Operate egg storage facilities/ cool rooms according to enterprise procedures 3.5 Fumigate eggs if required
4. Complete hygiene and administration activities	4.1 Clean and disinfect or sanitise egg belts/conveyors, equipment and work area 4.2 Clean, sanitise and check cool room and equipment 4.3 Safely handle and measure chemicals used in the cleaning process 4.4 Take and prepare samples for testing as required 4.5 Dispose of non settable eggs and waste in line with enterprise environmental policies 4.6 Monitor pest and vermin presence and implement control measures in line with enterprise procedures 4.7 Record and report all required information and issues 4.8 Follow industry standards and enterprise procedures for excess

Element	Performance criteria
	eggs which are destined for human consumption

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPLY201A Collect store and handle eggs from breeder flocks.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPLY201 Collect store and handle eggs from breeder flocks

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- follow personal hygiene requirements
- check nest boxes and egg belts are free of obstructions
- match egg collection equipment flow rate to handling rate
- collect nest and floor eggs and keep separate
- ensure that practices to minimise floor eggs are implemented
- assess and sort eggs into settable and non settable and categories within each
- place eggs on trays pointed end down
- pack, label and store eggs correctly
- complete hygiene and administration activities
- operate egg washing equipment at correct temperature and sanitiser/detergent levels
- clean and sanitise equipment, egg washing equipment, cool rooms and work areas
- monitor pest and vermin presence and implement control measures
- identify work health and safety hazards, assess risks and implement suitable controls
- follow biosecurity requirements
- follow enterprise animal welfare procedures

Knowledge Evidence

The candidate must demonstrate knowledge of:

- industry standards, codes of practice, and enterprise procedures for collecting, handling, sorting, packing and storing settable eggs
- commonly used methods of pest and vermin control
- types, uses, cleaning and maintenance of machinery and equipment

- relevant documentation, records and reports that are required
- criteria for sorting and determining eggs that are unfit for setting and disposal methods
- procedures for egg handling, collection, washing, sorting, packing, labelling, storage and fumigation
- temperature, humidity, cleaning and operation for cool rooms and egg washing machines
- procedures for handling, measurement and usage of cleaning chemicals, disinfectants and sanitisers
- procedures for taking and handling samples for testing
- enterprise environmental and sustainability requirements, and procedures for disposal and management of wastes, debris and run-offs
- enterprise work health and safety, biosecurity and animal welfare policies and procedures

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPLY202 Maintain health and welfare of poultry

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain poultry health and welfare.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Poultry (PLY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor and assess poultry health and	1.1 Maintain biosecurity protocols and quarantine procedures at all

Element	Performance criteria
welfare	times 1.2 Follow enterprise work health and safety policies 1.3 Check poultry health and welfare regularly 1.4 Recognise and report signs of ill health, common diseases, parasite infestations and physical abnormalities 1.5 Identify cull birds using criteria established by the enterprise or industry quality assurance program 1.6 Record flock health status
2. Provide an optimal environment for poultry	2.1 Check bird housing conditions to ensure that protection is provided from external factors that compromise poultry health and welfare 2.2 Monitor, maintain and operate temperature and humidity control equipment 2.3 Install equipment and housing infrastructure appropriately 2.4 Monitor welfare of poultry and report non-compliance with animal welfare codes promptly 2.5 Record information which is relevant to the welfare and health of stock
3. Administer medicines or other chemicals	3.1 Store labelled veterinary chemicals or other medicines appropriately 3.2 Carry out routine prevention procedures for disease agents and parasites 3.3 Handle and measure medicines and chemicals safely and appropriately for administration 3.4 Medicate poultry appropriately as instructed or under supervision where required 3.5 Complete required documentation and records for administration of medicines and chemicals
4. Collect samples for analysis	4.1 Take swabs from surfaces and work areas regularly and prepare swabs for laboratory testing 4.2 Label and pack swabs and samples for dispatch appropriately
5. Remove non-viable poultry	5.1 Identify and remove sick, injured or unthrifty poultry in line with enterprise animal welfare policies 5.2 Treat sick poultry 5.3 Provide post-mortem assistance where necessary
6. Report and complete records	6.1 Report individual bird and flock health status promptly so that prevention strategies can be planned and implemented 6.2 Complete all required documentation and records clearly, promptly and accurately, and store appropriately

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPLY202A Maintain health and welfare of poultry.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPLY202 Maintain health and welfare of poultry

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- monitor and assess poultry health and welfare
- provide an optimal environment for poultry
- administer medicines or other chemicals
- collect samples for analysis
- remove non-viable poultry
- report and complete records
- follow enterprise work health and safety policies
- follow biosecurity protocols
- follow enterprise animal welfare policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant regulatory requirements, codes of practice, industry standards and enterprise procedures for biosecurity and quarantine
- relevant regulatory requirements, codes of practice, industry standards and enterprise procedures for animal welfare of poultry
- signs of health, signs of ill health, and methods for assessing poultry health and welfare
- common diseases of poultry, treatment regimes, prevention and management strategies
- criteria for determining birds to be culled
- relevant documentation, records and reports that are required
- types, functions and characteristics of housing, housing infrastructure and housing equipment for poultry, and the criteria and methods for determining that they are in working condition

- types, uses, handling, storage and routes of administration of commonly used veterinary medicines and chemicals
- procedures for taking, handling, labelling, packing and transporting swab samples
- procedures for assisting a post-mortem examination
- effects and impacts of individual bird health and welfare on flock health status and vice versa
- relevant work health and safety requirements and environmental policies

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPLY203 Set up shed for placement of day-old chickens

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to set up shed for placement of day-old chickens.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Poultry (PLY)

Elements and Performance Criteria

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to work in poultry shed	1.1 Follow biosecurity procedures 1.2 Confirm work to be undertaken from work program and

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	management 1.3 Follow enterprise work health and safety policies 1.4 Select, use and maintain suitable personal protective equipment 1.5 Select, check and maintain tools and equipment
2. Check and maintain shed and equipment	2.1 Check biosecurity procedures are in place to prevent entry of pathogens on personnel and equipment 2.2 Check shed and all equipment are clean, sanitised to required standards and maintained in working condition 2.3 Check that pest and vermin controls are in place, and maintain if required 2.4 Ensure that rodent barriers are in place and working 2.5 Operate and check lights, time switches and shed equipment
3. Prepare shed	3.1 Spread or place litter/paper as per enterprise procedures 3.2 Ensure litter/paper is clean & dry 3.3 Setup feeders, drinkers, heaters and other equipment in shed 3.4 Ensure that bird wires are in place and working 3.5 Install brooder curtains if required 3.6 Test watering, feeding, ventilation and cooling systems 3.7 Check and adjust lighting levels for day old chicks 3.8 Reset or adjust shed climate management system if required 3.9 Test alarm systems and time switches 3.10 Test brooders for proper operation and temperature control 3.11 Adjust time clocks 3.12 Install additional drinkers if required 3.13 Install additional feeders or lay paper & spread feed on it as required 3.14 Start heaters prior to chick placement to ensure brooding section is at required temperature for chick placement
4. Place chicks	4.1 Check that feed, water and shed conditions are adequate 4.2 Check shed and litter are at required temperatures 4.3 Carry chick containers safely and gently remove chickens from

Element	Performance criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	boxes and place on litter or paper 4.4 Check chick behaviour and health regularly after placement in line with enterprise animal welfare policies
5. Complete hygiene and administration activities	5.1 Clean and sanitise containers and equipment as required 5.2 Dispose of waste in line with enterprise environmental policies 5.3 Complete required records and documentation promptly and accurately

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPLY203 Set up shed for placement of day-old chickens Release 2	AHCPLY203 Set up shed for placement of day-old chickens Release 1	Minor typographical errors corrected	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPLY203 Set up shed for placement of day-old chickens

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- make preparations to work in poultry sheds
- check cleanliness of shed and equipment
- check and maintain shed and equipment
- check pest and vermin controls are in place
- prepare shed (spread litter or place paper, setup feeders, drinkers, adjust time clocks)
- place day old chicks
- check chick behaviour
- complete hygiene and administration activities
- follow enterprise work health and safety policies
- follow biosecurity procedures
- follow enterprise animal welfare and environmental policies.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant regulatory requirements, codes of practice, industry standards and enterprise procedures for biosecurity
- relevant animal welfare requirements and practices for poultry and day old chicks
- types, uses, cleaning and maintenance of suitable equipment, tools, machinery and personal protective equipment
- types, characteristics, cleaning and maintenance of poultry sheds

- commonly used methods of pest and vermin control
- types, characteristics and maintenance of bird wires and rodent barriers
- lighting systems, time switches, alarm systems, brooders, watering systems, feeding systems, ventilation systems and fogging systems, and methods for determining that they are in working condition
- requirements of day old chicks to ensure their health and welfare
- behavioural signs of health and methods for assessing health and welfare in day old chicks
- types, characteristics, uses and maintenance of litter for poultry
- biosecurity requirements for brooding and rearing chickens
- relevant environmental and sustainability requirements, and procedures for disposal and management of wastes
- relevant documentation and records that are required
- relevant work health and safety requirements.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPLY204 Collect and pack eggs for human consumption

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to collect and pack eggs intended for human consumption *to be* ready for transfer to the grading and packing floor.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Poultry (PLY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for work	1.1 Follow biosecurity requirements

Element	Performance criteria
	1.2 Follow personal hygiene requirements such as washing and sanitising hands 1.3 Follow enterprise work health and safety policies 1.4 Select, use and maintain appropriate personal protective equipment and clothing 1.5 Check & clean work area 1.6 Check equipment is clean and working correctly
2. Collect eggs	2.1 Ensure that nests and egg belts are free of sick or injured birds, carcasses and other obstructions in line with enterprise animal welfare policies 2.2 Control flow of eggs to match handling rate 2.3 Remove heavily marked, dirty, cracked, leakers or weak shelled eggs and useless eggs 2.4 Collect eggs by placing eggs onto trays or into baskets
3. Pack and store eggs	3.1 Pack eggs, keeping production categories separate and wrap pallets as required ready for transport 3.2 Label packed eggs, pallets and all packing requirements correctly 3.3 Check cool room temperature and humidity 3.4 Transfer eggs to cool room or grading floor
4. Clean and sanitise equipment and sites	4.1 Clean and sanitise egg belts/conveyors and all equipment and work areas 4.2 Clean and sanitise cool room and equipment 4.3 Control pests in egg collection, packing and storage areas 4.4 Handle and measure chemicals used in the washing and cleaning equipment safely 4.5 Take samples for testing if required 4.6 Dispose of non-conforming eggs and waste according to enterprise environmental management requirements 4.7 Complete records clearly and accurately

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCPLY204A Collect and pack eggs for human consumption.
No unit equivalent.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPLY204 Collect and pack eggs for human consumption

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply personal hygiene requirements
- check nest boxes and egg belts are free of obstructions
- match egg collection equipment flow rate to handling rate
- collect eggs
- assess and sort eggs
- pack and store eggs
- clean and sanitise equipment, cool rooms and work area
- check equipment is working correctly
- follow enterprise work health and safety policies
- follow biosecurity requirements
- follow animal welfare policies
- follow enterprise environmental management requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- industry standards, codes of practice, and enterprise procedures for collecting, handling, sorting, packing and storing eggs
- commonly used methods of pest and vermin control
- relevant documentation and records that are required
- types, uses, cleaning, maintenance and servicing of equipment and machines
- criteria for sorting and determining eggs that are unfit for sale and disposal methods
- temperature, humidity, cleaning and operation for cool rooms

- procedures for taking and handling egg samples for testing
- relevant environmental and sustainability requirements, and procedures for disposal and management of wastes, debris and run-offs
- relevant work health and safety, biosecurity and animal welfare requirements

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPLY205 Grade and pack eggs for human consumption

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to grade and pack eggs for human consumption.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Poultry (PLY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for work	1.1 Follow enterprise biosecurity requirements

Element	Performance criteria
	1.2 Follow enterprise personal hygiene requirements such as washing and sanitising hands 1.3 Select, use and maintain appropriate personal protective equipment and clothing 1.4 Check & clean work area 1.5 Check equipment is working correctly 1.6 Follow enterprise work health and safety policies
2. Assess and grade eggs	2.1 Load eggs onto grader 2.2 Control flow of eggs to match grader flow rate 2.3 Remove very dirty, cracked and leaking eggs 2.4 Candle eggs accurately 2.5 Grade eggs into appropriate weight and quality grades 2.6 Stamp eggs 2.7 Wash eggs using approved sanitisers and equipment as required 2.8 Check wash and rinse water temperature 2.9 Check egg washer sanitiser level and application rate 2.10 Oil eggs when required 2.11 Check oil type and application rate 2.12 Take and prepare samples for testing if required
3. Pack and store eggs	3.1 Pack eggs into cartons or trays and into boxes and assemble as required onto pallets and wrap pallets 3.2 Ensure eggs, trays, cartons, boxes and pallets are stamped and labelled correctly 3.3 Ensure correct separation of non-conforming products and saleable products 3.4 Check cool room temperature and humidity 3.5 Transfer eggs to cool room
4. Clean and sanitise equipment and sites	4.1 Report problems and abnormal equipment operations such as noises to supervisor 4.2 Clean and sanitise egg conveyors, cool room, all equipment and work areas 4.3 Monitor and report sightings or activities of pests in egg collection, grading, and storage areas 4.4 Handle and measure chemicals used in the egg washing and cleaning process safely 4.5 Dispose of useless eggs and waste according to enterprise environmental policies 4.6 Complete records clearly and accurately

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCPLY204A Collect and pack eggs for human consumption.
No unit equivalent.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPLY205 Grade and pack eggs for human consumption

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- follow personal hygiene requirements
- match egg feed rate to grading equipment flow rate
- assess and grade eggs
- pack and store eggs
- clean and sanitise equipment, cool rooms and work area
- check equipment is working correctly
- follow enterprise work health and safety policies and biosecurity requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- industry standards, codes of practice, and enterprise procedures for sorting, candling, grading, washing, oiling, packing and storing eggs
- commonly used methods of pest and vermin control
- egg labelling requirements
- relevant documentation and records that are required
- types, uses, cleaning and maintenance of equipment and machines
- criteria for determining non-conforming eggs and disposal methods
- temperature, humidity, cleaning and operation for cool rooms
- temperatures, cleaning and sanitising and operation of the egg washing process
- procedures for handling, measurement and usage of egg washing and cleaning chemicals, and sanitisers
- procedures for taking and handling egg samples for testing

- relevant environmental and sustainability requirements, and procedures for disposal and management of wastes, debris and run-offs
- relevant work health and safety and biosecurity requirements

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPLY206 Catch and load poultry

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to catch, handle and load poultry for transfer to new facilities or processing plant. Poultry can be meat chickens, layer or breeder pullets or spent hens.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Poultry (PLY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare to catch or pick up poultry	1.1 Follow biosecurity procedures 1.2 Confirm and identify sheds, flocks and bird numbers to be caught and loaded 1.3 Identify work health and safety hazards, assess risks and implement suitable controls 1.4 Select, use and maintain suitable personal protective equipment 1.5 Dim lights and set ventilation and cooling appropriately 1.6 Raise feeders, drinkers, nests and perches as required 1.7 Check and ensure that catching, movement path and vehicle loading area is clear of all obstacles 1.8 Set up catching equipment according to age, stock type and production system 1.9 Select, use and maintain tools and equipment 1.10 Follow relevant work health and safety and animal welfare procedures
2. Catch or pick up poultry	2.1 Quietly and calmly move birds into catching area 2.2 Catch and handle birds gently and calmly 2.3 Place birds in crates/modules according to space or weight requirements 2.4 Check birds regularly for overheating and smothering 2.5 Move crates/modules and load onto vehicle gently and calmly
3. Complete hygiene and administration activities	3.1 Clean, sanitise, maintain and appropriately store equipment and tools 3.2 Dispose of waste and debris in line with enterprise environmental procedures 3.3 Complete required records and documentation promptly and accurately

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - No equivalent.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPLY206 Catch and load poultry

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- follow biosecurity requirements
- identify flocks or shed to be caught
- make preparations for catching
- set up shed and catching area
- catch and handle poultry gently, quietly and calmly
- load birds into crates/modules according to space or weight requirements
- complete hygiene and administration requirements
- follow work health and safety procedures
- follow biosecurity procedures
- follow animal welfare procedures

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant work health and safety requirements
- relevant biosecurity requirements
- relevant animal welfare requirements and practices
- types, uses, cleaning and maintenance of equipment, tools, machinery and personal protective equipment required
- techniques and methods for handling, catching, placing into containers and loading poultry
- how to assess poultry condition and welfare including overheating and smothering

- relevant environmental requirements, and procedures for disposal and management of wastes, debris and fluids
- relevant documentation and records that are required

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPLY302 Brood poultry

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to brood poultry.

This unit applies to all poultry species and breeds.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Poultry (PLY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for brooding	1.1 Confirm work to be undertaken from work program and

Element	Performance criteria
	management 1.2 Follow biosecurity procedures 1.3 Hold discussions with other workers who may be affected by the brooding operations to ensure smooth operation of enterprise production processes 1.4 Select, check and maintain tools and equipment 1.5 Identify work health and safety hazards, assess risks and implement suitable controls 1.6 Select, use and maintain suitable personal protective equipment
2. Place hatchlings	2.1 Check shed and equipment has been set up correctly for placement of chickens and for brooding 2.2 Start heaters prior to chick placement to ensure brooding section is at required temperature for chick placement 2.3 Check feed, water and shed conditions are adequate 2.4 Check shed and litter are at required temperatures 2.5 Carry chick containers safely and gently remove chickens from boxes and place on litter, paper or matting 2.6 Check chick behaviour regularly after placement 2.7 Follow enterprise animal welfare policies
3. Carry out brooding operations	3.1 Observe chick behaviour regularly 3.2 Check temperature regularly and adjust according to chicks requirements 3.3 Pick up dead birds and dispose of carcasses 3.4 Identify and remove sick, injured or unthrifty birds 3.5 Remove paper or matting at appropriate time 3.6 Extend brooding area as young birds grow 3.7 Check equipment, shed climate, litter condition and ventilation regularly, and adjust as necessary 3.8 Clean drinkers and equipment regularly 3.9 Remove wet litter and replace where appropriate 3.10 Adjust lighting program as chickens grow 3.11 Carry out black-out training where required 3.12 Monitor beak tipping at appropriate times 3.13 Monitor body weight regularly 3.14 Monitor feed and water intake
4. Complete cleaning, maintenance and administration activities	4.1 Dispose of waste in line with enterprise environmental policies 4.2 Clean, maintain and store tools, machinery and equipment appropriately 4.3 Clean and maintain work areas

Element	Performance criteria
	4.4 Complete records promptly and accurately and report to management

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPLY302A Brood poultry.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPLY302 Brood poultry

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- check and confirm that shed or section is ready for brooding
- place hatchlings
- carry out brooding operations
- monitor chick behaviour and sensors and adjust temperature and ventilation appropriately
- monitor body weight and beak tipping where applied regularly
- complete cleaning, maintenance and administration activities
- implement work health and safety policies
- follow biosecurity procedures
- follow enterprise animal welfare policies
- apply enterprise environmental policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the effects and impacts of brooding operations on enterprise production processes
- the types, uses, maintenance and storage of relevant tools, machinery and equipment
- relevant work health and safety requirements
- the requirements, industry standards, codes of practice and procedures for welfare and health of poultry during brooding
- the effects and impacts of temperature and shed climate on chick behaviour and how temperature and shed conditions are checked
- the range, effects and impacts of stocking density and overcrowding on poultry behaviour, health and welfare
- the relevant lighting and lighting programs for chickens and pullets and effects on welfare and performance

- relevant environmental and sustainability requirements, and procedures for disposal and management of wastes
- the requirements and procedures for cleaning and maintaining work areas
- relevant records and reports that are required
- describe relevant animal welfare and biosecurity requirements

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPLY304 Incubate eggs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to incubate eggs.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

Candidates should confirm the regulatory requirements in regard to the use of fumigants that apply in their relevant State or Territory before undertaking this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Poultry (PLY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Receive and store eggs	1.1 Implement enterprise work health and safety policies 1.2 Implement enterprise biosecurity procedures 1.3 Unload eggs and record required information 1.4 Transfer eggs from delivery dollies/trolleys to setter dollies/trolleys 1.5 Store eggs with regard to position, temperature, humidity and period of storage 1.6 Attach eggs to turning machine to ensure maximum viability is maintained 1.7 Manage egg stock to minimise egg age on setting 1.8 Monitor temperature, humidity and airflow to maintain required settings
2. Monitor and operate setter	2.1 Take and record setter readings 2.2 Recognise alarms and carry out specified sequence of operations during a breakdown 2.3 Operate, repair and maintain setter 2.4 Calibrate temperature probes with known standards
3. Transfer eggs to hatcher	3.1 Move dollies to the egg handling and transfer area in the sequence required by the organisation 3.2 Check temperature, humidity and airflow 3.3 Transfer eggs to hatching trays in sequence

Element	Performance criteria
4. Fumigate setter or hatcher	4.1 Determine need for fumigation from supervisor's instructions 4.2 Prepare fumigant and apparatus 4.3 Seal and fumigate setter or hatcher 4.4 Air room or chamber to completely remove traces or vapours of the fumigant prior to re-entry of staff, re-installation of equipment and placement of eggs
5. Monitor and operate hatcher	5.1 Take and record readings 5.2 Carry out adjustments to temperature, humidity and airflow when instructed 5.3 Recognise alarms and carry out correct sequence of operations during a breakdown as set out by employer
6. Complete hygiene and administration activities	6.1 Dispose of waste and debris from the work areas in line with enterprise environmental policies 6.2 Clean, maintain and store tools, equipment and machinery 6.3 Clean and maintain safe work areas 6.4 Complete documentation, records and reports promptly and accurately

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPLY304A Incubate eggs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPLY304 Incubate eggs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- receive and store eggs
- monitor and operate setter
- transfer eggs to hatcher
- fumigate setter or hatcher
- monitor and operate hatcher
- complete hygiene and administration activities
- implement enterprise work health and safety policies
- implement enterprise biosecurity procedures

Knowledge Evidence

The candidate must demonstrate knowledge of:

- requirements, methods and procedures for handling, unloading, storing, transferring and turning eggs
- types, uses, cleaning, maintenance and storage of machinery, equipment and tools used in incubating operations
- range, effects and impacts of environmental parameters on incubating eggs
- types, handling, use and disposal of fumigating agents, work health and safety and environmental practices for these agents
- relevant environmental and sustainability requirements, and procedures for disposal and management of wastes and debris
- requirements and procedures for cleaning and maintaining work areas
- relevant documentation and records that are required
- enterprise work health and safety policies
- relevant biosecurity requirements

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPLY306 Clean and disinfect poultry production sheds

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to wet or dry clean and disinfect (sanitise, disinfect or fumigate) sheds used for poultry production. The standard of cleaning and disinfection applied depends in the type of stock, enterprise disease status and disease risk.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes of practice and sustainability practices.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

Candidates should confirm the regulatory requirements in regard to the use of fumigants that apply in their relevant State or Territory before undertaking this unit.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Poultry (PLY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to clean sheds	1.1 Confirm work requirements 1.2 Confirm standard of cleaning (wet or dry), sanitation, disinfection or fumigation required 1.3 Identify work health and safety hazards, and assess risks and implement suitable controls 1.4 Select, use and maintain suitable personal protective equipment 1.5 Identify environmental impacts of cleaning the shed, assess likely outcomes and take responsive action 1.6 Raise, dismantle or remove equipment for cleaning 1.7 Raise or remove feed and watering equipment, and clean to industry standards 1.8 Cover or seal electrical switchboards and other equipment to prevent entry of water
2. Clean sheds and surrounds	2.1 Apply insecticides for initial knock down if required 2.2 Remove and dispose of litter or manure and sweep floors 2.3 Service filters and flush drinker lines and tanks 2.4 Clean shed, feeders, drinkers and equipment 2.5 Empty and clean silos 2.6 Mix chemicals, detergents and disinfectants appropriately 2.7 Dry clean electrical equipment 2.8 Manage waste, effluent and run-offs from cleaning activity appropriately 2.9 Maintain all shedding, equipment and machinery
3. Sanitise, disinfect or fumigate sheds	3.1 Prepare equipment (including safety equipment) and chemicals for application of sanitiser, disinfectant or fumigant 3.2 Prepare shed for sanitisation, disinfection or fumigation by sealing sensitive and or electrical equipment 3.3 Seal shed to minimise escape of disinfectant to the outside 3.4 Carry out disinfection of shed according to legislative, enterprise and manufacturers requirements 3.5 Air shed to completely remove traces or vapours of the disinfectant prior to re-entry of staff, re-installation of equipment and placement of eggs 3.6 Apply insecticides if required
4. Complete hygiene and	4.1 Check cleaning and disinfection is done correctly

Element	Performance criteria
administration tasks	4.2 Apply biosecurity requirements 4.3 Clean and maintain cleaning and disinfection equipment, disinfect and store 4.4 Dispose of leftover fluids, containers and waste in line with enterprise environmental policies 4.5 Complete records and documentation

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPLY306A Clean and fumigate intensive production sheds.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPLY306 Clean and disinfect poultry production sheds

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- make preparations to clean sheds
- raise or remove equipment including feeders and drinkers
- clean equipment, sheds and surrounds
- maintain sheds, silos, feeders, drinkers and all equipment
- clean silos safely
- prepare sheds and equipment for cleaning
- sanitise, disinfect or fumigate sheds and equipment safely and in line with legislative requirements
- apply insecticide both in and outside shed
- dry clean and effectively cover electrical equipment
- complete hygiene and administration tasks
- implement enterprise work health and safety procedures
- apply biosecurity requirements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of sheds, machinery and equipment found in sheds
- how to handle, raise or remove equipment in sheds
- methods of sealing or covering electrical or sensitive equipment to prevent entry of water
- methods for litter and manure removal
- methods for dry cleaning electrical equipment
- procedure for dry or wet cleaning sheds and equipment

- environmental impacts of shed cleaning operation, and measures to mitigate these impacts
- equipment and machinery used for shed cleaning and disinfection, its operation, maintenance and storage
- methods of disposal of effluent and waste
- cleaning, maintenance and servicing of filters, drinker lines, tanks and silos
- handling and application of insecticides, sanitisers, disinfectants and fumigants and the relevant legislative requirements
- types, handling, use and disposal of cleaning agents
- types of documentation and records that need to be completed after the cleaning operations
- relevant work health and safety requirements
- relevant biosecurity requirements
- environmental impacts and controls of cleaning and fumigating sheds
- chemical spillage management and safety equipment and clothing

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPLY307 Implement and monitor biosecurity measures in poultry production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement and monitor biosecurity measures for poultry enterprises.

All work must be carried out to comply with workplace procedures, legislation, codes of practice, and guidelines relating to work health and safety, biosecurity, animal welfare, and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They provide and communicate solutions to a range of predictable problems in relation to biosecurity.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Note:

Pest is a bird or animal or insect which can be a carrier of infectious disease or which can cause stock losses or loss of productivity through predation.

Weed is a poisonous plant or one declared as a noxious weed (free range runs).

Pre-requisite Unit

Nil.

Unit Sector

Poultry (PLY)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Apply biosecurity procedures for site entry	1.1 Identify potential biosecurity threats to the enterprise 1.2 Identify potential sources of disease, pest or weed contamination being carried between sites 1.3 Consult with supervisor and management on the requirements for maintaining the enterprise as a biosecure zone as appropriate, in compliance with relevant legislation, Codes of Practice, industry guidelines and enterprise procedures 1.4 Maintain the integrity of enterprise as a biosecure zone 1.5 Maintain personal sanitation and hygiene on entry to enterprise 1.6 Complete sign in procedures 1.7 Ensure contractors and visitors are signed in, checked for risk profile and instructed in biosecurity requirements 1.8 Ensure all equipment, machinery or vehicles prior to entry onto the site are cleaned and disinfected 1.9 Check poultry, feed and feed ingredients to be introduced to the enterprise for health, pest and contamination status and isolate them from other poultry and feedstock where necessary 1.10 Implement enterprise work health and safety policies 1.11 Use and maintain appropriate personal protective equipment
2. Implement biosecurity procedures to minimise spread of disease, pest or weed where relevant within the enterprise	2.1 Implement procedures for entering production areas or facilities or moving from one site to another 2.2 Implement enterprise requirements, order of priority and prescribed routes for specified movements of personnel, vehicles, equipment, feedstuffs and poultry 2.3 Ensure all surface water used for drinking, cooling and washing down is sanitised 2.4 Implement appropriate personal sanitation and equipment cleaning procedures for movement between sites 2.5 Implement a health control program including vaccination 2.6 Keep enterprise areas clear of debris 2.7 Implement biosecure procedures for carcass, effluent, organic waste and inorganic waste removal and disposal
3. Implement biosecurity procedures on detection of disease, pest or weed where	3.1 Identify signs of disease, pest or weed incursion, or unusual signs in the poultry flocks 3.2 Follow enterprise animal welfare policies

Element	Performance criteria
relevant	3.3 Assess severity and extent of disease or incursion 3.4 Seek immediate advice from supervisors, professionals or appropriate authorities where signs indicate an unusual disease or pest presence 3.5 Immediately report signs of unusual disease or pest to management or appropriate authorities 3.6 Implement instructions from supervisors, enterprise and appropriate authorities for additional biosecurity measures
4. Apply enterprise sanitation and disinfection practices to reduce the risk of disease, pest or weed	4.1 Ensure all used bedding, organic and inorganic waste are removed from facilities or sites and disposed of in line with enterprise environmental policies 4.2 Remove dust from surfaces 4.3 Clean production areas, facilities or sites using pressure cleaning, water or dry cleaning method where appropriate 4.4 Clean feeding and watering equipment using an appropriate method 4.5 Sanitise or disinfect facilities, sites and equipment appropriately
5. Implement pest control	5.1 Identify pests that can introduce or spread high risk pathogens 5.2 Exclude wild birds from the poultry housing and other pests from the facilities by effective physical barriers 5.3 Monitor wild bird and pest numbers 5.4 Carry out procedures to discourage wild birds and to control pests
6. Monitor, record and report	6.1 Monitor effectiveness and progress of control activities and compare with enterprise requirements 6.2 Monitor production areas, facilities or sites as part of work duties to ensure work practices and procedures are applied 6.3 Complete records accurately and timely 6.4 Report issues and concerns with biosecurity to management 6.5 Work with management to review procedures, activities and communicate revisions to other staff

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - No equivalent.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPLY307 Implement and monitor biosecurity measures in poultry production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply biosecurity procedures for site entry and between sections
- implement biosecurity procedures
- implement biosecurity procedures as instructed on detection of disease, pest or weed where relevant
- identify abnormal signs in a flock
- implement wild bird, pest and weed control measures
- monitor application of biosecurity procedures
- implement enterprise work health and safety policies
- implement enterprise animal welfare policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant statutory requirements, codes of practice, industry standards and procedures for biosecurity
- types, characteristics, methods of spread, signs, prevention, control and treatment of diseases, pests or weeds relevant to the enterprise
- requirements for maintaining an enterprise as a biosecure zone including perimeter fencing, lockable gates, vehicle access, enterprise boundaries, production area boundaries, dirty and clean production areas, poultry housing and pasture boundaries and appropriate signage
- specific biosecurity procedures applicable to an enterprise and enterprise work routines, including personnel, visitors, vehicles, equipment, machinery, introduced poultry, pests, wild birds and health program

- requirements, procedures and resources for entry to enterprise, production areas, facilities or sites
- normal signs of a healthy flock
- relevant work health and safety requirements
- methods and procedures for cleaning and disinfection of facilities, sheds, feeding and watering equipment and other shed equipment
- requirements, methods and procedures for treatment and sanitisation of drinking, cooling and washing down water supplies as appropriate to an enterprise
- procedures for handling, measurement and usage of cleaning chemicals, disinfectants and sanitisers
- relevant environmental and sustainability requirements, methods and procedures for disposal and management of effluent, organic and inorganic waste and debris
- essential principles and key aspects of Commonwealth and State disease control emergency plans, including AUSVETPLAN
- types and maintenance of relevant documentation and records
- requirements and methods for reporting, reviewing, revising and communicating biosecurity procedures

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG201 Treat weeds

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to recognise common weed species and apply a range of weed treatments and control options.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to treat weeds	1.1 Identify and record details of target weeds and confirm with supervisor according to workplace procedures 1.2 Discuss and select appropriate control technique with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Perform calculations according to control option and treatment requirements and confirm with supervisor</p> <p>1.4 Select and prepare equipment for use according to enterprise guidelines, supervisor's direction and manufacturer's specifications</p> <p>1.5 Secure the treatment area according to workplace procedures and supervisors instructions</p> <p>1.6 Identify health and safety hazards and risks in the workplace and apply appropriate controls according to supervisor instructions</p>
2. Conduct weed treatment	<p>2.1 Identify, select, fit and use personal protective equipment according to workplace procedures and manufacturer instructions</p> <p>2.2 Prepare treatments according to supervisor's instructions, manufacturer guidelines, label directions and safety data sheets</p> <p>2.3 Apply treatments to minimise damage to off-target species according to workplace procedures, health and safety in the workplace and environmental legislative and regulatory requirements</p>
3. Carry out post treatment operation	<p>3.1 Clean and store personal protective equipment and application equipment according to workplace and environmental procedures</p> <p>3.2 Dispose of treatment waste according to environmental procedures</p> <p>3.3 Maintain records according to workplace procedures and legislative and regulatory requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information to operate equipment, determine methods and rates for treatments
Writing	<ul style="list-style-type: none"> Prepare treatment records using clear and accurate language and terminology
Numeracy	<ul style="list-style-type: none"> Perform basic mathematical calculations to determine rates of application relevant to treatment option

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Use clear language and concepts, and tone and pace appropriate when communicating with supervisor
Navigate the world of work	<ul style="list-style-type: none"> Recognise organisational expectations and follow explicit work procedures and protocols
Get the work done	<ul style="list-style-type: none"> Follow clearly defined instructions and sequencing, and monitor own progress for the task, seeking assistance when necessary

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG201 Treat weeds Release 2	AHCPMG201 Treat weeds Release 1	<p>Minor changes to Performance Criteria for clarity</p> <p>Updated Performance Evidence and Knowledge Evidence</p>	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG201 Treat weeds

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has demonstrated that they have treated weeds using at least two different techniques, including:

- recognised and recorded target weeds and confirmed with supervisor
- discussed and selected control options with supervisor
- prepared control options and treatments following required procedures
- identified health, safety and environmental hazards and risks and applied controls according to workplace procedures
- identified, selected, fitted and used personal protective equipment
- applied treatments safely ensuring off-target species were unaffected
- shut down, cleaned and stored personal protective equipment and application equipment according to environmental procedures
- disposed of waste according to workplace procedures and environmental procedures
- maintained records according to workplace procedures and legislative and regulatory requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- common weeds identification and naming conventions
- weeds and dispersal methods common to work area
- common weed treatment options, including:
 - cultural
 - chemical
 - mechanical
 - biological

- Integrated Pest Management
- basic environmental considerations when using chemicals for treating weeds, including:
 - spray drift and off target damage
 - inversion
 - re-entry period
 - residues
 - chemical handling
- regulatory requirements and responsibilities when applying weed treatments
- weed control equipment, capabilities and limitations
- health and safety in the workplace including personal protective equipment required for controlling weeds
- principles and methods for securing treatment sites including, caution or hazard signs and signals
- purpose and use of chemical labels and safety data sheets (SDS)
- environmental considerations when controlling and disposing of weeds and waste materials
- record keeping methods and requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a site with weed infestation or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - weeds to be identified and controlled
 - tools and equipment suitable for control options and treatments
 - personal protective equipment
 - treatment materials
- specifications:
 - workplace documents including treatment and control procedures and processes and forms for recording treatments
 - use of manufacturers' operating instructions for specific equipment, machinery used for weed control
 - SDS for treatment materials
 - specific regulations
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG202 Treat plant pests, diseases and disorders

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to recognise plant pests, diseases and disorders, determine the treatment options and apply treatments under supervision.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to treat plant pests, diseases and	1.1 Identify and record details of pest, disease or disorder and confirm

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
disorders	<p>with supervisor according to workplace procedures</p> <p>1.2 Discuss and select appropriate control technique with the supervisor</p> <p>1.3 Perform calculations according to control option and treatment requirements and confirm with supervisor</p> <p>1.4 Select and prepare equipment for use according to workplace procedures, supervisor instructions and manufacturer specifications</p> <p>1.5 Secure treatment area according to health and safety in the workplace procedures and supervisors instructions</p> <p>1.6 Identify health and safety hazards and risks in the workplace and apply appropriate controls according to supervisor instructions</p>
2. Apply treatments to plant pests, diseases and disorders	<p>2.1 Identify, select, fit and use personal protective equipment according to according to workplace procedures and manufacturer instructions</p> <p>2.2 Prepare treatments according to supervisor's instructions, chemical label instructions, safety data sheets and manufacturer instructions</p> <p>2.3 Apply treatments to minimise damage and exposure to off-target species according to workplace procedures, health and safety in the workplace and environmental legislative and regulatory requirements</p>
3. Carry out post treatment operation	<p>3.1 Clean and store personal protective equipment and application equipment according to workplace and environmental procedures</p> <p>3.2 Dispose of treatment waste according to environmental procedures</p> <p>3.3 Maintain records according to workplace procedures and legislative and regulatory requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information to operate equipment, determine

Skill	Description
	methods and rates for treatments
Writing	<ul style="list-style-type: none"> Prepare treatment records using clear and accurate language and terminology
Numeracy	<ul style="list-style-type: none"> Perform basic mathematical calculations to determine rates of application relevant to treatment option
Oral Communication	<ul style="list-style-type: none"> Use clear language and concepts, and tone and pace appropriate when communicating with supervisor
Navigate the world of work	<ul style="list-style-type: none"> Recognise and apply organisational expectations and follows explicit workplace procedures and protocols
Get the work done	<ul style="list-style-type: none"> Follow clearly defined instructions and sequencing, and monitors own progress for the task, seeking assistance when necessary

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG202 Treat plant pests, diseases and disorders Release 2	AHCPMG202 Treat plant pests, diseases and disorders Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG202 Treat plant pests, diseases and disorders

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have treated plant pests and diseases, including:

- recognised and recorded target pests, diseases and disorders and confirmed with supervisor
- discussed and selected control options with supervisor
- prepared control options and treatments following required procedures
- identified health and safety in the workplace and environmental hazards and risks and applied controls according to workplace procedures
- identified, selected, fitted and used personal protective equipment
- applied treatments safely ensuring off-target species were unaffected
- shut down, cleaned and stored personal protective equipment and application equipment according to environmental procedures
- disposed of waste according to workplace procedures and environmental procedures
- updated records according to workplace procedures and legislative and regulatory requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- common pests, diseases and disorders identification
- pests, diseases and disorders and dissemination method common to work area
- pests, diseases and disorders treatment options, including:
 - cultural
 - chemical

- mechanical
- biological
- Integrated Pest Management
- basic environmental considerations when using chemicals for treating pests, diseases and disorders, including:
 - spray drift and off target damage
 - inversion
 - re-entry period
 - residues
 - chemical handling
- regulatory requirements and responsibilities when applying control measures
- pests, disease and disorders control equipment, capabilities and limitations
- health and safety in the workplace including personal protective equipment required for treating pests, disease and disorders
- principles and methods for securing treatment sites including, caution or hazard signs and signals
- purpose and use of chemical labels and safety data sheets (SDS)
- environmental considerations when treating pests, diseases and disorders, and disposing of waste materials
- record keeping methods and requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - samples of pests, diseases and disorders to be identified and controlled
 - tools and equipment suitable for control options and treatments
 - personal protective equipment
 - treatment materials
- specifications:
 - workplace documents including instructions, treatment and control procedures and processes and forms for recording treatments
 - manufacturers' operating instructions for specific equipment
 - SDS for treatment materials
 - specific regulations
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG203 Work effectively in a pest management environment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to interpret and apply industry and workplace procedures and standards to daily work activities when working in the pest management sector. It requires the ability to identify and follow legislative and procedural requirements while under supervision.

The unit applies to individuals working in a broad range of job contexts who undertake defined routine activities under supervision. They exercise limited autonomy within established and well known parameters, providing solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Demonstrate basic understanding of pest management principles	1.1 Identify common invasive pests according to workplace requirements 1.2 Identify characteristics of pest species and their impacts on the community and environment 1.3 Identify workplace pest management plans 1.4 Recognise workplace strategies for pest management according to supervisor instructions 1.5 Identify and recognise the effects of pests on workplace performance 1.6 Identify and apply personal responsibilities according to workplace procedures and pest management practices
2. Work within industry guidelines, procedures and legislation	2.1 Assist with identifying key stakeholders and contribute to stakeholder engagement and consultation processes 2.2 Apply health and safety in the workplace practices according to workplace procedures 2.3 Identify and apply environmental, legislative, ethical and organisational requirements when working in the pest management sector 2.4 Identify licenses, permits and permissions required to enter a property for the purpose of pest management activities 2.5 Apply standard operating procedures and Codes of Practice to field of work 2.6 Implement procedures ethically according to legislative, licensing and procedural requirements
3. Use technology, equipment and tools to carry out work tasks	3.1 Identify and use suitable navigational tools for workplace orientation 3.2 Calibrate or prepare equipment for use according to workplace procedures 3.3 Use communication devices according to workplace procedures 3.4 Operate a range of equipment and tools required for work tasks according to workplace procedures 3.5 Identify equipment faults and take corrective action according to workplace procedures 3.6 Maintain records for pest control program according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures
4. Prioritise and undertake daily work activities	<p>4.1 Clarify methods and target area for the pest management program with senior officer</p> <p>4.2 Identify, prioritise and carry out work tasks within designated timeframes according to work instructions</p> <p>4.3 Identify and select equipment required to carry out pest management program according to treatment option</p> <p>4.4 Review and report factors affecting work task completion to your supervisor</p> <p>4.5 Dispose of waste material in accordance with workplace procedures and biosecurity practices</p> <p>4.6 Monitor worksite for pest management program effectiveness and report outcomes to your supervisor</p> <p>4.7 Conduct all work activities according to health and safety in the workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret workplace instruction, processes and procedures to identify work requirements and expected standards
Writing	<ul style="list-style-type: none"> Complete pest management records and reports using clear and accurate language and terminology
Numeracy	<ul style="list-style-type: none"> Perform basic mathematical calculations to determine rates of materials and calibration of equipment for pest management activities
Oral Communication	<ul style="list-style-type: none"> Use clear language and concepts, and tone and pace appropriate when communicating with supervisor and stakeholders
Navigate the world of work	<ul style="list-style-type: none"> Recognise and apply organisational expectations and follows explicit work procedures and protocols Identify and accept responsibility for working within common

Skill	Description
	legal and ethical frameworks
Interact with others	<ul style="list-style-type: none"> Respond to clear requests and contributes to stakeholder engagement when invited to do so, initiating a connection through verbal, or nonverbal communication
Get the work done	<ul style="list-style-type: none"> Follow clearly defined instructions and sequencing, and monitors own progress for the task, seeks assistance when necessary Use the main features and functions of digital tools to complete work tasks and access information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG203 Work effectively in a pest management environment Release 2	AHCPMG203 Work effectively in a pest management environment Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG203 Work effectively in a pest management environment

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they can work effectively in a pest management environment, including:

- recognised common pests and identified the characteristics and impact on community
- identified and monitored effectiveness of pest management plans for pests recognised for impact on workplace performance
- identified, selected and safely used equipment required to implement pest management program
- identified and took corrective action for equipment faults
- recognised and implemented workplace strategies for controlling pests
- applied health and safety in the workplace and environmental practices and procedures ethically according to legislative requirements
- identified permissions, licences and necessary permits required prior to entering properties
- followed safe waste disposal procedures
- prepared and used communication and navigational equipment relevant to workplace requirements
- assisted with identifying key stakeholders and contributed to stakeholder engagement
- used communication strategies to engage with supervisor and stakeholders
- complied with designated timelines
- maintained pest management records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- common pest management methods, strategies and monitoring techniques for specific pest species
- standard operating procedures and codes of practice applicable to pest control
- invasive pest species common to field of work and their harmful impact, including:
 - signs and symptoms of active pests
 - effect of pests on work environment
- basic environmental considerations when controlling pests, including:
 - spray drift and off target damage
 - inversion
 - re-entry period
 - residues
 - chemical handling
- pest control strategies, including:
 - cultural
 - chemical
 - mechanical
 - biological
 - Integrated Pest Management
- risk factors, including human, health and environmental associated with the pest management activity
- record keeping and reporting processes and procedures, including:
 - databases
 - paper based
 - mandatory reporting
- licenses, permits and permissions when entering properties
- common equipment used for, controlling pests, navigating and communicating on properties, including:
 - calibration requirements
 - basic operation principles
 - maintenance and repairs
- health and safety in the workplace procedures and legislative requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live pests for identification and control
 - tools and equipment for pest control, navigation and communications

- personal protective equipment
- specifications:
 - workplace documents including policies, procedures, processes, instructions, records and forms
 - manufacturers' operating instructions for specific equipment, machinery
 - relevant legislation, regulations and codes of practice
- relationships:
 - industry stakeholders
 - supervisor
- timeframes:
 - according to the job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG301 Control weeds

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to plan and coordinate weed control activities using appropriate strategies to provide effective, economic control while minimising environmental damage.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess weed infestation	<p>1.1 Identify and record weeds and potential weeds for target area</p> <p>1.2 Identify the scope, stage and size of the weed infestation impacting on target area</p> <p>1.3 Assess effect of weed infestation on target area</p> <p>1.4 Identify tolerable levels of infestation according to workplace requirements</p> <p>1.5 Investigate approaches to control weed infestation</p> <p>1.6 Identify non-target plant and animal species present in the area</p> <p>1.7 Assess the site for suitability of control measures according to health and safety in the workplace and environmental requirements</p>
2. Plan weed control measures	<p>2.1 Determine suitable control options according to workplace requirements and legislative and regulatory requirements</p> <p>2.2 Identify and assess hazards, risks and controls according to workplace procedures and regulations</p> <p>2.3 Identify appropriate resources for control options</p> <p>2.4 Identify, fit and use personal protective equipment in accordance with health and safety in the workplace procedures</p> <p>2.5 Select and prepare a plan for control measures according to workplace strategy and environmental legislative and regulatory requirements</p> <p>2.6 Document control measures according to workplace and legislative requirements</p>
3. Implement weed control	<p>3.1 Assess conditions for implementation of control plan and adjust plan according to conditions</p> <p>3.2 Implement control measures in accordance with workplace pest management plan and industry best practice</p> <p>3.3 Ensure that control measures minimise effect on non-target species and environmental damage</p> <p>3.4 Maintain records of the control measure according workplace procedures and regulatory requirements</p>
4. Monitor weed control measures	<p>4.1 Monitor weed control measures and identify adverse impact on non-target entities</p> <p>4.2 Assess effectiveness of weed control measures in accordance with</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures 4.3 Report results of assessment according to client or workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret plans, regulations, and other documentation and consolidate information to determine control plans and implement control measures
Writing	<ul style="list-style-type: none"> Accurately complete organisational records, plans and reports using clear language and industry terminology
Numeracy	<ul style="list-style-type: none"> Perform calculations for volumes, weights and measures for application rates of chemicals and materials
Oral Communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges using collaborative and inclusive techniques including active listening and questioning and reading of verbal and non-verbal signals to convey and clarify information
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following explicit and implicit policies, procedures, codes of practice and legislative requirements
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks and workload Make routine decisions and implements standard procedures for routine tasks, using formal decision making processes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG301	AHCPMG301	Minor changes to	Equivalent unit

Control weeds Release 3	Control weeds Release 2	Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG301 Control weeds

Modification History

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Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has demonstrated on at least one occasion that they have controlled weeds, including:

- identified, recorded and assessed weeds and their impact on the target area
- investigated the suitability of weed control approaches and effect on site environment and non-target entities
- planned and coordinate weed control activities
- identified tolerable levels of weed infestation for the target site
- conducted a site hazard, risk assessment and identified controls for weed control
- ensured personal safety by using appropriate personal protective equipment
- selected and applied weed management methods appropriate to the target site
- maintained records of weed management activities
- monitored, recorded and reported the effectiveness of methods
- ensured control measures had minimal effect on non-target species and environment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- weeds and their tolerable levels and impact on target area, including:
 - economic, aesthetic, health, fire hazard and environmental thresholds of common weeds
 - non-target entities common to the area
 - effect of weed infestation on required plant health and growth

- basic weed biology, including:
 - lifecycle and ecology of a range of weeds
 - cyclical nature of weeds and control programs
 - weed characteristics, morphology and dispersal
- weed management strategies and their selection criteria, including:
 - cultural
 - chemical
 - mechanical
 - biological
 - Integrated Pest Management
- risk factors including human, animal health and environmental associated with control measures
- factors that affect the efficacy of weed management strategies, including:
 - prevailing weather and atmospheric conditions
 - impact of off target damage on non-target entities
 - residues and maximum residue levels
- weed control activities and disturbance to other plant or animal species
- signs of adverse impact of control measures and ways to minimise their effect on non-target entities, including:
 - humans
 - animals
 - non-target plants
 - environment
- site-monitoring techniques that may be used to implement the weed control plan
- hazard and risks assessment and control methodologies
- equipment including personal protective equipment appropriate to control measure
- health and safety in the workplace requirements
- pest management planning and survey strategies
- legislative requirements relevant to weed control.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live weeds
 - tools and equipment used for weed control program
 - personal protective equipment
- specifications:

- workplace documents including policies, procedures, processes and forms for record keeping
- manufacturers' operating instructions for specific equipment and machinery
- safety data sheets
- workplace instructions and client briefs
- specific regulations and codes of practice
- relationships:
 - clients.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG302 Control plant pests, diseases and disorders

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to identify and assess the effect to plants of plant pests, diseases and disorders and plan and coordinate control measures.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess pests, disease	1.1 Identify and record plant pests, diseases, disorders and beneficial

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
and disorders	<p>organisms in target area</p> <p>1.2 Assess the scope, stage and size of the pests, diseases or disorders</p> <p>1.3 Determine tolerable threshold of pests, diseases or disorders according to workplace requirements</p>
2. Plan the implementation of plant pests, diseases and disorder control measures	<p>2.1 Identify and select control options according to workplace requirements and environmental procedures</p> <p>2.2 Select tools, equipment and machinery for control measure according to workplace procedures</p> <p>2.3 Identify and assess health and safety in the workplace hazards, risks and implement controls according to workplace procedures</p> <p>2.4 Select, fit, use and maintain personal protective equipment according to manufacturer instructions and health and safety in the workplace procedures</p> <p>2.5 Ensure control measures comply with health and safety in the workplace policies and environmental regulations</p>
3. Implement plant pests, diseases and disorder control measures	<p>3.1 Coordinate control measures with work team, contractors and suppliers according to sequence and timing in consultation with supervisor</p> <p>3.2 Implement control measures according to workplace procedures and industry best practice</p> <p>3.3 Maintain records according to workplace procedures and legislative and regulatory requirements</p>
4. Monitor plant pests, diseases and disorder control methods	<p>4.1 Monitor control measures to identify off-target effects</p> <p>4.2 Assess effectiveness of management measures against planned outcomes according to workplace procedures</p> <p>4.3 Adjust control methods where effectiveness has been below expectations</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret plans, regulations, and other documentation and consolidates information to determine and implement management measures
Writing	<ul style="list-style-type: none"> Accurately complete organisational records, plans and reports using clear language and industry terminology
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following explicit and implicit policies, procedures, codes of practice and legislative requirements
Interact with others	<ul style="list-style-type: none"> Select and use appropriate conventions and protocols when communicating with clients and co-workers in a range of work contexts Cooperate with others and contributes to work practices where joint outcomes are expected and deadlines are to be met
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks and workload Make routine decisions and implements standard procedures for routine tasks, using formal decision making processes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG302 Control plant pests, diseases and disorders Release 3	AHCPMG302 Control plant pests, diseases and disorders Release 2	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG302 Control plant pests, diseases and disorders

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has demonstrated that on at least one occasion they can control pests, disease and disorders, including:

- identified and recorded pests, diseases and disorders, beneficial organisms on host plants in target area
- assessed damage, threat and threshold of pests diseases or disorders on host plants according to client, market or environment requirements
- selected and implemented pest, disease and disorder control measures according to workplace, environmental and safe work practices
- identified and selected tools equipment and resources necessary to implement the control measure
- identified and assessed health and safety hazards and risks and incorporate and implemented in controls strategies according to health and safety procedures
- identified, fitted and used personal protective equipment according to workplace procedures
- monitored the effectiveness of pest and disease control
- adjusted control measure on crop and off-target entities where outcomes were below expectation
- maintained records of pest and disease control activities according to regulatory and workplace requirements
- coordinated the control strategy with others according planned outcomes.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- pest, disease and disorder and symptom recognition of host stress
- economic, aesthetic or environmental thresholds for a range of plant pests, diseases and disorders
- control strategies for pests diseases and disorders, including:
 - chemical
 - biological
 - cultural methods
 - treatments available
 - Integrated Pest Management
 - industry best practice
- tools, equipment and machinery for implementing the control strategies and the importance of calibration
- site monitoring and analysis techniques used to implement a control strategy
- implications of control strategies for:
 - target and off-target
 - site limitations
 - environmental implications
 - end market and production
 - environmental objectives
- health and safety in the workplace responsibilities for employees and employers
- correct use, maintenance and storage of personal protective equipment
- health and safety in the workplace and environmental regulatory requirements including hazardous substances regulations
- basic communications skills
- workplace and mandatory record keeping requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - pests, diseases and disorders
 - tools and equipment for control program
 - personal protective equipment
- specifications:

- workplace documents including policies, procedures, processes and forms for record keeping
- manufacturers' operating instructions for specific equipment and machinery
- safety data sheets
- workplace instructions and client briefs
- specific legislation/codes of practice
- relationships:
 - clients
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG304 Use firearms to humanely destroy animals

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to euthanise animals using firearms and techniques appropriate for the type and mobility of the animal.

The unit applies to individuals who hold a valid firearms license and work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions. Destruction of pest animals must comply with state animal cruelty legislation.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan for the shooting activity	1.1 Map location and boundaries for the shoot in accordance with the pest management plan and monitoring program 1.2 Confirm location of habitats, habits and range of movement of target animal

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Determine timing of the shoot based on the activity patterns of the target animal and estimate time required to complete the shoot</p> <p>1.4 Identify hazards and risks and apply control measures associated with the shoot according to workplace safety procedures</p> <p>1.5 Identify environmental and personal and public safety risks associated with the shoot</p> <p>1.6 Identify, fit and use suitable personal protective equipment and warning signs required for the activity</p>
2. Prepare for the shooting activity	<p>2.1 Confirm anatomy and physical features identifying location of vulnerable organs of target animal</p> <p>2.2 Take precautions to minimise hazards and environmental risks associated with the shoot</p> <p>2.3 Select vehicles, equipment and materials intended for use and check for serviceability</p> <p>2.4 Ensure firearm licences and permits are current and applicable to purpose</p> <p>2.5 Select firearm and ammunition types to comply with recommendations and workplace procedures for target animal</p> <p>2.6 Ensure firearms, ammunition, and stowage for transportation meets licensing requirements</p> <p>2.7 Check and prepare firearm and ammunition</p> <p>2.8 Zero and test firearm according to workplace procedures</p> <p>2.9 Stow firearm for transport according to legislative and regulatory requirements and workplace procedures</p>
3. Shoot animals	<p>3.1 Carry firearm safely with muzzle pointing in safe direction at all times according to industry best practice and workplace procedures</p> <p>3.2 Load, discharge and unload firearm according to safety procedures</p> <p>3.3 Aim firearm at vulnerable organ on the target animal and discharge firearm to kill using a single shot</p> <p>3.4 Check each target animal to ensure it is dead prior to selecting the next target animal</p> <p>3.5 Euthanise target animals that have not been killed cleanly</p> <p>3.6 Handle carcasses required for research or commercial use to minimise personal health and safety and biosecurity risks</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.7 Dispose of animal carcasses not required for research or other purposes according to enterprise procedures to minimise biosecurity or public safety and health risks
4. Clean and store equipment and material	4.1 Clean and store carcasses for research or commercial use 4.2 Clean and store equipment and materials according to workplace practices 4.3 Clean, maintain and store firearms in line with regulatory standards 4.4 Store ammunition safely 4.5 Report or record activity completion according to workplace practices

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately completes organisational records and reports using clear language and industry terminology
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for following explicit and implicit licencing requirements, policies, procedures, codes of practice and legislative requirements Be up to date with state or territory and federal legislation related to the use of firearms licensing
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks and workload Makes routine decisions and implements standard procedures for routine tasks, using formal decision making processes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG304 Use firearms to humanely destroy animals Release 2	AHCPMG304 Use firearms to humanely destroy animals Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG304 Use firearms to humanely destroy animals

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated the skills to use a firearm to euthanise animals, including:

- planned the shoot within the boundaries and location of the target animal its range and habitat according to the timeframe, pest management plan and monitoring program
- ensured licences and permits were valid and applicable and environmental and public safety risks were mitigated
- identified target animal and its anatomical vulnerabilities for a clean kill
- operated a firearm safely in accordance with statutory requirements
- zeroed and test fired the firearm safely at a range under supervision at a distance that is commensurate with the target animals to be destroyed
- selected and checked serviceability of transport, equipment, firearms and ammunition, and stowed the firearm and ammunition safely for transport
- cleaned, maintained and stored equipment, firearms and ammunition safely and in accordance with statutory requirements
- checked target animal was dead, and euthanised immediately, if signs of life, according to relevant animal welfare codes of practice
- used personal protective equipment (PPE) to handle carcasses to ensure health and safety in the workplace
- identified health and safety in the workplace hazards and risks and applied control measures and used PPE according to health and safety in the workplace procedures
- applied biosecurity measures when handling, transporting or disposing of carcasses
- maintained records and reporting procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- pest management plan and their purpose
- environmental hazards and risks associated with the use of firearms
- safety hazards and risk management strategies associated with shooting
- checking and preparing a firearm and ammunition
- checking target animal for life after discharging the firearm
- anatomy and physical features and vulnerable organs, or humane points on target animals
- procedures for the safe handling of carcasses required for research or commercial use
- procedures for the safe disposal of animal carcasses not required for other purposes
- reporting and recording procedures required by the pest management plan
- location and boundaries for the shoot
- habitats, habits and range of movement of target animals
- PPE required for the shoot
- firearm's licensing requirements
- firearm and ammunition types recommended for the target animal
- State and territory gun control laws, acts and regulatory requirements including firearms agreements and codes of practice, relating to the use of firearms for euthanising animals
- basic requirements for ensuring the welfare of animals described in the relevant Codes of Practice
- prevention of cruelty to animals legislation applicable to destruction of animals
- basic requirements for biosecurity in the context of destruction of animals.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an outdoor field environment with pest animals or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - pest animals, carcasses or targets
 - firearms
 - PPE
- specifications:
 - workplace documents including procedures for firearm use
 - operating instructions for firearms
 - licences and permissions to discharge firearms
 - specific legislation and codes of practice for firearm use and animal welfare
- timeframes:
 - checked animal for signs of life after discharge of firearm.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

In addition, the following specific assessor requirements apply to this unit:

- must possess firearms licences
- appropriate experience in using firearms for pest control.

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG305 Survey pests

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to survey pest abundance for plants, vertebrate or invertebrate animals. This will be carried out using a range of observation techniques in conjunction with workplace pest management plan, survey strategy and a monitoring program according to established standards and protocols.

The unit applies to individuals who work under broad direction and take responsibility for their own work use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to conduct survey	1.1 Access and interpret pest management plan, survey strategy and monitoring program documents according to workplace procedures 1.2 Map location and boundaries for the count and obtain required

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>permits</p> <p>1.3 Work with key stakeholders to develop trust and effective working relationships</p> <p>1.4 Identify natural areas and features</p> <p>1.5 Confirm location of habitats and the range of movement of the target pest</p> <p>1.6 Determine items of direct evidence of the pest to be counted and survey method</p> <p>1.7 Determine time and duration of the count and notify relevant personnel</p> <p>1.8 Identify safety hazards and take precautions to minimise risks associated with the selected survey method</p> <p>1.9 Identify environmental risks and take precautions to minimise risks associated with the count</p> <p>1.10 Check serviceability of resources required to complete the count</p>
2. Conduct survey and record observations	<p>2.1 Operate equipment according to workplace procedures and operator instructions</p> <p>2.2 Conduct count within boundaries of specified location</p> <p>2.3 Record observations of direct evidence of the target pest and report to supervisor</p> <p>2.4 Clean and store equipment and materials according to workplace practices</p> <p>2.5 Apply animal welfare policies and procedures when conducting survey</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret plans, strategies and other documentation and consolidates information to determine and implement surveys

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately complete organisational records of observations using clear language and industry terminology
Numeracy	<ul style="list-style-type: none"> Perform basic mathematical calculations to determine counts and preparing reports and records
Navigate the world of work	<ul style="list-style-type: none"> Take personal responsibility for following explicit and implicit policies, procedures and permit requirements
Interact with others	<ul style="list-style-type: none"> Select and use appropriate conventions and protocols when communicating with key stakeholders
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks and workload

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG305 Survey pests Release 2	AHCPMG305 Survey pests Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG305 Survey pests

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have surveyed pests, including:

- organised and completed a pest survey according to the organisation's pest management plan and survey strategy
- recognised signs or evidence of common pests
- counted, calculated and recorded observations
- operated equipment safely and according to workplace and environmental procedures
- cleaned and stored the equipment at the conclusion of the job
- took appropriate safety and environmental precautions for all pest survey activities
- applied appropriate animal welfare practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- survey techniques and equipment appropriate to the geography and type of pest being surveyed
- health and safety considerations with survey techniques including aerial observation
- the basic requirements for ensuring the welfare of animals described in the relevant Codes of Practice
- relevant parts of the organisation's pest management plan and survey strategy
- permits and permissions required for survey work
- pest survey plans and their application
- pest behaviour and habitats including areas that have a high probability of infestation
- direct evidence requirements of range of pests included in pest management plan
- survey recording methods and procedures

- map reading techniques for survey work.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a site with pests to be surveyed or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live pests to be surveyed
 - survey tools and equipment
 - personal protective equipment
- specifications:
 - workplace documents including survey plans, procedures, survey records and forms
 - manufacturers' operating instructions for specific equipment
 - workplace instructions or briefs]
 - specific animal welfare codes of practice
- relationships:
 - team member, supervisor or key stakeholder.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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AHCPMG306 Determine pest control techniques

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to select a pest control technique for a strategic approach to pest management.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess targeted pest	1.1 Identify the biology and characteristics of the target pest 1.2 Observe and confirm the location and extent of the pest problem 1.3 Observe and confirm target pest behaviour and movement patterns

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Assess the impact of the pest on assets
2. Assess pest control techniques	<p>2.1 Identify purpose of control program and determine desired outcomes</p> <p>2.2 Discuss suitable pest control strategy with supervisor according to planned outcomes</p> <p>2.3 Identify biosecurity risks associated with control methods</p> <p>2.4 Determine legislative, economic or social constraints on pest control techniques</p> <p>2.5 Identify non-target species and constraints that they may impose</p> <p>2.6 Assess the impact that urban areas will have on the planning of pest control techniques</p>
3. Plan the pest control	<p>3.1 Source information on techniques applicable to the type of pest</p> <p>3.2 Identify permits, licenses or clearances required to carry out pest control activities</p> <p>3.3 Assess the relative humaneness of pest control techniques, where target pests include animals</p> <p>3.4 Determine control measures to address identified constraints</p> <p>3.5 Identify safety hazards associated with control measures and apply relevant health and safety in the workplace policies and procedures to manage risks</p> <p>3.6 Discuss and confirm the most appropriate technique for the situation with the stakeholder, and the desired outcome</p> <p>3.7 Determine monitoring techniques according to workplace practices</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Analyse and consolidate technical information and data against defined criteria to determine planned outcomes

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges including active listening and questioning and reading of verbal and non-verbal signals to convey and clarify information
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following explicit and implicit policies, procedures and for licencing and permit requirements
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks and workload for efficiency and effective outcomes Make routine decisions and implements procedures for routine tasks, using formal decision-making processes for more complex situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG306 Determine pest control techniques Release 2	AHCPMG306 Determine pest control techniques Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG306 Determine pest control techniques

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have determined pest control techniques, including:

- assessed the impact of pests on assets
- identified the target pest and its characteristics
- determined the desired outcomes, constraints and measures for pest control techniques
- planned and discussed appropriate humane pest control techniques with supervisor and stakeholder
- used a variety of monitoring techniques to determine pest numbers
- identified non-target species and biosecurity risks affected during a control program
- identified pest control permissions and licences required for pest control techniques
- determined the legal, economic and social constraints affecting pest control techniques
- included health and safety in the workplace policies and procedures when planning pest control techniques.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- pest lifecycles and behaviours, including modes of dispersal, biology and reproduction
- features of target and non-target species
- habitats of target and non-target pest animals
- impacts pest control activities can have on native species
- licenses, permits and clearances that may need to be obtained
- the impact pest control can have on nearby urban areas and off target species
- pest control techniques appropriate for different contexts

- key conditions for the survival of pests and methods for eliminating or controlling those conditions
- basic requirements for ensuring the welfare of animals described in the relevant Codes of Practice, where target pests are vertebrate animals
- pests and their impact on assets, including the environment and their acceptable population densities
- types of constraints that apply to pest control techniques
- legislation applicable to pest control including declared species.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live pests
- specifications:
 - workplace documents including survey plans, procedures, records and forms
 - workplace instructions or briefs
 - specific animal welfare codes of practice
 - technical information and resources applicable to pest.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG307 Apply animal trapping techniques

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to trap and hold live animals for release, transportation or destruction. Trapped animals can be native animals, domestic animals, animals determined to be pests or feral animals.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for trapping	1.1 Identify purpose of animal capture and set objectives 1.2 Confirm the location and size of the area designated for trapping activities

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Confirm target animal movement patterns, behaviour and lifecycles to determine trapping location and placement of equipment and appropriate timing of trapping activity</p> <p>1.4 Identify potential non-target animals</p> <p>1.5 Estimate time required to complete trapping activities</p> <p>1.6 Identify and check method of transport, materials and equipment required for trapping</p> <p>1.7 Select appropriate traps for target animal and the environment</p> <p>1.8 Clean, maintain and prepare trapping equipment according to manufacturer specifications</p> <p>1.9 Identify hazards, risks and controls for trapping and select appropriate personal protective equipment</p> <p>1.10 Identify and manage environmental risks associated with trapping animals</p> <p>1.11 Obtain relevant approvals, permits and permission to carry out trapping activities</p> <p>1.12 Determine precautions for minimising trapping of non-target animals</p>
2. Place and set traps	<p>2.1 Undertake site surveillance prior to setting traps</p> <p>2.2 Select and prepare site to maximise opportunity for trapping target animals and minimise the chance of trapping non-target animals</p> <p>2.3 Position, set and calibrate trapping equipment and check it for operation and safety</p> <p>2.4 Apply lures, decoys, baits or toxins according to workplace procedures and permits</p> <p>2.5 Camouflage traps according to workplace procedures</p> <p>2.6 Apply precautions to prevent trapping of non-target animals</p> <p>2.7 Set traps according to legislative requirements and animal welfare codes of practice</p>
3. Check and remove traps	<p>3.1 Inspect traps at the required frequency</p> <p>3.2 Identify trapped animals then release, humanely destroy or prepare for transport according to trapping objectives and permits</p> <p>3.3 Handle captured animals humanely according to animal welfare codes of practice</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.4 Transport animals from site according to trapping objectives and animal welfare codes of practice 3.5 Observe health and safety in the workplace procedures and public safety requirements during trapping activities 3.6 Operate trap release mechanism safely and remove trap 3.7 Restore trap-site to its prior condition
4. Record data	4.1 Use global positioning system (GPS) loggers to record locations of trapped animals 4.2 Use recording instruments to record details of trapping activities according to trapping plan and workplace procedures
5. Clean and store equipment and material	5.1 Clean and store carcasses for research or other purposes 5.2 Clean and store equipment and materials according to safety data sheets, workplace and biosecurity procedures 5.3 Record target and non-target kills
6. Report completion of work	6.1 Report results of trapping activities and incidents according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational documentation using clear language, and terminology when reporting and maintaining animal trapping records
Numeracy	<ul style="list-style-type: none"> Perform basic mathematical calculations to determine and record trapping data and GPS locations
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following explicit and implicit policies, procedures and legislative requirements
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks and workload for efficiency and effective trapping outcomes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG307 Apply animal trapping techniques Release 2	AHCPMG307 Apply animal trapping techniques Release 1	Minor changes and removal of unnecessary Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG307 Apply animal trapping techniques

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have applied animal trapping techniques, including:

- determined objectives for trapping and confirmed target animal characteristics and trapping location and size
- estimated trapping period and identified, selected and prepared baits, equipment, traps and transport for trapping activities
- set and trapped animals humanely and released or destroyed animals according to workplace procedures and animal welfare code of practice
- identified presence of target and non-target animals
- identified environmental, health and safety in the workplace hazards, risks and applied controls according to workplace and environmental procedures
- checked method of transport, equipment and materials for serviceability and cleaned equipment before and after trapping activities
- selected, prepared and restored trapping site during trapping activities
- positioned, set, calibrated and checking trapping equipment according to workplace procedures
- applied lures or baits according to trapping plan
- selected, used and stored baits or toxins according to workplace procedures
- inspected traps in a timely manner and handled and euthanised captured animals in accordance with workplace procedures and animal welfare practices
- maintained records using global positioning system data
- summarised and presented trapping data and reports according to workplace procedures
- cleaned and stored equipment and carcasses using approved chemicals according to safety data sheets (SDS) and workplace procedures to minimise biosecurity risks.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic requirements for ensuring the welfare of animals described in the relevant Codes of Practice
- purpose for trapping the animal
- target animals and non-target animals
- target animal's range, movement patterns and behaviour and how to apply knowledge of these to selecting trapping location and equipment
- reproductive cycle of the target animal to determine appropriate timing of trapping activities
- food preferences, both general and local, of target animals
- capture and kill points for target animals
- traps and techniques for target animals
- permissions that may be required to undertake trapping
- principles relating to property, stock and duty of care when trapping
- precautions that need to be taken to minimise trapping of non-target animals
- trap camouflage materials and techniques
- trap types, setting and operating release to render them inactive
- health and safety in the workplace procedures that relate to trapping animals
- recording and reporting requirements
- use of decoys and lures
- baits or toxins types and preparation
- applicable state or territory legislation on the use and storage of baits or toxins
- applicable legislation on the capture and handling of animals
- suitable personal protective equipment
- transportation methods for captured animals.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live animals in the field
 - traps appropriate to trapping technique required
 - baits, lures or poisons relevant to trapping context
 - methods of transport relevant to trapping context
 - cleaning products
- specifications:

- workplace documents including plans, procedures, records and forms
- workplace instructions or briefs
- specific regulations and animal welfare codes of practice
- technical information and resources applicable to pest
- specific SDS
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

In addition, the following specific assessor requirements apply to this unit if firearms are used to destroy animals:

- must possess firearms licences
- appropriate experience in using firearms for pest control.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG308 Implement pest management strategies

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to assist in the implementation of a pest management plan for weeds, vertebrate or invertebrate pests.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for pest management strategy implementation	1.1 Access and interpret the pest management plan and discuss requirements with supervisor 1.2 Determine declared species in legislation 1.3 Identify concepts of the pest management plan and impact on

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>implementation</p> <p>1.4 Identify key stakeholders and take into consideration their opinions about the pest management plan</p> <p>1.5 Identify, select and prepare resources required for implementation</p> <p>1.6 Identify health and safety hazards, risks and controls required according to health and safety in the workplace procedures</p> <p>1.7 Identify select, fit, use and maintain personal protective equipment according to workplace procedures</p> <p>1.8 Identify budgetary constraints for pest management plan and ensure planned activity is within budget</p>
2. Assess targeted pest	<p>2.1 Identify the targeted pest and determine pest characteristics</p> <p>2.2 Identify pest management control method according to workplace procedures</p> <p>2.3 Identify pest status according to location, land use, legislative requirements, benefits and damage caused</p> <p>2.4 Assess target area for hazards, environmental risks and conflicting outcomes with pest management plan,</p>
3. Implement the pest management plan	<p>3.1 Use safeguards to ensure that the target pest is controlled, and other species remain unharmed according to plan outcomes</p> <p>3.2 Assess and control environmental impacts and use biosecurity and sustainability principles as outlined in the plan</p> <p>3.3 Use appropriate application processes and techniques to achieve desired period of control</p> <p>3.4 Ensure animal welfare, property, stock and duty of care comply with federal and state legislation</p> <p>3.5 Assess the effectiveness of the plan using relevant monitoring techniques and survey data</p> <p>3.6 Apply follow-up controls to manage reinfestation according to procedures</p>
4. Complete activities pertaining to the pest management plan	<p>4.1 Dispose of pest waste according to workplace procedures and legislative requirements</p> <p>4.2 Review and assess outcomes of the plan with supervisor to inform future pest management plans</p> <p>4.3 Complete required documentation and make recommendations to</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	supervisor according to workplace procedures 4.4 Clean, store and maintain equipment, tools and machinery

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret pest management plans and other documentation to consolidate information to determine implementation requirements
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational documentation using clear language, and terminology for recording and reporting performance of management strategies
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculation to analyse budgetary information, costs and values to determine performance against budget
Oral Communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges including active listening and questioning and reading of verbal and non-verbal signals to convey and clarify information with supervisor
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following explicit and implicit policies, procedures and legislative requirements
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks and workload for efficiency and effective outcomes Make routine decisions and implements standard procedures for tasks, using formal decision-making processes for complex and non-routine situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

AHCPMG308 Implement pest management strategies Release 2	AHCPMG308 Implement pest management strategies Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit
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Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG308 Implement pest management strategies

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has demonstrated that they have implemented a pest management strategy, including:

- accessed and interpreted pest management plan and discussed requirements
- identified declared species
- identified stakeholders, resources, health and safety in the workplace requirements and budgetary constraints of pest management plan
- assessed the target pest status, control technique and impact
- implemented the pest management plan using appropriate techniques ensuring safety of non-target species and environment
- applied the techniques to achieve long term outcomes
- applied standard monitoring techniques
- reviewed pest management plan and presented recommendations on improvements
- disposed of waste and cleaned, stored and maintained equipment according to workplace and legislative requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- appropriate legislative requirements with regards to declared species
- basic sustainability principles, including the ecological role provided by some pests
- federal and state legislation relating to property, animal welfare and duty of care
- risk management approaches
- stakeholder engagement and consultation strategies

- pest physiological and biological characteristics that influence on pest management, particularly with regard to pest populations and the ability of pests to rapidly recolonise
- pest management control methods and techniques and how they fit into an integrated pest management strategy
- standard monitoring techniques
- pest status in the context of location, land use, benefits and damage caused
- types of follow up techniques that may be required to minimise the possibility of reinfestation
- information sources used for identifying and managing pests
- animal welfare requirements for vertebrate pest control
- legislative requirements for the destruction, movement and propagation of a declared species
- biosecurity principles, including prevention of pest spread
- requirements for ensuring the welfare of animals described in the relevant Codes of Practice
- conflicting and cross purpose land use resolution processes.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live pests
 - vehicle, tools and equipment and resources appropriate to the control methods
 - personal protective equipment
- specifications:
 - workplace documents including procedures, processes, forms
 - manufacturers' operating instructions for specific equipment and machinery
 - safety data sheets where chemicals have been used
 - workplace instructions, job specifications or client briefs
 - specific legislation/codes of practice
 - financial budget for project
- relationships:
 - clients
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG309 Apply pest animal control techniques

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to apply control techniques for pest animals, in compliance with a pest management plan. This includes involving the use of vertebrate pesticides, traps (except leg hold traps), cages, lures and firearms with the animal humanely destroyed according to industry guidelines or protocols.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for pest control	1.1 Identify control techniques to be used in the pest management plan 1.2 Identify health and safety in the workplace hazards and risks

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>associated with the control technique and apply controls</p> <p>1.3 Identify health and safety hazards and risks in the workplace that could adversely impact on the environment, off-target animals and public and apply controls</p> <p>1.4 Select and check materials, equipment and vehicles according to pest management plan</p> <p>1.5 Clean, calibrate and prepare equipment according to workplace procedures</p> <p>1.6 Obtain permits, permissions and licences for affected properties and follow appropriate notification plan for stakeholders</p> <p>1.7 Prepare timeline for pest control operation according to industry best practise or protocols</p>
2. Implement pest control	<p>2.1 Identify target and non-target animals according to workplace procedures</p> <p>2.2 Select site to maximise impact of control methods on target animals and minimise impact on non-target animals.</p> <p>2.3 Check planned control technique applies to current target pest, site, current conditions and timing</p> <p>2.4 Install notification and warning signage according to control plan and health and safety in the workplace procedures</p> <p>2.5 Carry out control activities according to control plan and health and safety in the workplace procedures</p> <p>2.6 Follow control timelines for control technique</p> <p>2.7 Maintain records of control plan activities and outcomes according to workplace procedures</p> <p>2.8 Monitor site according to control plan and local conditions</p> <p>2.9 Euthanise animals according to pest control plan and workplace procedures</p>
3. Complete the pest control work	<p>3.1 Ensure equipment and unused resources are reconciled against plan and removed from site according to pest control plan and workplace procedures</p> <p>3.2 Dispose of waste and animal carcasses and restore site according to pest control plan, workplace and environmental procedures</p> <p>3.3 Clean, maintain and store equipment and materials according to workplace procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.4 Report results of control activities according to workplace procedures and legislative and regulatory requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret plans, regulations, and other documentation and consolidates information to determine pest control plan and implement control measures
Writing	<ul style="list-style-type: none"> Accurately complete organisational records, plans and reports using clear language and industry terminology
Numeracy	<ul style="list-style-type: none"> Perform calculations for volumes, weights and measures for application rates of chemicals, baits and materials
Oral Communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges including active listening and questioning and reading of verbal and non-verbal signals to convey and clarify information to stakeholders
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following explicit and implicit policies, procedures, codes of practice and legislative requirements
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks and workload Make routine decisions and implements standard procedures for routine tasks, using formal decision-making processes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG309 Apply pest animal control techniques	AHCPMG309 Apply pest animal control techniques Release 1	Minor changes to consolidate Performance Criteria for clarity	Equivalent unit

Release 2		Updated Performance Evidence and Knowledge Evidence	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG309 Apply pest animal control techniques

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have applied a pest animal control technique, including:

- identified the control techniques and selected equipment and resources required
- Identified hazards and risks and controls measure
- identified target and non-target animals
- obtained permits and licences and notified stakeholders of intended works
- checked vehicles, selected equipment and materials for serviceability and cleaned equipment before and after implementation
- prepared timeline and selected and prepared the site for control activity and restored it on completion
- prepared, installed and checked, safety warning signs, control equipment, materials according to plan
- applied controls according to timelines and control plan
- reconciled controls against plan within specified timeframes
- recorded details of control activities to comply with enterprise and legislative requirements
- reported results of control
- reconciled, cleaned and maintained equipment and disposed of waste according to workplace and environmental procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- requirements for ensuring the welfare of animals described in the relevant Codes of Practice and standard operating procedures
- the purpose and scope of the animal control program
- suitable control techniques and timing of control activities based on:
 - the target animal's range, movement patterns, behaviour and habitats
 - the reproductive cycle of the target animal
 - target animal behaviours and biology relevant to control technique
 - food preferences, both general and local, of target animals
 - scent station and other animal tracks and traces
 - target pests and non-target native animals found in the area
 - the environment and terrain of the target area
- appropriate calibre of firearm required to euthanise animals
- euthanasia procedures, including capture and kill points for animals
- licencing, permissions and notification protocols
- precautions that need to be taken to minimise harm to non-target animals
- health and safety in the workplace procedures that relate to animal control activities including personal protective equipment
- recording and reporting requirements
- procedures for using, recording and reconciling baits and poisons
- relevant legislation for pest animal control activities
- transportation methods for captured animals or carcasses
- land reparation works, waste disposal and the environment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live pest animals
 - tools and equipment used for pest animal control program
 - personal protective equipment
- specifications:
 - workplace documents including policies, procedures, processes and forms for record keeping
 - use of manufacturers' operating instructions for specific equipment, machinery
 - safety data sheets
 - workplace instructions and client briefs
 - specific legislation and codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

In addition, the following specific assessor requirements apply to this unit if firearms are used to destroy animals:

- must possess firearms licences
- appropriate experience in using firearms for pest control.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG311 Use firearms for pest control activities from aircraft

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to conduct pest control activities from the air using firearms.

The unit applies to individuals who hold a valid firearms license and work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection and use of available resources.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Undertake pre-flight procedures	1.1 Confirm location and boundaries for the activities with pilot 1.2 Obtain appropriate approvals and permits to conduct pest control activity according to regulations and the Civil Aviation Safety

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	Authority (CASA) 1.3 Check time and duration of flight and notify relevant personnel 1.4 Confirm flight plans and search and rescue operations with the pilot and ground crew 1.5 Check on-board emergency equipment with pilot 1.6 Check emergency landing procedures with pilot 1.7 Check landing-site requirements 1.8 Confirm intent to approach or leave the aircraft with pilot 1.9 Approach aircraft according to aircraft and workplace health and safety procedures
2. Prepare activity related to the use of a firearm	2.1 Carry current firearm's license according to regulations 2.2 Ensure the prescribed firearm is functioning correctly and sighted according to operation procedures 2.3 Check the firearm to ensure it meets appropriate regulatory standards
3. Use firearm from aircraft	3.1 Stow equipment safely on aircraft according to health and safety in the workplace procedures and legislative and regulatory requirements 3.2 Wear harnesses and helmet during pest control activities according to health and safety in the workplace procedures 3.3 Plot route and location of activities on map 3.4 Carry out pest control activity safely according to legislative and regulatory requirements, workplace procedures and instructions 3.5 Ensure animal is humanely destroyed 3.6 Observe and record pest numbers according to workplace procedures
4. Complete work relating to the use of firearms for pest control	4.1 Clean and store equipment and materials according to workplace procedures 4.2 Dispose of waste and debris according to workplace procedures 4.3 Document and report activities according to workplace instructions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret plans, permits and conditions to ensure compliance with regulatory requirements
Writing	<ul style="list-style-type: none"> Accurately complete organisational records and reports using clear language and industry terminology
Oral Communication	<ul style="list-style-type: none"> Use clear language and concepts, and tone and pace appropriate when communicating with pilot
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following explicit and implicit licencing requirements, policies, procedures, codes of practice and legislative requirements Be up to date with state or territory and federal legislation related to the use of firearms licensing
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks and workload

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG311 Use firearms for pest control activities from aircraft Release 2	AHCPMG311 Use firearms for pest control activities from aircraft Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG311 Use firearms for pest control activities from aircraft

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have used a firearm to control pest animals from an aircraft, including:

- obtained and complied with approvals, permits and conditions for planned activity
- confirmed flight plan, emergency procedures and search and rescue operations with pilot
- checked, sighted and used a firearm safety to shoot pest animal targets from an aircraft
- applied air safety practices when entering and occupying aircraft
- stored firearms safely in an aircraft
- applied health and safety in the workplace practices
- checked accurate location, carried out pest control and ensured all animals were humanely destroyed according to animal welfare codes of practice and workplace procedures
- cleaned maintained and stored firearms and equipment and disposed of waste according to workplace procedures
- maintained records of pest numbers and reported outcomes according to workplace procedures.

Knowledge Evidence

- An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:
- requirements for ensuring the welfare of animals described in relevant codes of practice and workplace procedures
- map reading and plotting position
- air safety principles and emergency procedures appropriate to firearms
- approvals required for carrying firearms airside
- firearms' licensing requirements

- health and safety in the workplace procedures
- environmental, animal welfare, prevention of cruelty to animals, and pest control legislation
- appropriate personal protective equipment (PPE)
- principles and methods of using firearms from an aircraft.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an aircraft suitable for pest animal control activities or an environment that accurately represents these conditions
- resources, equipment and materials:
 - live pest animals
 - appropriate firearms for pest animal management
 - suitable PPE for the individuals task
- specifications:
 - workplace and Civil Aviation Safety Authority documents such as policies, procedures, processes, forms and instructions
 - operating instructions for firearms
 - licences and permissions to discharge firearms from an aircraft
 - legislation, regulations and codes of practice for animal welfare and firearm use from aircraft
- relationships:
 - pilot and supervisors
- timeframes:
 - according to the specified flight plan.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

In addition, the following specific assessor requirements apply to this unit:

- the assessment team must include assessors with firearms licences and appropriate experience in using firearms from aircraft for pest control.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG312 Apply poison baits for vertebrate pest control in rural and environmental landscapes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to prepare pest animal baiting programs. This includes the safe preparation and distribution of poison baits for the control of vertebrate pest animals affecting the rural and natural environment according to legislative and regulatory requirements.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify vertebrate pests' species and prepare a poison baiting program	1.1 Identify the pest animal species and abundance in target area 1.2 Assess the type, availability and mode of action of poison for control of pest animal species in target area

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify key aspects of pest animal species ecology, habitat use and control program objectives to determine the timing and extent of baiting program</p> <p>1.4 Assess public health, safety hazards, risks and regulatory restrictions for control options</p> <p>1.5 Assess environmental conditions and off target risk for control options</p> <p>1.6 Select appropriate control option, baiting technique, poison and delivery method appropriate for target pest species, location and landscape</p> <p>1.7 Prepare baiting program to maximise pest animal control objectives according to legislative and regulatory requirements</p> <p>1.8 Determine monitoring and reporting protocols to evaluate effectiveness of baiting program according to legislative and regulatory requirements</p>
2. Obtain and confirm approvals for accessing and using poison baits	<p>2.1 Identify necessary approvals and notification requirements for the location of the baiting program and poison use according to legislative and regulatory requirements and toxin/poison label requirements</p> <p>2.2 Access and complete documentation to gain approvals for use of poisons and baits according to workplace procedures and legislative and regulatory requirements</p> <p>2.3 Ensure approvals have been granted, received and filed according to workplace procedures and legislative and regulatory requirements</p> <p>2.4 Notify stakeholders of intended baiting program according to workplace procedures and legislative and regulatory requirements</p>
3. Prepare, transport and store baits	<p>3.1 Determine the type of bait, quantity and dose rate of poison for the pest control program according to poison label and legislative and regulatory requirements</p> <p>3.2 Select, ensure serviceability, fit and use personal protective equipment for baits according to chemical label and safety data sheets (SDS)</p> <p>3.3 Select suitable location to prepare poison bait according to workplace procedures and legislative and regulatory requirements, codes of practice or guidelines</p> <p>3.4 Prepare bait for the target species, bait substrate/material and poison according to label and legislative and regulatory requirements</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>3.5 Transport poisons and prepared baits according to legislative and regulatory requirements</p> <p>3.6 Prepare baits for storage according to baiting program requirements, type of bait and legislative and regulatory requirements</p> <p>3.7 Store the treated baits safely according to workplace procedures, legislative and regulatory requirements and poison label directions</p> <p>3.8 Clean and decontaminate bait preparation and distribution equipment according to operator instructions, SDS and legislative and regulatory requirements</p>
4. Distribute and monitor baits in target area	<p>4.1 Monitor and assess weather conditions and forecasts to ensure effective conditions for baiting to proceed</p> <p>4.2 Ensure notifications have been communicated and signage installed prior to baiting program according to legislative and regulatory requirements</p> <p>4.3 Identify health and safety hazards and risks and implement controls when handling and distributing baits according to workplace procedures, poison label directions and SDS</p> <p>4.4 Distribute baits in target area to maximise target pest access and minimise off target risk according to label directions and baiting program</p> <p>4.5 Monitor bait uptake and control outcomes in a timely manner according to baiting program requirements, poison label directions and legislative and regulatory requirements</p> <p>4.6 Clean up and dispose of baits according to poison label instructions, workplace procedures and legislative and regulatory requirements</p>
5. Recording and reporting on outcomes of baiting program	<p>5.1 Record and report safety and environmental incidents according to workplace procedures and legislative and regulatory requirements</p> <p>5.2 Record details of poison bait application and outcomes according to workplace procedures and legislative and regulatory requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret SDS, poison labels, operating instruction, applicable legislation and regulations and other documentation and consolidates information to determine baiting requirements
Writing	<ul style="list-style-type: none"> Complete regulatory applications and forms for permissions according to legislation and regulations Accurately record and complete organisational and legislative records using clear language and terminology
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to determine bait size and quantity relevant to the vertebrate animal population and scale of the program
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following policies, procedures and regulations Identify and implement poison label requirements
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks required for baiting activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG312 Apply poison baits for vertebrate pest control in rural and environmental landscapes	Not applicable	New Unit	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG312 Apply poison baits for vertebrate pest control in rural and environmental landscapes

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has on at least one occasion demonstrated the ability to apply poison baits for vertebrate pest animals in a rural or natural environmental landscape ensuring they have:

- identified pest animal species and abundance
- identified and assessed the availability, mode of action of poison and their application for control of vertebrate pest animal species
- identified and selected the poison and baits required for the target pest and calculated the requirements for bait size according to poison label and regulatory requirements
- determined the timing for undertaking a baiting program in consideration of target animal ecology, behaviour, location and landscape
- identified the various approaches to baiting for pest animal species and selects most appropriate form of baiting for target pest animal species and environment
- assessed environmental and off target hazards and risks
- developed a poison baiting program and monitoring protocol suitable for pest control objectives for target vertebrate pest and location
- identified and accessed legislative and regulatory forms and made application for approvals to access and implement a poison baiting program
- confirmed approvals and notified stakeholders of poison baiting program
- assessed health and safety in the workplace hazards, risks and implemented control procedures for applying and handling poison baits according to poison label, safety data sheets (SDS), legislative and regulatory requirements, and workplace procedures
- used personal protective equipment for all poison bait activities
- prepared baits for target species in a suitable location
- prepared bait for storage and stored the bait safely ready for distribution according to poison label and workplace procedures
- monitored and assessed weather to ensure effective baiting conditions according to workplace procedures and poison label
- transported baits according to legislative requirements

- installed signage and distributed baits ensuring effective target access and minimising off target risks according to baiting program
- monitored bait stations in a timely manner according to poison label and baiting program
- cleaned equipment, spills, and disposed of waste and baits according to workplace and environmental procedures, SDS and poison labels
- maintained records and reported incidents according to workplace procedures and legislative and regulatory requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- vertebrate pests and their impact on the rural and environmental landscape
- vertebrate pesticides, toxins or poisons to control and manage pest animal species, including:
 - types
 - origin
 - mode of action
 - application
- application and use of pesticides in vertebrate animal baiting program
- baiting techniques for the delivery of vertebrate pesticide toxins or poisons to target species in a baiting program
- regulatory conditions for the use of vertebrate pesticides in pest animal baiting programs, including:
 - legal implications
 - requirements of poisons labels
 - role of SDS
 - regulated poisons including Schedule 7
- federal, state or territory guidelines and codes of practice for the preparation and use of poison baits for pest animals
- types and characteristics of vertebrate pests and their impact on the human and natural environment, including:
 - life cycle
 - effect on farms and farmland
 - effect on natural ecosystem and landscape
 - effect on the urban environment
- options for controlling vertebrate pests for a control program, including:
 - poison baiting
 - fumigation
 - habitat destruction
 - concussive (explosive) force
 - trapping

- shooting
- fencing
- Integrated Pest Management
- guard animals
- aversions
- bait techniques and technologies, including:
 - grains
 - meat
 - fruits and vegetables
 - bait stations
 - baiting trails
 - replacement baiting programs
 - canid pest ejectors
 - aerial baiting
- legislation, regulations and licensing requirements in relation to access and use of poisons and poison baits, including:
 - application process for permits and licencing
 - roles and responsibilities of land owners, pest controllers and government agencies for using poison baits
- stakeholders and required notifications including, neighbours, staff and statutory notifications
- bait distribution techniques and considerations, including:
 - impact of weather
 - pest species and their habits
 - breeding cycle
 - feeding and caching (storing) behaviours
 - watering behaviours
- predation risk to rural and environmental assets being protected
- building baiting program into farm or park management activities
- factors that contribute to off target risks, including:
 - proximity to urban and peri urban environment
 - domestic animal behaviours
 - pest animal interactions
 - native birds and animal activities
- hazards of poisons and their application, including:
 - human and animal health
 - environmental contamination
 - residues in environment, plants and animals
 - timing for checking bait stations/sites
- safety requirements when handling, treating and distributing poisonous baits, including:

- procedures
- personal protective equipment
- signage
- preparing poisonous baits, including:
 - bait types
 - sizes
 - preparation before and after treatment
 - equipment and methods of treating baits
- safe handling, transport and storage of treated baits and poison concentrates
- requirements for disposal of waste poison and baits, clearing spillages and equipment clean up.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - poison baits
 - personal protective equipment
- specifications:
 - workplace documents including work instructions and procedures for bait distribution and planning
 - poison labels and SDS
 - legislation and regulations relevant to the use of poisons and poison baits
 - access to weather forecasts or means to measure local weather.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG313 Prepare, monitor and maintain biological agents for weeds

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to prepare, monitor and maintain biological control agents for weed control prior to release in an experimental or field situation. Biological agents must be maintained and stored in an effective way to optimise their potency on targeted weed species.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare and propagate bioagent media	1.1 Identify, select, fit and use personal protective equipment according to health and safety in the workplace procedures 1.2 Identify, select and access bioagent media to suit the host and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	target 1.3 Prepare required media according to workplace procedures according to laboratory policies and procedures, and health and safety in the workplace, environmental sustainability and biosecurity protocols
2. Obtain bioagent cultures	2.1 Procure cultures from established sources and maintain microclimate in transport to the laboratory 2.2 Transfer cultures to growing environment according to laboratory policies and procedures and health and safety in the workplace, environmental sustainability and biosecurity protocols
3. Maintain and monitor cultures	3.1 Check cultures according to workplace procedures 3.2 Maintain optimum environmental conditions to maximise culture growth and condition according to laboratory policies and procedures and health and safety in the workplace, environmental sustainability and biosecurity protocols 3.3 Record observations and report abnormalities according to workplace procedures
4. Harvest and store cultures	4.1 Monitor culture growth to identify the need for harvest and agent release according to workplace procedures 4.2 Determine harvesting program according to program requirements 4.3 Complete harvest operations and transfer cultures to storage according to laboratory policies and procedures for health and safety in the workplace, environmental sustainability and biosecurity

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately complete organisational records of observations using clear language and industry terminology
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations for weights and measures in the

Skill	Description
	preparation of media for cultures
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following explicit and implicit policies, procedures and protocols for laboratory and health and safety with bioagents
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning, sequencing and prioritising tasks and workload

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG313 Prepare, monitor and maintain biological agents for weeds	AHCPMG310 Prepare, monitor and maintain biological agents	Minor change of title for clarity Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG313 Prepare, monitor and maintain biological agents for weeds

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have prepared, monitored and maintained biological agents for weed control, including:

- prepared and propagated biological agents according to laboratory policies and procedures
- procured and transferred cultures to growing environment according to laboratory policies and procedures
- maintained, harvested and stored biological agents according to laboratory policies and procedures
- monitored and kept records of observations and details of any abnormalities according to laboratory policies and procedures.
- applied health and safety in the workplace procedures, environmental sustainability and biosecurity practices.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- context of biological agents used for weed control
- laboratory procedures for biological agents
- media available for culture maintenance
- culture and media preparation techniques
- available biological control agents and their use
- the range of pest species that are to be targeted with biological agents
- biosecurity and quarantine requirements
- health and safety in the workplace for laboratories and biological agents, including:
 - use of personal protection equipment (PPE)
- environmental sustainability and biosecurity practices when using biological agents.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a laboratory suitable for handling biological agents or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live biological agents
 - laboratory tools, equipment and materials to produce and store media
 - PPE
- specifications:
 - workplace and laboratory policies, procedures and processes
 - safety data sheets
 - workplace instructions and specifications.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG409 Implement a pest management plan

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to implement pest management plans for weeds, vertebrate or invertebrate pests.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They use discretion and judgment in the selection, allocation and use of available resources.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify and allocate resources for the pest management plan	1.1 Determine operational parameters and objectives in consultation with management 1.2 Determine site operational parameters through site inspection 1.3 Consult stakeholders to provide advice and secure support on pest

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>management activities</p> <p>1.4 Identify budgetary allocations and determine the effect on resources and activities</p> <p>1.5 Identify health and safety, environmental and biosecurity hazards and risks and determine controls</p> <p>1.6 Select and allocate pest management activities to personnel according to planned health and safety in the workplace standards, legislation</p> <p>1.7 Procure machinery, equipment, tools and materials identified in the plan according to health and safety in the workplace standards and legislation</p>
2. Brief personnel on pest management plan activities	<p>2.1 Inform personnel of the requirements and expectations of the pest management plan according to workplace procedures</p> <p>2.2 Advise personnel of health and safety in the workplace standards and legislative and regulatory requirements to be applied when carrying out required activities</p>
3. Implement the pest management plan	<p>3.1 Ensure machinery, equipment, tools and materials are checked and serviceable</p> <p>3.2 Ensure personal protective equipment is serviceable, fitted and used by personnel according to health and safety in the workplace procedures</p> <p>3.3 Manage pest control techniques according to pest management plan</p> <p>3.4 Monitor procedures and processes employed by personnel for compliance with health and safety in the workplace procedures, animal welfare and environmental guidelines</p> <p>3.5 Provide feedback, advice and coaching to personnel according to workplace procedures</p>
4. Coordinate contingency management activities	<p>4.1 Review and reschedule activities not completed according to workplace procedures</p> <p>4.2 Notify personnel and stakeholders of changes to the schedule according to workplace procedures</p>
5. Report progress in relation to pest management plan	<p>5.1 Review reports and records supplied by personnel and assess performance against pest management plan</p> <p>5.2 Document and compile reports and records according to workplace</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	procedures 5.3 Provide regular progress reports to stakeholders according to workplace procedures and reporting schedule

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse plans, reports and records and consolidate information to determine pest control actions
Writing	<ul style="list-style-type: none"> Document outcomes and changes to plans and generates reports using industry relevant and recognised terminology
Numeracy	<ul style="list-style-type: none"> Apply computational skills to identify budgetary information, determine time durations and human resource allocations
Oral Communication	<ul style="list-style-type: none"> Present complex information in formal situations using clear and convincing language, tone and pace appropriate when briefing personnel and conversing with management
Navigate the world of work	<ul style="list-style-type: none"> Work independently or with others in making decisions to achieve organisation outcomes Contribute to roles and responsibilities of others Take full responsibility for following policies, procedures and legislative requirements
Interact with others	<ul style="list-style-type: none"> Implement strategies for a diverse range of colleagues in order to build rapport and foster strong relationships when allocating workload Elicit feedback and provide feedback to others in order to improve workgroup behaviours and develop contingencies
Get the work done	<ul style="list-style-type: none"> Accept responsibility for planning and sequencing complex tasks and workload, negotiating key aspects with others taking into account capabilities, efficiencies and effectiveness Monitor progress of plans and schedules and review and change them to meet new demands and priorities Apply systematic and analytical decision-making processes for complex and non-routine situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG409 Implement a pest management plan Release 2	AHCPMG409 Implement a pest management plan Release 1	Updated to meet Standards for Training Packages Minor changes to Performance Criteria for clarity	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG409 Implement a pest management plan

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they can implement a pest management plan, including:

- determined all operational parameters and objectives and identified the budgetary allocations, health and safety in the workplace, biosecurity, human and operational resources required for the pest management plan
- supervised others to meet health and safety in the workplace, legislative and regulatory requirements in their work
- procured and ensured machinery, equipment tools and materials met operational and statutory requirements
- communicated with stakeholders and personnel on pest management activities
- supervised others to carry out pest management work according to the pest management plan and provided feedback, advice and coaching
- informed and advise personnel on duties and expected standards
- reviewed and rescheduled works and notified stakeholders of changed schedules
- reviewed and compiled outcomes of pest management plan and prepared reports to stakeholders on progress.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- pest management plans their structure and implementation
- factors affecting the selection of pest control methods and techniques, including:
 - pest biology and lifecycle
 - potential diseases and toxicity

- principles of sustainability
- herbicide resistance and the alternatives that are available
- pest status in the context of location, land use, benefits and damage caused
- pest management control programs and how to use them in an integrated manner, including:
 - key concepts of integrated pest management as a strategy
- contingency management principles
- risk assessment and management processes
- legal responsibilities of stakeholders including landowners
- local, regional, state and national pest management strategies
- federal, state or territory legislation and regulations relating to pest management activities
- the basic concepts and underpinning principles of the strategic approach to invasive pest management and how to manage damage caused by pests
- the basic principles and importance of monitoring and evaluating the effectiveness of invasive pest management and how to plan and implement an appropriate monitoring program for a pest management plan
- common causes of failure in pest management
- requirements for ensuring the welfare of animals described in relevant codes of practice
- relevant environmental and pesticides legislation as they apply to the workplace
- developing operational parameters and objectives, timelines and milestones
- reporting and recording requirements for the various stakeholders
- scheduling workload and developing work plans.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - live pest animals
 - tools and equipment required to implement the plan
 - personal protective equipment
 - baits and poisons
- specifications:
 - workplace documents including policies, procedures, processes
 - pest management plan
 - manufacturers' operating instructions for specific equipment and machinery
 - specific safety data sheets
 - workplace instructions and job specifications
 - specific legislation/codes of practice
- relationships:

- clients
- team member(s)/work crew
- supervisors/management
- timeframes:
 - schedules and planned completion dates for a pest management plan.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG412 Develop a pest management plan

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to develop a pest management plan for the management of pests, in the broader context of weeds, vertebrate or invertebrate pests and diseases. This includes identifying the activities required to meet objectives of the organisation through the coordination of human and physical resource requirements.

The unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine goals of the	1.1 Determine scope of the plan according to project requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
pest management plan	1.2 Conduct and document consultation with stakeholders to determine goals according to workplace procedures 1.3 Determine realistic time frames for plan implementation
2. Set specific objectives for the pest management plan	2.1 Define and document objectives to be achieved in consultation with stakeholders 2.2 Define roles and responsibilities of stakeholders in delivering objectives
3. Identify activities required to achieve specific objectives relating to the pest management plan	3.1 Determine and document activities required to achieve objectives by proposed deadlines in consultation with stakeholders 3.2 Select and schedule activities according to critical control points and workplace activities 3.3 Conduct risk management for community, environment, production and health and safety according to health and safety in the workplace procedures and biosecurity and environmental regulations 3.4 Identify site clean-up requirements according to workplace procedures 3.5 Develop contingency plans for identified risks and external influences according to health and safety in the workplace and biosecurity procedures and regulations 3.6 Determine monitoring methods and procedures 3.7 Determine control methods relevant to the plan
4. Estimate resources required to complete required activities	4.1 Determine human and physical resources required for plan 4.2 Estimate and document cost of resources according to workplace procedures
5. Finalise pest management plan	5.1 Prioritise activities in plan 5.2 Document and present plan to stakeholders for approval according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Document outcomes of discussions and produce plans using industry relevant terminology
Numeracy	<ul style="list-style-type: none"> Apply computational skills to determine costs of resources and determine time lines and activity schedules
Oral Communication	<ul style="list-style-type: none"> Present complex information in formal situations using clear and convincing language, tone and pace appropriate when consulting with stakeholders
Navigate the world of work	<ul style="list-style-type: none"> Work independently or with others in making decisions to achieve organisation outcomes Contribute to roles and responsibilities of others Take full responsibility for following policies, procedures and legislative requirements
Get the work done	<ul style="list-style-type: none"> Accept responsibility for planning and sequencing complex tasks and workload, negotiating key aspects with others taking into account capabilities, efficiencies and effectiveness while developing plans and schedules Apply systematic and analytical decision making processes for complex and non-routine situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG412 Develop a pest management plan Release 2	AHCPMG412 Develop a pest management plan Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG412 Develop a pest management plan

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have developed a pest management plan, including:

- developed the scope, goals and time frames for a pest management plan
- consulted with stakeholders in the development of the plan
- defined and documented the objectives, roles and responsibilities for the plan
- identified and documented the activities and developed a schedule of critical control points
- conducted a risk assessment for management of community, environment production and health and safety in the workplace and developed contingency plans
- determined and developed operational procedures and methods for monitoring the plan, control methods to be used, site clean-up strategy, and biosecurity
- identified resources and estimated cost of pest management plan
- prioritised activities according to budgetary constraints
- incorporated health and safety in the workplace, environmental and biosecurity procedures and regulations into pest management plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- project planning and management processes
- factors that impact on selection of pest management activities, including:
 - pests in the context of weeds, vertebrate and invertebrate animals and diseases
 - pest behaviour
 - pest population dynamics and economic and environmental thresholds

- target pest biology and lifecycles
- potential diseases or toxicity risks
- relevant local, regional, state or territory and national pest management strategies
- the principles that underpin the strategic approach to managing pests
- land management and production processes of targeted area
- Federal, state or territory legislation and regulations relating to pest management activities including animal welfare
- chemical, biological, physical and habitat control techniques for pest management
- pest control methods and techniques
- critical control points in the target pests' life cycle, land management and production activity cycles
- develop objectives for specific, measurable, achievable, realistic and time-based outcomes.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - technology and resources for documenting plans
- specifications:
 - workplace documents including policies, procedures, processes
 - pest management planning tools
 - workplace instructions and job specifications
 - specific legislation and codes of practice
- relationships:
 - clients
 - team member(s)/work crew
 - supervisors/management.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG413 Define the pest problem

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to apply a strategic pest management approach to define a weed, vertebrate or invertebrate pest problem for a target area.

The unit applies to individuals who use consultation and analysis to define the pest problem. They exercise autonomy in undertaking complex work and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish the background to the target pest problem	1.1 Determine landscape and land use within target area 1.2 Consult with stakeholders to identify and record views and issues for target pest

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Define desired environmental management and production outcomes</p> <p>1.4 Collect and record information about management or production processes relating to pest problem</p> <p>1.5 Determine non-target species populations in target area according to ecological data</p>
2. Analyse the target pest problem in the area	<p>2.1 Establish and document stakeholder views on the distribution of target pest within affected area</p> <p>2.2 Source and analyse information to validate stakeholder views for target pest population, damage, and distribution</p> <p>2.3 Identify environmental and pest biology factors which influence the target pest population and distribution</p> <p>2.4 Document the target pest lifecycle, optimum times, locations and behaviours that impact program effectiveness</p> <p>2.5 Identify non-target species populations and distribution</p> <p>2.6 Identify hazards, risks and controls for non-target species, environment, ecology and production in target area</p> <p>2.7 Identify potential ecological role of target pest</p>
3. Determine critical control points for management of the target pest problem	<p>3.1 Determine timing of control activities for periods of least risk to off target activities and conditions</p> <p>3.2 Identify periods of significant vulnerability during target pest lifecycle</p> <p>3.3 Determine appropriate time period for pest management activity</p>
4. Define and document the impacts of the target pest	<p>4.1 Estimate economic losses and environmental impacts of the pest presence</p> <p>4.2 Conduct a cost-benefit analysis of managing pest in accordance with workplace plans</p> <p>4.3 Prepare a report on outcomes of investigation for stakeholders according to workplace procedures</p> <p>4.4 Assess whether the pest problem warrants the need for a pest management plan</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse documents and data from a variety of sources and consolidates information to determine requirements for management plans
Writing	<ul style="list-style-type: none"> Document outcomes of consultations and incorporates details into report Document report using industry relevant terminology, structure and format
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to analyse costs and values to accurately create a cost benefit analysis
Oral Communication	<ul style="list-style-type: none"> Determine and confirm client views and opinion using collaborative and inclusive techniques including active listening and questioning and reading of verbal and non-verbal signals to convey and clarify information and to confirm understanding
Navigate the world of work	<ul style="list-style-type: none"> Work independently or with others in making decisions to achieve organisation outcomes Take full responsibility for following, procedures and legislative requirements
Get the work done	<ul style="list-style-type: none"> Accept responsibility for planning and sequencing complex tasks and workload, negotiating key aspects with others taking into account capabilities, efficiencies and effectiveness Apply systematic and analytical decision-making processes for complex and non-routine situations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG413 Define the pest problem Release 2	AHCPMG413 Define the pest problem Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG413 Define the pest problem

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have produced a written report that details the pest problem in a target area, including:

- identified and consulted with stakeholders
- collected information on pest impact and defined the pest problem in consultation with stakeholders
- determined the target pest population and distribution and factors impacting population and distribution
- determined non-target species populations and distribution in area
- accessed and analysed information to validate pest impact
- identified appropriate times for pest control activities and identified and documented pests' characteristics that impact on program effectiveness
- conducted a cost-benefit analysis for managing target pest
- prepared a report and assessed the viability for a pest management plan for pest population
- identified environmental impact of pest presence and pest management activity.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- impact of pests on environment, land use, land management and production processes
- behaviour of target pests, particularly those behaviours that impact pest susceptibility to being effectively managed
- animal welfare and related codes of practice and workplace procedures

- pest biology and lifecycles of target pests
- principles that underpin the strategic approach to managing pests
- land management and production processes of targeted area
- ecology of targeted area
- performance criteria for measuring land management and production outcomes
- techniques used to validate the target pest population and distribution data supplied by stakeholders and sources of relevant data
- measuring or estimating economic implication and environmental impacts of pests
- potential ecological role some pests provide
- potential disease or toxicity risks
- relevant parts of local, regional, state or territory and national pest management strategies
- factors that influence pest population and distribution
- periods of vulnerability in the lifecycle of pests
- critical control points for management of pest problem
- range of pests, non-target species, plant pests and diseases.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - site with pests to evaluate
 - technology and resources for documenting reports and cost benefit analysis
- specifications:
 - workplace documents including policies, procedures, processes
 - research materials and data for pests
 - workplace instructions and job specifications
 - specific legislation and codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG506 Manage the implementation of legislation

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to manage the implementation of legislation and develop procedures to support and advise landholders to ensure compliance within organisational guidelines or legislative requirements relating to the management of pests, including weeds, vertebrate and/or invertebrate pests.

The unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in a specific technical area and analyse information and exercise judgement to complete a range of advanced skilled activities. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

Pest control legislation and regulations apply in all states and territories and must be adhered to. User are advised to check details with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop procedures to identify infestations and locations	1.1 Analyse and interpret pest legislation 1.2 Develop procedures to identify land ownership, and responsibilities of stakeholders, according to legislation 1.3 Develop procedures to contact landowners, and issue notifications of pest control requirements, according to agency and regulatory requirements 1.4 Verify record-keeping documents comply with regulatory requirements 1.5 Develop and implement procedures for serving notices 1.6 Develop and implement guidelines on collecting evidence and reporting findings 1.7 Establish organisational policy to provide assistance and advice to landholders in implementing pest management plans
2. Administer the implementation of legislation	2.1 Interpret, analyse and evaluate existing policy, and provide recommendations 2.2 Determine need for legal action 2.3 Explain policies for right of entry to work team for them to communicate to landowners 2.4 Verify monitoring program identifies contravention of existing legislation 2.5 Issue and serve penalty notices according to contraventions and workplace procedures 2.6 Provide pest management advice to landholders 2.7 Collate evidence and findings for court or legal representative 2.8 Prepare ministerial briefs according to workplace procedures and legislative requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Organise, analyse and critique information from pest management legislation, regulations and policies to build and maintain a balanced understanding for developing procedures of compliance and preparing reports and briefs for legal arguments and ministerial needs
Writing	<ul style="list-style-type: none"> Develop procedures and reports expressing ideas and presenting complex and technical information in a simple and factual manner ensuring accurate, succinct and logically constructed texts
Oral Communication	<ul style="list-style-type: none"> Establish and maintain complex and effective communications when discussing, consulting and advising stakeholders on pest management and compliance requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG506 Manage the implementation of legislation Release 2	AHCPMG506 Manage the implementation of legislation Release 1	Minor changes to Application and Performance Criteria for clarity Foundation Skills added Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG506 Manage the implementation of legislation

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, developed procedures to identify infestations in accordance with pest management legislation.

There must also be evidence that the individual has:

- interacted with landholders according to workplace requirements and legislative requirements to:
 - explain the ramifications of legislation
 - provide pest management advice
- explained policies for right of entry to work team
- prepared and served penalty notices to landholders who are in contravention of legislation
- collated evidence and findings for presentation in a court or to legal team
- prepared a ministerial brief.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- relevant Commonwealth and state/territory legislation and regulations relevant to pest management, including:
 - identification, destruction, movement and propagation of declared species
 - gathering and presenting evidence
- appropriate record-keeping systems
- environmental protection legislation and compliance in land and water management
- land management and production principles

- techniques used in the development of policies and procedures
- how to present evidence for court proceedings
- principles that underpin a strategic approach to managing pests
- pest control treatments relating to pests dealt with under legislation
- monitoring points in the pest management plan and evidence of infestations
- biosecurity implications of pest management strategies
- chemicals and toxins used in pest control and environmental protection
- relevant local, regional, state/territory and national pest management strategies.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an agency environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology and software for reviewing legislation and preparing written documentation
- specifications:
 - workplace policies and procedures for preparing and processing pest management documents
 - legislation and regulations for pest management
- relationships:
 - landowners
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG508 Develop a system to monitor and evaluate the pest management plan

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to develop a pest monitoring and evaluation program for a local or broader regional area. The management plan may include weeds, vertebrate pests or invertebrate pests.

The unit applies to individuals who take personal responsibility, and exercise autonomy, in undertaking complex work. They demonstrate deep knowledge in pest management and are able to analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine pest	1.1 Identify pest management plan monitoring and evaluation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
monitoring and evaluation requirements	objectives 1.2 Investigate and assess attitudes and land management practices of stakeholders for inclusion in monitoring and evaluation program 1.3 Document investigation outcomes and objectives of monitoring and evaluation
2. Develop procedures for monitoring and evaluation	2.1 Identify target pests and select monitoring sites 2.2 Specify sampling parameters 2.3 Identify economic and environmental impact to be monitored 2.4 Identify factors that trigger an emergency response 2.5 Define reporting procedures for the pest management plan 2.6 Define verification and analysis procedures of sampling results 2.7 Develop procedures for monitoring and recording the economic and environmental impact of pests 2.8 Develop procedures for monitoring and recording pest abundance 2.9 Develop a schedule of monitoring with verifiable milestones for pest management plan
3. Document the monitoring program	3.1 Design recording documents and forms 3.2 Document procedures and recording systems 3.3 Distribute procedures and recording systems to stakeholders 3.4 Verify pest monitoring program conforms with local, regional, state and national pest management strategies

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Prepare detailed procedural texts defining the requirements and purpose for the stakeholders, taking into account the needs of a culturally and linguistically diverse workforce

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG508 Develop a system to monitor and evaluate the pest management plan Release 2	AHCPMG508 Develop a system to monitor and evaluate the pest management plan Release 1	Changes made to Application Minor changes to Element 1 title Minor changes to Performance Criteria for clarity Performance Criteria 2.5 split for clarity Foundation Skills added Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG508 Develop a system to monitor and evaluate the pest management plan

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has developed at least one pest monitoring and evaluation program, according to local, regional, state or territory and national pest management strategies.

There must also be evidence that the individual has:

- consulted with stakeholders
- investigated and determined the objectives of the pest management monitoring plan
- identified required operational and performance standards for monitoring, which must include:
 - sample timing, observation systems, level of accuracy required and sample size
 - economic and environmental impact
 - triggers for emergency response
- developed procedures for monitoring and evaluation of pest management plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- monitoring and evaluation principles and how they should be included in the management program
- pest biology, behaviour and lifecycles and how they influence monitoring procedures
- pest population dynamics and economic and environmental thresholds
- relevant local, regional, state, territory and national pest management strategies

- Commonwealth, state or territory legislation and regulations relating to pest management activities
- key concepts in the integrated pest management strategy
- data and information management, including formatting and complexity considerations for target stakeholders
- monitoring points for target pests
- non-target species in the area and their impact on pest management
- potential economic and environmental impacts of pest population
- trigger points to initiate an emergency response
- aims, objectives and milestones in the pest management plan
- requirements for ensuring the welfare of animals described in the relevant codes of practice, where monitoring plan involves pest animals
- potential diseases and toxicity relevant to the area and pests.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology and software for research and creating documents
- specifications:
 - legislation, regulations and industry codes of practice for pest management
- relationships:
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPMG510 Develop a pest survey strategy

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to develop a plant pest survey strategy to determine the presence, distribution and prevalence of pest plants, vertebrates and/or invertebrates. The work may be conducted as part of an emergency response to an incursion or as part of routine surveillance and must be conducted in accordance with established standards and protocols.

The unit applies to individuals who undertake a role within a pest incursion response and take personal responsibility and exercise autonomy in undertaking complex work. They are accountable for the work of others within broad parameters and analyse information and exercise judgement to complete a range of advanced skilled activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pest Management (PMG)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Obtain and analyse biological information for survey design	1.1 Identify the biological and dispersal characteristics of the pest 1.2 Determine impact of climate on reproduction rates and the predicted distribution of the pest 1.3 Identify the geographical distribution of the host 1.4 Analyse information to determine priority areas to be surveyed
2. Develop survey methodology	2.1 Determine particular type of survey to be designed according to phase of incursion 2.2 Determine field data collection methodology in consultation with technical experts 2.3 Incorporate quality assurance standards, legislative requirements and codes of practice into survey methodology and documentation 2.4 Select diagnostic tests for use in confirming pest presence in samples 2.5 Include procedure for sustainability and biosecurity in survey plan 2.6 Determine review processes to evaluate survey program 2.7 Develop instructions for survey teams
3. Determine the resources and obtain approvals for survey design	3.1 Determine and document resources required for survey activities in consultation with technical experts 3.2 Document survey design according to protocols, industry standards and workplace health and safety policies 3.3 Submit survey design to authorising agency for approval

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and analyse biological data, maps and charts to verify pest characteristics and dispersal
Writing	<ul style="list-style-type: none"> Prepare detailed procedural texts defining the requirements and purpose of pest survey strategy for stakeholders, taking into account the needs of a culturally and linguistically diverse workforce

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPMG510 Develop a pest survey strategy Release 3	AHCPMG510 Develop a pest survey strategy Release 2	Minor changes to Application and Performance Criteria Updated Foundation Skills added Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPMG510 Develop a pest survey strategy

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has produced at least one pest survey strategy according to local, regional, state/territory and national pest management strategies.

There must also be evidence that the individual has:

- analysed biological information for the characteristics, distribution and dispersal of pest
- developed survey methodology for target pest, environment and terrain
- prepared plans to workplace and authority standards
- developed review processes according to workplace requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- biometric principles of biological survey design
- biology of pests relevant to the region
- types and distribution of hosts relevant to the region
- requirements for ensuring the welfare of animals described in the relevant codes of practice
- legislation, regulations, codes of practice and industry standards relevant to surveying pests
- pest biology, behaviour and lifecycles

- diagnostic tests for use in confirming pest presence in samples
- resources required for survey activities.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field for a possible pest incursion, or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology and software for researching pest biological information and preparing documentation
- specifications:
 - legislation, regulations and industry codes of practice for pest management
- relationships:
 - stakeholders
 - work team.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK201 Care for health and welfare of pigs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to care for the health and welfare of pigs. This unit applies to workers in pork production enterprises operating under routine supervision.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Check and assess pig health and welfare	1.1 Check pig health and welfare regularly 1.2 Recognise and report signs of ill health, diseases, parasite infestations and physical abnormalities 1.3 Record pig health and welfare status 1.4 Seek immediate advice where signs indicate an unusual disease
2. Provide an optimal environment for pigs	2.1 Operate and check temperature and other environment control equipment where appropriate 2.2 Record relevant information on shed environmental conditions
3. Establish and maintain hygiene	3.1 Use and maintain personal protective equipment, and follow work health and safety procedures 3.2 Follow biosecurity procedures 3.3 Follow personal hygiene practices 3.4 Clean work areas, machines and surfaces appropriately 3.5 Remove and dispose of all waste and debris appropriately in line with enterprise environmental policies
4. Administer medication to pigs	4.1 Store labelled vaccines, veterinary medicines and other chemicals appropriately as directed 4.2 Carry out routine disease or parasite prevention procedures 4.3 Measure and administer medication under supervision 4.4 Administer vaccines as required, and identify pigs that have been vaccinated 4.5 Complete required documentation and records for administration of vaccines, medicines and chemicals
5. Remove dead or non-viable pigs	5.1 Dispose of dead pigs appropriately 5.2 Recognise, report and carry out appropriate procedures for unhealthy or non-viable pigs 5.3 Provide post-mortem assistance where necessary
6. Report and complete records	6.1 Complete all required documentation and records of diseases, pig losses and treatments clearly, promptly and accurately 6.2 Report to enterprise where relevant so that prevention strategies can be planned and implemented

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPRK201A Care for health and welfare of pigs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK201 Care for health and welfare of pigs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- check and assess pig health and welfare
- provide an optimal environment for pigs
- establish and maintain hygiene
- administer medication to pigs
- remove dead or non-viable pigs
- report and complete records
- follow work health and safety policies
- follow biosecurity policies
- follow animal welfare policies
- follow environmental policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant regulatory requirements, codes of practice, industry standards and enterprise procedures for biosecurity
- relevant regulatory requirements, codes of practice, industry standards and enterprise procedures for animal welfare of pigs
- signs of health, signs of ill health, and methods for assessing pig health and welfare
- techniques and methods for humane handling and restraint of pigs
- common diseases of pigs, treatment regimes, prevention and management strategies
- criteria for handling compromised pigs
- relevant documentation, records and reports that are required

- types, functions and characteristics of housing, housing infrastructure and housing equipment for pigs, and the criteria and methods for determining that they are in working condition
- types, uses, handling, storage and routes of administration of commonly used vaccines, veterinary medicines and chemicals
- requirements, methods and procedures for removing and disposing of waste and debris
- procedures for conducting post-mortem examinations
- effects and impacts of individual pig health and welfare on herd health status and vice versa
- relevant work health and safety requirements and environmental practices

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK203 Move and handle pigs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to move and handle pigs.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to workers in pork production enterprises operating under routine supervision within organisational guidelines.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Control and move pigs	1.1 Conduct moving, manual handling, lifting and restraining of pigs in a safe and appropriate manner in compliance with relevant work health and safety requirements

Element	Performance criteria
	1.2 Move and handle pigs either singly or in groups safely and humanely, using appropriate positive behavioural methods 1.3 Monitor pigs constantly for signs of distress and take appropriate action 1.4 Record as required
2. Restrain pigs	2.1 Restrain pigs safely and humanely in line with enterprise animal welfare policies
3. Weigh or condition score pigs	3.1 Weigh individual pigs and groups of pigs as required, in line with enterprise biosecurity policies 3.2 Read ear tag, ear notch or pen number to identify pigs
4. Return pigs to housing	4.1 Return pigs to their housing or secure pigs at their final destinations as appropriate

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPRK203A Move and handle pigs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK203 Move and handle pigs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- control and move pigs
- restrain pigs
- weigh and condition score pigs
- return pigs to housing
- follow work health and safety policies
- follow biosecurity policies
- follow animal welfare policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- techniques and methods for humane handling and restraint of pigs
- relevant regulatory requirements, industry standards and codes of practice for ensuring animal welfare of pigs
- signs of health, signs of ill health, signs of distress and methods for assessing pig health, welfare and behaviour
- requirements, methods and procedures for weighing pigs
- types and methods of identifying pigs
- relevant work health and safety and biosecurity requirements

Assessment Conditions

Competency is to be assessed in the workplace OR workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK204 Care for weaner pigs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to care for weaner pigs.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare accommodation for	1.1 Clean, disinfect and prepare appropriate accommodation for all classes of weaned pigs according to enterprise procedures and

Element	Performance criteria
weaners	instructions 1.2 Check and adjust housing environment and conditions as required to ensure appropriate ventilation, temperature and humidity 1.3 Fill or prepare feeders and drinkers according to supervisor's instructions 1.4 Identify problems with accommodation or environmental controls and report to the supervisor for appropriate action 1.5 Conduct all work according to enterprise requirements, work health and safety, biosecurity, animal welfare and industry regulations
2. Carry out weaner pig operations	2.1 Group pigs from different litters to form viable groups based on body weight and sex at stocking densities to achieve optimal productivity 2.2 Monitor behaviour, health and condition of weaners regularly and take appropriate actions 2.3 Provide weaners with water and appropriate feed according to the established feed schedule to meet nutritional and growth requirements 2.4 Record or report weaner mortalities to the supervisor and remove deceased stock according to enterprise policy 2.5 Administer preventative treatments according to enterprise schedules and the supervisor's instructions
3. Transition weaners to grower facility	3.1 Identify pigs for transition to grower facilities 3.2 Separate pigs not fit to load and take appropriate actions according to company policy 3.3 Identify pigs that have been treated and record withholding periods (WHP) for grower facility 3.4 Complete documentation clearly, accurately and promptly

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - No equivalent.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK204 Care for weaner pigs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare accommodation for weaners
- carry out weaner pig operations
- transition weaners to grower facility
- follow work health and safety policies
- follow biosecurity policies
- follow animal welfare policies
- follow environmental policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types, characteristics, requirements and care of weaner pigs
- types, functions, characteristics, cleaning and maintenance of relevant pig accommodation and production installations and equipment, such as feeders and drinkers
- range, effects and impacts of ventilation, temperature, humidity and other environmental parameters on weaner pig health and welfare
- optimal range of values for ventilation, temperature, humidity and other environmental parameters for weaner pigs and methods for measuring these values
- requirements and components of enterprise work routines for weaner pigs
- techniques and methods for humane handling and restraint of pigs
- requirements, methods and procedures for weaning piglets
- requirements, methods and procedures for formation of viable weaner groups, and the impacts of a viable group on individual pig health and production
- signs of health, signs of ill health, and methods for assessing pig health, welfare and behaviour

- nutritional requirements and methods and procedures for feeding and watering weaner pigs
- criteria and methods of assessing optimal stocking densities of weaner pigs
- criteria for assessing suitability of weaner pigs for transition to grower facilities
- requirements, methods and procedures for removal and disposal of pig carcasses
- types, uses and procedures of relevant veterinary and preventive treatments of weaner pigs
- withholding periods of veterinary chemicals and medicines and rationale for withholding periods
- types, handling, use and disposal of cleaning agents and disinfectants, work health and safety and environmental practices for these chemicals
- types of documentation and records that are required for weaner pig operations
- relevant work health and safety and biosecurity requirements and environmental practices

Assessment Conditions

Competency is to be assessed in the workplace OR workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK302 Treat rectal prolapse in pigs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to treat rectal prolapse in pigs.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Respond to signs of rectal prolapse	1.1 Recognise signs of rectal prolapse 1.2 Remove pig from pen

Element	Performance criteria
	1.3 Determine treatment based on severity of injury and animal's health and condition 1.4 Seek supervisor's, veterinary or other expert advice where required 1.5 Prepare work site, required resources and materials for treatment 1.6 Isolate pig in hospital pen where required 1.7 Follow enterprise animal welfare and biosecurity policies 1.8 Recognise outbreaks of rectal prolapse in a herd and notify management
2. Treat rectal prolapse	2.1 Select, use and maintain appropriate personal protective equipment 2.2 Apply knowledge of relevant animal anatomy and physiology 2.3 Clean prolapses appropriately 2.4 Treat as prescribed by veterinary advice 2.5 Recognise and treat rectal strictures where appropriate 2.6 Administer antibiotics to pigs with rectal prolapse where required
3. Report and reduce incidence of rectal prolapse	3.1 Report incidents and treatments to supervisor or management 3.2 Identify possible causes of prolapse 3.2 Implement changes to pig management to reduce incidence of rectal prolapse

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPRK302A Treat rectal prolapse in pigs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK302 Treat rectal prolapse in pigs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- respond to signs of rectal prolapse
- treat rectal prolapse
- report and reduce incidence of rectal prolapse
- follow work health and safety policies
- follow biosecurity policies
- follow animal welfare policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- signs, causes, treatment, management and prevention of rectal prolapse
- anatomy and physiology of relevant organs and tissues
- techniques and methods for humane handling and restraint of pigs for rectal prolapse
- signs of health, signs of ill health, and methods for assessing pig health, welfare and behaviour
- work site requirements, resources and materials for treatment of rectal prolapse
- characteristics, signs, management and control of rectal prolapse outbreaks
- relevant work health and safety requirements for treatment of rectal prolapse
- signs, causes, treatment, management and prevention of rectal strictures
- requirements, functions and procedures for setting up hospital pens
- relevant biosecurity requirements

Assessment Conditions

Competency is to be assessed in the workplace OR workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK305 Care for grower and finisher pigs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to care for grower pigs.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work. They undertake defined activities and work in a structured context.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare accommodation for	1.1 Clean and prepare accommodation for new grower stock according to enterprise procedures

Element	Performance criteria
growers	1.2 Follow enterprise work health and safety policies 1.3 Control and monitor environment in line with established enterprise biosecurity and environmental policies 1.4 Fill or prepare feeders and drinkers according to instructions 1.5 Identify problems with accommodation and/or environmental controls and report to supervisor for appropriate action
2. Carry out grower and finisher pig operations	2.1 Monitor pig condition and health regularly as an integral part of daily routines 2.2 Check feeders and drinkers regularly as part of daily routines 2.3 Move pig groups as required in line with growth, condition and stocking density 2.4 Remove poor performing pigs from groups and reassign in line with enterprise policy 2.5 Isolate sick, injured or unhealthy pigs in a quarantine area or identify for euthanasia according to enterprise animal welfare policies 2.6 Apply health treatments when required and according to supervisor's instructions and enterprise policy 2.7 Record or report grower mortalities to the supervisor and remove deceased stock according to enterprise policy.
3. Identify and select sale pigs	3.1 Identify pig according to enterprise market requirements 3.2 Assess pigs for transportation prior to loading 3.3 Complete or verify property banding for every sale animal 3.4 Separate pigs not fit to load and take appropriate action according to enterprise policy 3.5 Complete pig pass and other documentation for accurately and consistently

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - No equivalent.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK305 Care for grower and finisher pigs

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare accommodation for growers
- carry out grower and finisher pig operations
- identify and select sale pigs
- follow work health and safety policies
- follow biosecurity policies
- follow animal welfare policies
- follow environmental policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types, characteristics, requirements and care of grower and finisher pigs
- types, functions, characteristics, cleaning and maintenance of relevant pig accommodation and production installations and equipment, such as feeders and drinkers
- range, effects and impacts of ventilation, temperature, humidity and other environmental parameters on grower pig health and welfare
- optimal range of values for ventilation, temperature, humidity and other environmental parameters for grower pigs and methods for measuring these values
- requirements and components of enterprise work routines for grower pigs
- techniques and methods for humane handling and restraint of pigs
- requirements, methods and procedures for formation of viable grower groups, and the impacts of a viable group on individual pig health and production
- signs of health, signs of ill health, and methods for assessing pig health, welfare and behaviour

- nutritional requirements and methods and procedures for feeding and watering grower pigs
- criteria and methods of assessing optimal stocking densities of grower pigs
- requirements, methods and procedures for removal and disposal of pig carcasses
- types, uses and procedures of relevant veterinary and preventive treatments of grower pigs
- types, handling, use and disposal of cleaning agents and disinfectants, work health and safety and environmental practices for these chemicals
- types of documentation and records that are required
- criteria, methods and procedures for assessing suitability of pigs for transport and loading
- features and requirements of property banding and PigPass
- relevant work health and safety and biosecurity requirements and environmental practices

Assessment Conditions

Competency is to be assessed in the workplace OR workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK306 Monitor and maintain outdoor pig production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor and maintain outdoor pig production.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under broad direction and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for work in the production area	1.1 Confirm work to be undertaken from work program where necessary, and clarify with supervisor if required

Element	Performance criteria
	<p>1.2 Identify work health and safety hazards, assess risks and implement suitable controls</p> <p>1.3 Select and use suitable personal protective equipment</p> <p>1.4 Select, check and maintain tools and equipment suitable for the work to be undertaken</p> <p>1.5 Communicate the personal protective equipment and other safety requirements to staff and contractors, and obtain confirmation of understanding</p> <p>1.6 Monitor weather and carry out preparations or adjustments to work program as required</p>
2. Coordinate work activities and monitor progress	<p>2.1 Communicate the work required to staff and contractors clearly and unambiguously following the production plan and program</p> <p>2.2 Meet work schedules, plans and priorities according to the needs of the organisation or situation</p> <p>2.3 Ensure the allocation of work optimises resources and the existing competencies of staff</p> <p>2.4 Communicate with operational staff and any contractors regularly to ensure smooth operation and progress</p> <p>2.5 Provide feedback to staff and management on request, or as necessary</p>
3. Monitor pig health	<p>3.1 Observe pigs for signs of ill health, and record and report changes</p> <p>3.2 Observe and monitor pig behaviour, and record and report abnormalities</p> <p>3.3 Ensure that welfare and care needs of pigs are adequately provided</p> <p>3.4 Ensure that pigs have access to clean and adequate water supply</p> <p>3.5 Examine dead pigs for evidence of disease through post-mortem techniques in line with regulatory and industry standards and veterinary advice</p> <p>3.6 Identify disease status of herd and request staff or veterinary assistance when required</p> <p>3.7 Check components of biosecurity procedures for compliance</p>
4. Monitor pig housing, sheds, shelters and infrastructure	<p>4.1 Monitor outdoor pig housing, sheds or shelters for wear and tear, and carry out maintenance and repair as required</p> <p>4.2 Monitor outdoor facilities and infrastructure such as fencing, feeders and drinkers, and carry out maintenance or repair as required</p>
5. Monitor effluent and waste removal, storage and treatment	<p>5.1 Remove manure and litter if required, and store or treat appropriately</p> <p>5.2 Remove, store and treat liquid effluent appropriately and as</p>

Element	Performance criteria
	<p>required</p> <p>5.3 Check that manure and effluent storage and treatment systems are operated according to the production program and manufacturer's instructions</p> <p>5.4 Ensure that all waste and used consumables are removed from production site and disposed of in line with enterprise environmental policies</p> <p>5.6 Ensure work, health and safety requirements are being observed and followed</p>
6. Monitor and maintain production environment	<p>6.1 Identify and monitor production environment components</p> <p>6.2 Observe production environment for signs of deterioration, and record and report to management</p> <p>6.3 Monitor nutrient, soil and water conditions of production environment, report and carry out maintenance as required</p> <p>6.4 Coordinate or carry out maintenance of production environment as required.</p>
7. Complete records and documentation	<p>7.1 Collate information gathered throughout production operations</p> <p>7.2 Document collated information where required, and prepare for reporting to supervisor or manager</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - No equivalent.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK306 Monitor and maintain outdoor pig production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- prepare for work in the production area
- coordinate work activities
- monitor daily operations
- monitor herd health
- monitor production environment
- complete records and documentation
- follow work health and safety policies
- follow biosecurity policies
- follow animal welfare policies
- follow environmental policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant legislation, codes of practice, industry standards and guidelines for outdoor pig production
- features and uses of enterprise production plans, enterprise work programs, environmental management plan and nutrient management plan
- requirements, maintenance, mitigation and protection measures for nutrients, soils, ground and surface water
- significance, effects and control measures for chemicals, gaseous emissions and odours that impact on the production environment and surrounding community
- relevant regulatory, industry and enterprise work health and safety requirements, codes of practice and standards

- use and maintenance of personal protective equipment
- types, functions, cleaning and maintenance of relevant tools and equipment
- types, requirements for and methods for determining allocation of enterprise resources
- strategies for communicating with and providing feedback to staff, contractors and management
- effects and impacts of weather elements on enterprise work programs and outdoor production environments, and preparations and adjustments to mitigate such impacts
- types, functions, characteristics, cleaning and maintenance of relevant outdoor pig housing and production installations and equipment, such as fencing, feeders and drinkers
- requirements, methods and procedures for manure and litter removal and treatment
- types, characteristics, functions, operation and maintenance of effluent storage and treatment systems
- requirements, methods and procedures for waste removal and disposal
- common diseases signs of health, signs of ill health, and methods for assessing individual pig and herd health and condition
- requirements, methods and procedures for conducting post mortem examination of pigs
- relevant regulatory, industry and enterprise biosecurity requirements, codes of practice and standards
- relevant regulatory, industry and enterprise environmental and sustainability requirements, codes of practice and standards
- criteria, methods and procedures for monitoring environmental health and condition
- relevant documentation, records and reports that are required
- relevant animal welfare requirements

Assessment Conditions

Competency is to be assessed in the workplace OR workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCPRK401 Implement a feeding strategy for pig production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement a feeding strategy for pig production.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Pork (PRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine feed rations and schedules	1.1 Determine feed quantities required from the production program 1.2 Use relevant laboratory results when determining quantities and

Element	Performance criteria
	ration formulation of stockfeed 1.3 Schedule and allocate responsibility for feeding in line with the production program and other operations in the facilities 1.4 Determine methods of providing feed to livestock
2. Manage storage of feed	2.1 Develop a plan for secure and hygienic storage of feed in line with enterprise biosecurity policies 2.2 Select storage location with safe access 2.3 Organise rotation and replenishment of feedstock supplies to ensure freshness 2.4 Formulate feeding plan to suit the needs of livestock, their nutritional requirements and the equipment available in the organisation 2.5 Collect and prepare samples of feed for testing according to the production program 2.6 Supervise calibration of measuring equipment and calculation of quantities regularly 2.7 Check that suitable personal protective equipment are appropriately used and maintained, and enterprise work health and safety policies are followed
3. Supervise feeding	3.1 Ensure that rations are supplied according to the production program and feeding plan. 3.2 Ensure continuous supplies of potable water are available to livestock 3.3 Monitor the health and condition of livestock and their production levels; and report any reaction or change to a change in feed types, ingredients or schedules 3.4 Provide advice to enterprise staff on the feeding of livestock when requested, or when the need arises 3.5 Remove and dispose of all waste and debris from the facilities appropriately in line with enterprise environmental policies 3.6 Complete required documentation and records

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCPRK401A Implement a feeding strategy for pig production.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCPRK401 Implement a feeding strategy for pig production

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine feed rations and schedules
- manage storage of feed
- supervise feeding
- implement work health and safety policies
- implement biosecurity policies
- implement animal welfare policies
- implement environmental policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles of nutrition, feeding strategies and feeding management of pigs
- types, characteristics and quality assessments of feed ingredients, and the methods for assessing their nutritional value in meeting the needs of pigs
- types, forms and characteristics of pig feeds
- correlation and application of nutritional test results in formulating feeding strategies and feeding plans
- criteria, requirements, types of and principal considerations for feed storage
- features, criteria and requirements for formulating a feeding plan
- requirements, methods and procedures for collecting, preparing and transporting feed samples for testing
- types, calibration and use of measuring equipment
- relevant work health and safety requirements and selection, use and maintenance of personal protective equipment

- requirements, types and maintenance of potable water supplies to pigs
- signs of health, ill health, good condition and poor condition in livestock, and methods for assessing pig health and condition in relation to nutrition and feeding
- possible production changes in relation to changes in nutrition, feeds and feeding strategies
- types of and disposal methods for organic and non-organic waste
- relevant documentation and records that are required
- relevant animal welfare and biosecurity requirements and environmental practices

Assessment Conditions

Competency is to be assessed in the workplace OR workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSAW503 Plan conservation earthworks

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to develop a conservation earthworks plan to control runoff to prevent soil erosion, safely store and distribute water, and rehabilitate eroded or disturbed areas.

The unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. This includes analysing, designing and communicating solutions to sometimes complex problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Soil and Water Conservation (SAW)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish client needs	1.1 Consult with landholder on proposed land use 1.2 Review and discuss the catchment characteristics for proposed land use 1.3 Explain to landholder impact of legislation and policies on project 1.4 Determine budget constraints for project

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Discuss possible strategies with landholder 1.6 Seek agreement for proposed land use and strategy from landholder according to workplace procedures
2. Develop the strategy to utilise earthworks	2.1 Check titles and maps to confirm property ownership 2.2 Determine profile of catchment from survey and aerial photographs 2.3 Develop earthworks concept consistent with industry principles and selection criteria 2.4 Establish final water disposal points according to proposed strategy 2.5 Survey location of proposed earthworks and structures on site, and discuss with landholder 2.6 Document preferred strategy for future reference
3. Prepare a detailed works plan	3.1 Assess and select earthworks, structures or measures according to proposed land use and industry standards 3.2 Cost project and develop schedule for plan 3.3 Communicate design of structures and specifications to qualified designer 3.4 Prepare and present a conservation earthworks plan and documentation according to workplace procedures and industry standards

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organise, evaluate and analyse ideas and information from land use documents, catchment characteristics, titles and maps to determine requirements and ensure compliance with legislation and industry standards
Writing	<ul style="list-style-type: none"> Demonstrate sophisticated writing skills by selecting appropriate conventions and stylistic devices to express precise meaning in

Skill	Description
	<p>plans and strategies</p> <ul style="list-style-type: none"> Prepare documentation and specifications for plans and designs, expressing ideas, exploring complex design issues and constructing the documents accurately and succinctly to industry standards
Numeracy	<ul style="list-style-type: none"> Use highly developed numeracy skills to interpret complex design ideas, and perform calculations with precision and accuracy for inclusion in conservation earthworks plans

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSAW503 Plan conservation earthworks Release 2	AHCSAW503 Plan conservation earthworks Release 1	<p>Minor changes to Application and Performance Criteria for clarity</p> <p>Foundation Skills added</p> <p>Updated Performance Evidence, Knowledge Evidence and Assessment Conditions</p>	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSAW503 Plan conservation earthworks

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has produced at least one plan of conservation earthworks that conforms with the following:

- meets client needs
- conforms to industry standards
- complies with legislation and policy requirements.

There must also be evidence that the individual has:

- consulted and negotiated with client for needs, agreements and approvals
- investigated site using:
 - surveys
 - aerial photographs
 - maps
- explained to landholder the impact of legislation and policies on project
- developed a strategy to protect natural areas and utilise earthworks according to industry principles and regulatory requirements
- prepared detailed project costing according to client budget
- prepared detailed works plans and communicated design requirements to designer.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental, planning, groundwater, heritage and cultural legislation, and the impact on development sites and conservation earthworks planning
- environmental, planning and earthwork construction standards and codes of practice relevant to planning conservation earthworks projects

- earthwork structures used for managing the movement of water
- principles of erosion control and design for conservation earthworks
- ecology protection and principles of rehabilitation on conservation sites
- soils and soil formation and the properties of soils for earthworks and erosion control
- determining levels and levelling on sites
- accessing plans and checking titles
- principles of earthmoving to manage water flow, and the equipment used to achieve it
- total catchment issues related to erosion and land degradation
- land use practices that contribute to erosion, and land development strategies to help mitigate erosion
- earthworks and erosion control and their potential impact on environment
- estimating and calculating peak water flows and methods to manage peak flows
- sub-surface and surface water interactions and the drainage principles and systems used in design
- simulation systems and techniques for demonstrating design outcomes and their limitations.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated on a landholder site or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - digital technology with planning and design tools and resources
- specifications:
 - workplace policies, procedures and processes for planning and design
 - site land use, maps, plans and titles
 - legislation, regulations and industry codes of practice for addressing land degradation
- relationships:
 - landholder.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG201 Crutch sheep

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to crutch a sheep.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for crutching operations	1.1 Check crutching equipment for correct operation prior to commencing work 1.2 Identify potential and existing hazards in the workplace and

Element	Performance criteria
	report to the supervisor 1.3 Select, use and maintain suitable personal protective equipment and ensure correct fit 1.4 Identify, catch and move sheep to be crutched in line with work health and safety, industry and animal welfare standards 1.5 Position sheep for crutching
2. Perform crutching operations	2.1 Activate handpiece and position in readiness for crutching 2.2 Shear wool from face, crutch or belly as instructed 2.3 Use crutching methods to ensure that injury to the sheep and damage to the fleece is avoided 2.4 Use safe handling techniques at all times
3. Respond to complications	3.1 Identify contamination during crutching and report to wool handlers 3.2 Treat cuts as required 3.3 Identify and report flyblown sheep 3.4 Identify and report problem sheep
4. Complete crutching operations	4.1 Place wool appropriately to avoid contamination and for wool handlers to collect 4.2 Switch off handpiece and re-position to non-operational position 4.3 Release sheep safely from the board into the count out pens 4.4 Report crutching grievances and difficulties 4.5 Follow enterprise biosecurity policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG201A Crutch sheep

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG201 Crutch sheep

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify potential and existing hazards to the supervisor
- select and use equipment and materials appropriate for crutching sheep
- avoid contamination, second cuts and damage to wool, animals and people
- catch and release sheep safely
- demonstrate safe and responsible workplace practices
- provide due care and handle sheep humanely
- clean and maintain crutching equipment, site and facilities
- communicate problems, faults and workplace hazards to the owner or overseer
- tally crutched sheep count
- apply enterprise work health and safety policies in the context of own work
- apply enterprise animal welfare policies in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed shearing techniques and positions, and method of shearing
- safe handling techniques for catching, dragging, shearing and releasing sheep
- basic anatomy of male and female sheep as it relates to the safe humane removal of wool.
- common sheep diseases as they relate to work health and safety and humane treatment of animals
- the impacts of sheep behaviour on moving, handling and shearing sheep
- personal protective clothing and equipment, and when and how it should be used

- Federal and/or State shearing awards and agreements associated with shearing sheep
- enterprise biosecurity policies applying to the job role
- work health and safety legislation and codes of practice applying to the job role
- animal welfare legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG202 Assist in preparing for shearing and crutching

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to assist the owner or classer in the preparation of sheds and facilities prior to shearing and crutching operations.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare equipment	1.1 Inspect the facilities with the owner or classer to determine the degree of preparation required

Element	Performance criteria
	1.2 Clean facilities and equipment as directed 1.3 Identify contaminating substances, remove and dispose of according to enterprise environmental requirements 1.4 Report equipment faults or malfunctions to owner or classer 1.5 Select, use and maintain suitable personal protective equipment
2. Arrange equipment and materials	2.1 Position equipment according to owner or classer requirements 2.2 Arrange bins and wool packs as instructed 2.3 Position brooms and scrapers where required for safety
3. Identify hazards and dispose of contaminants	3.1 Identify potential and existing hazards and report to owner or classer 3.2 Follow directions of owner or classer in eliminating work health and safety hazards
4. Pen sheep	4.1 Undertake work in conjunction with shed manager and other shed staff, to ensure sheep are moved and penned for shearing or crutching in line with work health and safety, industry and animal welfare standards

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG202A Assist in preparing for shearing and crutching

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG202 Assist in preparing for shearing and crutching

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- arrange and position shearing equipment and materials ready for shearing or crutching
- maintain contamination and hazard-free environment for shearing and wool handling
- carry out minor maintenance and repairs to equipment and facilities as directed
- disposal of waste in accordance with enterprise environmental requirements
- communicate verbally with owner/classer and follow instructions
- apply enterprise work health and safety policies in the context of own work
- apply enterprise animal welfare practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- shearing shed layouts and equipment
- maintenance and hygiene requirements of shearing sheds, boards and catching pens
- work health and safety legislation and codes of practice applying to the job role
- animal welfare legislation and codes of practice applying to the job role
- enterprise environmental policies

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG203 Shear sheep to novice level

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to select, handle and shear sheep under supervision to novice level.

Novice level is defined as shearing a minimum of 40 adult merino sheep or 50 adult crossbred sheep per day to industry standards.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the	Performance criteria describe the performance needed to demonstrate

Element	Performance criteria
essential outcomes.	achievement of the element.
1. Set-up shearing handpiece	1.1 Identify potential and existing hazards in the workplace and report to supervisor 1.2 Check shearing equipment for correct operation 1.3 Assemble comb and cutter on handpiece 1.4 Set lead and throw for comb and cutter 1.5 Set tension to enable comb and cutter to cut wool cleanly with minimum friction 1.6 Lubricate working surfaces and moving parts
2. Follow health and fitness procedures	2.1 Prepare for exercises to warm-up the body 2.2 Perform back, shoulder, leg, arm, and abdomen stretches 2.3 Recognise the necessities of hydration, nutrition and rest periods
3. Catch sheep for shearing	3.1 Select, use and maintain suitable personal protective equipment 3.2 Catch sheep and move to required location in line with organisational, work health and safety, industry and animal welfare standards 3.3 Drag sheep from the catching pen to the shearing board using safe manual handling techniques 3.4 Position sheep for shearing
4. Remove fleece	4.1 Activate handpiece and position in readiness for shearing operations 4.2 Shear section of sheep in position suitable to the individual's competence 4.3 Shear the six basic positions in sequence 4.4 Minimise injury to sheep and treat injuries where required 4.5 Release sheep safely from the board into the count-out pens 4.6 Minimise second cuts and contamination 4.7 Maintain shearing effort to achieve the required minimum rate per day to acceptable standard

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG203A Shear sheep to novice level

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG203 Shear sheep to novice level

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed shearing a minimum of 40 adult merino sheep or 50 adult crossbred sheep per day to industry standards.

The candidate must provide evidence that they can:

- follow safe work practices
- select and use equipment and materials appropriate for shearing sheep
- load a handpiece correctly
- avoid contamination, second cuts
- shear sufficient sheep within eight hours to match novice skill level
- use appropriate suturing for cuts to sheep
- catch and release sheep safely
- provide due care and handle sheep humanely
- clean and maintain shearing equipment, site and facilities
- communicate problems, faults and workplace hazards to the owner or overseer
- tally shorn sheep count
- apply work health and safety policies in the context of own work
- apply enterprise animal welfare policies in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed shearing techniques and positions, and method of shearing

- safe handling techniques for catching, dragging, shearing and releasing sheep
- basic anatomy of male and female sheep as it relates to the safe humane removal of wool
- common sheep diseases as they relate to work health and safety and humane treatment of animals
- the impacts of sheep behaviour on moving, handling and shearing sheep
- personal protective clothing and equipment, and when and how it should be used
- Federal and/or State shearing awards and agreements associated with shearing sheep
- enterprise biosecurity policies applying to the job role
- work health and safety legislation and codes of practice applying to the job role
- animal welfare legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG204 Shear sheep to improve r level

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to select, handle and shear sheep under supervision to improve r level.

Improver level is defined as shearing a minimum of 80 adult merino sheep or 100 adult crossbred sheep per day to industry standards.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under broad supervision and take responsibility for their own work. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for shearing	1.1 Check shearing equipment for correct operation prior to shearing session 1.2 Identify potential and existing hazards in the workplace and report to the supervisor 1.3 Select, use and maintain suitable personal protective equipment 1.4 Identify, catch sheep and move to required location in line with organisational, work health and safety, industry and animal welfare standards
2. Perform shearing operations	2.1 Position sheep for shearing using identified positions 2.2 Activate handpiece and position in readiness for shearing operations 2.3 Shear sheep using identified method and positions 2.4 Use shearing methods that ensure that injuries and damage to the sheep and fleece is avoided while meeting volume expectations 2.5 Use safe and humane handling techniques at all times
3. Respond to complications	3.1 Identify contamination during shearing operations and report to wool handlers 3.2 Suture sheep cuts as required 3.3 Identify flyblown sheep and report 3.4 Identify problem sheep and report
4. Complete shearing operation	4.1 Place wool to avoid contamination and for wool handlers to collect 4.2 Set handpiece to non-operational position and store 4.3 Release sheep safely from the board into the count-out pens 4.4 Report shearing grievances and difficulties 4.5 Follow enterprise biosecurity policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG204A Shear sheep to improve level

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG204 Shear sheep to improver level

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed shearing a minimum of 80 adult merino sheep or 100 adult crossbred sheep per day to industry standards.

The candidate must provide evidence that they can:

- identify hazards and follow safety directions
- select and use equipment and materials appropriate for shearing sheep
- avoid contamination, second cuts and damage to wool, sheep and people
- shear sufficient sheep within eight hours to match skill level as per industry award minimum rate of pay for learner shearers
- suture cuts to sheep
- catch and release sheep safely
- demonstrate safe and responsible workplace practices
- provide due care and handle sheep humanely
- clean and maintain shearing equipment, site and facilities
- communicate problems, faults and workplace hazards, and to comprehend instructions provided by the owner or overseer
- tally shorn sheep count
- apply enterprise work health and safety policies in the context of own work
- apply enterprise animal welfare policies in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of shearing sheds, boards and catching pens

- shearing machinery required and their relative functions
- industry shearing techniques and positions and method of shearing
- aspects of safe handling techniques for catching, dragging, shearing and releasing sheep
- basic anatomy of male and female sheep as it relates to the safe humane removal of wool
- common sheep diseases
- the impacts of sheep behaviour on moving and handling sheep and shearing sheep
- personal protective clothing and equipment, and when and how it should be used
- Federal and/or State shearing awards and agreements associated with shearing sheep
- enterprise biosecurity policies applying to the job role
- work health and safety legislation and codes of practice applying to the job role
- animal welfare legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG205 Grind combs and cutters for machine shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to grind combs and cutters for machine shearing so that they are effective for the type of wool and shearing conditions.

All work must be carried out to comply with workplace procedures, work health and safety, biosecurity requirements and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine need for sharpening combs and	1.1 Check combs and cutters for wear and report any issues found

Element	Performance criteria
cutters	1.2 Clean combs and cutters prior to grinding 1.3 Identify work health and safety hazards and report to supervisor
2. Prepare grinder and pendulum for use	2.1 Check the grinder and its location for serviceability and safety report safety hazards to supervisor 2.2 Identify grinder faults or malfunctions and report to supervisor for repair or replacement 2.3 Apply grinding papers to grinder discs 2.4 Store and care for grinding papers 2.5 Check, clean and adjust the bottom bar of the pendulum to ensure it is true 2.6 Confirm that the pressure bar and pins are set at the recommended distance 2.7 Check the height setting of pendulum
3. Carry out grinding	3.1 Wear eye protection while grinding is carried out 3.2 Secure comb or cutter for grinding 3.3 Apply correct pressure while grinding 3.4 Grind combs and cutters as directed 3.5 Check combs and cutters visually for even grinding 3.6 Identify and rectify faults or unevenness in grinding 3.7 Ensure grinding wheel is not left running when unattended

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG205A Grind combs and cutters for machine shearing

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG205 Grind combs and cutters for machine shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed grinding combs and cutters for machine shearing.

The candidate must provide evidence that they can:

- identify hazards and apply safe work practices
- determine need for sharpening combs and cutters
- prepare grinder and pendulum for use
- carry out grinding to industry standards

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of combs and cutters
- terminology, techniques and procedures for grinding combs and cutters
- setting of, storage and caring for grinding papers
- tools and equipment used in grinding combs and cutters
- work health and safety legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG206 Prepare handpiece and downtube for machine shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare handpieces and downtubes for machine shearing.

All work must be carried out to comply with workplace procedures, work health and safety, biosecurity requirements and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare combs and	1.1 Select combs and cutters to suit fleece type and shearing

Element	Performance criteria
cutters for shearing	conditions 1.2 Check combs and cutters for serviceability and prepare 1.3 Identify comb and cutter faults or malfunctions and report for repair or replacement 1.4 Clean combs and cutters prior to sharpening 1.5 Change combs and cutters during the shearing operations to suit shearing conditions 1.6 Identify potential and existing hazards and report to supervisor
2. Prepare handpiece for shearing	2.1 Secure comb and cutter for shearing 2.2 Lubricate handpiece prior to shearing 2.3 Adjust tension to suit shearing conditions and preference of the shearer 2.4 Check handpiece for serviceability and prepare 2.5 Identify handpiece faults or malfunctions and report for repair or replacement
3. Prepare downtube for shearing	3.1 Check downtube is checked for serviceability and prepare 3.2. Identify downtube faults or malfunctions and report for repair or replacement 3.3 Adjust safety clutch 3.4 Adjust downtube 3.5 Lubricate downtube prior to shearing

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG206A Prepare handpiece and downtube for machine shearing

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG206 Prepare handpiece and downtube for machine shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe operating procedures
- select and load comb and cutter for shearing
- prepare combs, cutters, handpieces and downtubes for shearing
- lubricate and maintain handpiece and downtube
- carry out minor maintenance and repairs
- recognise and clearly report any work health and safety hazards to the appropriate person

Knowledge Evidence

The candidate must demonstrate knowledge of:

- components of a shearing handpiece
- components of a downtube
- terminology for handpieces and downtubes
- maintenance and lubrication procedures for shearing equipment and handpieces
- types of combs and cutters to use under different conditions
- work health and safety legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG210 Undertake basic shearing and crutching

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required for basic wool removal as part of a shearing and crutching operation.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work alongside a supervisor in most situations and exercise limited autonomy within established and well known parameters.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Set-up shearing handpiece as directed	1.1 Identify potential and existing hazards in the workplace and report to supervisor

Element	Performance criteria
	1.2 Check shearing equipment for correct operation 1.3 Assemble comb and cutter on handpiece 1.4 Set lead and throw 1.5 Set tension to enable comb and cutter to cut wool cleanly with minimum friction 1.6 Lubricate working surfaces and moving parts
2. Follow health and fitness procedures	2.1 Prepare for exercises to warm-up the body 2.2 Perform back, shoulder, leg, arm, and abdomen stretches 2.3 Recognise the necessities of hydration, nutrition and rest periods 2.4 Select suitable personal protective equipment and ensure correct fit
3. Catch sheep for shearing	3.1 Catch and move sheep in line with organisational, work health and safety, industry and animal welfare standards 3.2 Move sheep from the catching pen to the shearing board using safe manual handling techniques 3.3 Position sheep for shearing and crutching
4. Remove wool	4.1 Activate handpiece and position in readiness for shearing and crutching operations 4.2 Shear and crutch section of sheep as directed 4.3 Release sheep safely from the board into the count-out pens

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG101A Undertake basic shearing and crutching

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG210 Undertake basic shearing and crutching

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- follow safety directions
- select, prepare and use tools equipment and materials appropriate for shearing sheep work
- ensure health and fitness for shearing
- avoid contamination, second cuts and damage to wool, sheep and people
- catch and shear a sheep in line with organisational, animal welfare and work health safety standards
- demonstrate safe and responsible workplace practices
- clean and maintain shearing equipment, site and facilities
- communicate problems, faults and workplace hazards, and to comprehend instructions provided by the owner or overseer

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed shearing and crutching techniques, and positions and method of shearing
- features of safe handling techniques for catching, dragging, shearing and releasing sheep
- basic anatomy of male and female sheep as it relates to the safe, humane removal of wool.
- common sheep diseases as they relate to work health and safety and humane treatment of animals
- the impacts of sheep behaviour on moving, handling and shearing sheep

- animal welfare requirements in relation to sheep
- personal protective clothing and equipment and when and how it should be used
- Federal and/or State shearing awards and agreements associated with shearing sheep
- work health and safety legislation and codes of practice apply to the job role
- animal welfare legislation and codes of practice apply to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG301 Prepare livestock for shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to sort and prepare livestock for shearing.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity requirements and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Sort livestock for	1.1 Locate, identify and confirm livestock with as specified in

Element	Performance criteria
shearing	shearing plan 1.2 Muster livestock and move to shearing facilities, sort, count and yard livestock 1.3 Identify livestock with pigmented fleece and cull for separate shearing operations 1.4 Identify potential and existing hazards, assess risks and implement control measures in line with enterprise work health and safety policies 1.5 Select, use and maintain suitable personal protective equipment 1.6 Comply with animal welfare codes of practice
2. Prepare livestock for shearing	2.1 Check shearing, cleaning and drenching equipment for correct operation 2.2 Crutch livestock as required 2.3 Remove contaminated and stained wool and dispose of appropriately 2.4 Take livestock off feed to allow emptying out before shearing
3. Monitor livestock	3.1 Provide and maintain feed and water supplies for livestock 3.2 Provide and maintain suitable shelter for livestock 3.3 Monitor livestock condition and health status for evidence of sickness, and record or report as required 3.4 Monitor and control environmental implications associated with shearing activities 3.5 Apply enterprise biosecurity policies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG301A Prepare livestock for shearing

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG301 Prepare livestock for shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed preparing livestock for shearing.

The candidate must provide evidence that they can:

- identify hazards and implement safe work procedures
- select equipment appropriate to crutching and shearing tasks
- organise crutching and shearing operations
- muster, move, draft and handle livestock in compliance with animal welfare requirements
- observe and monitor livestock health and condition and detect disease or nutritional disorders and treat appropriately
- organise feed and water supplies
- avoid and remove contamination of fleece
- demonstrate safe and environmentally responsible workplace practices
- communicate verbally with work team and manager
- calculate livestock numbers, keep mobs separate
- follow enterprise work health and safety policies in the context of own work
- follow enterprise biosecurity policies in the context of own work
- follow enterprise animal welfare policies in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- different types and purposes of shearing boards, yards and catching pens
- components and functions of shearing, cleaning and drenching equipment
- handling, mustering and movement techniques

- livestock breeds, nutritional and hygiene requirements
- possible fleece contaminants and types of pigmentation faults
- biosecurity legislation and codes of practice applying to the job role
- work health and safety legislation and codes of practice applying to the job role
- animal welfare legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG302 Prepare combs and cutters for machine shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare combs and cutters for machine shearing.

All work must be carried out to comply with workplace procedures and work health and safety.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Grind combs and	1.1 Check the grinder and its location for safety hazards and

Element	Performance criteria
cutters	implement control measures 1.2 Identify faulty components and determine level of repair or replacement requirements 1.3 Operate grinder in a safe manner without risk of injury to operator or others or damage to equipment 1.4 Adjust pendulum pin settings, confirm set and pendulum bar is clean and check for level 1.5 Test grinding plates visually in terms of being balanced and true 1.6 Identify worn and incorrectly adhered papers and replace 1.7 Set grinder 1.8 Identify even wear of combs and cutters and sharpen combs and cutters
2. Dress combs	2.1 Select bevel and modify appropriate to wool type 2.2 Determine factors affecting combs selection in terms of type of livestock and seasonal conditions 2.3 Dress comb teeth to uniform shape and length 2.4 Thin comb teeth uniformly along their length 2.5 Polish comb leaving no rough or sharp points

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG302A Prepare combs and cutters for machine shearing

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG302 Prepare combs and cutters for machine shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed preparing combs and cutters for machine shearing.

The candidate must provide evidence that they can:

- identify hazards and apply safe operating procedures to grinding
- determine need for sharpening combs and cutters
- determine need for dressing combs
- prepare grinder and pendulum for use
- carry out grinding
- set, store and care for grinding papers
- dress combs, including selecting bevels, teeth thinning and polishing

Knowledge Evidence

The candidate must demonstrate knowledge of:

- different types of combs and cutters
- terminology, techniques and procedures for grinding combs and cutters
- tools and equipment used in grinding combs, and cutters and dressing combs
- hazard identification and risk control

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG303 Maintain and service shearing handpieces

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain and service shearing handpieces as part of a shearing operation.

All work must be carried out to comply with workplace procedures and work health and safety requirements

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify worn and faulty handpiece	1.1 Assess the performance of the handpiece

Element	Performance criteria
components and install minor repair kit components	1.2 Check and clean comb bed, cups and fork yokes and check comb bed visually for flatness 1.3 Identify worn and faulty handpiece components 1.4 Install minor repair kit components 1.5 Check faulty comb beds and assess the required scope of repairs 1.6 Determine if there is a need for a technician to repair the fault 1.7 Carry out repairs according to manufacturer's specifications and work health and safety requirements 1.8 Arrange repairs by a technician as required
2. Service handpiece	2.1 Adjust handpiece components to maintain operational performance 2.2 Lubricate handpiece 2.3 Replace components requiring periodic replacement 2.4 Identify wear and tear on handpiece in terms of effects on performance 2.5 Install safety components and check before operation of the handpiece 2.6 Run and check handpiece prior to use to determine safe operational performance

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG303A Maintain and service shearing handpieces

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG303 Maintain and service shearing handpieces

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed maintaining and servicing shearing handpieces.

The candidate must provide evidence that they can:

- identify worn and faulty handpiece components
- install minor repair kit components
- maintain and service handpieces
- apply enterprise work health and safety policies in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- terminology and assembly procedures for handpieces
- maintenance and servicing requirements for shearing handpieces
- components of a shearing handpiece
- different types of combs and cutters to use under different conditions
- work health and safety legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG304 Shear sheep to professional level

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to select, handle and shear sheep to a professional level at least 120 adult merino sheep or 140 adult crossbred sheep per day to industry standards.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity requirements and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Recognise and correct faults in shearing technique	1.1 Analyse shearing technique 1.2 Recognise and correct faults in sheep position, footwork and free hand use 1.3 Recognise and correct faults in the number of blows and their placement 1.4 Improve co-ordination of footwork, free hand use, sheep control and blow placement
2. Apply techniques to increase shearing speed and accuracy	2.1 Increase speed at which the handpiece is pushed forward and returned between blow placements 2.2 Improve the power, direction and manoeuvrability applied at the increased speed 2.3 Improve rhythm at the increased speed 2.4 Maintain calm and consistent temperament whilst shearing 2.5 Recognise the importance of stamina and fitness in improvement of output consistency
3. Shear required number of sheep in an eight hour day working day to quality standard of the industry for both sheep and wool	3.1 Demonstrate safety procedures during shearing in relation to people and sheep 3.2 Avoid excessive wool contamination and damage to the wool 3.3 Shear 120 adult merino sheep or equivalent using identified method and positions in a normal eight-hour working day 3.4 Use correct movement of feet and hands, and maintain correct positioning to the downtube 3.5 Release sheep at increased speed 3.6 Comply with work health and safety and animal welfare requirements 3.7 Follow enterprise biosecurity policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG304A Shear sheep to professional level

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG304 Shear sheep to professional level

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed shearing a minimum of 120 adult merino sheep or 140 adult crossbred sheep per day to industry standards.

The candidate must provide evidence that they can:

- identify hazards and work safely
- avoid contamination, second cuts and injury to animals
- shear sufficient sheep within eight hours to match skill level of a professional shearer
- analyse and increase on improver shearer level
- shear with the industry accepted pattern
- use appropriate suturing for cuts to sheep
- catch and release sheep safely
- demonstrate safe and responsible workplace practices
- provide due care and handle sheep humanely
- apply enterprise workplace health and safety policies in the context of own work
- apply enterprise biosecurity policies in the context of own work
- apply enterprise animal welfare policies in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed shearing techniques and positions and method of shearing
- safe handling techniques for catching, dragging, shearing and releasing sheep

- the impacts of sheep behaviour on moving and handling sheep and shearing sheep
- Federal and/or State shearing awards and agreements associated with shearing sheep
- enterprise biosecurity policies applying to the job role
- work health and safety legislation and codes of practice applying to the job role
- animal welfare legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG305 Maintain consistent shearing performance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain a consistent shearing performance.

All work must be carried out to comply with workplace procedures and work health and safety requirements

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Maintain shearing control, coordination	1.1 Maintain consistent rhythm for 8-hour working day

Element	Performance criteria
and rhythm	1.2 Maintain coordination of footwork to assist control and blows placement for 8-hour working day 1.3 Analyse eye to hand coordination to optimise consistent blow placement
2. Maintain shearing output	2.1 Maintain shearing output and quality to meet expectation of the grower, contractor and self in terms of shearing conditions 2.2 Maintain shearing output and quality in terms of minimum industry output requirements and minimum industry quality requirements 2.3 Evaluate current stamina and fitness program, including eating, exercise, back care, fluid intake and rest periods, for means of improvement maintaining shearing performance 2.4 Comply with enterprise animal welfare and work health and safety policies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG305A Maintain consistent shearing performance

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG305 Maintain consistent shearing performance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed maintaining shearing control, coordination and rhythm over a working day.

The candidate must provide evidence that they can:

- identify hazards and implement risk controls
- maintain optimum shearing output by correct preparation and set up of equipment
- maintain application of improved techniques
- maintain speed and accuracy
- assess and monitor the shearing conditions and environment to maintain shearing performance
- maintain control, coordination, rhythm and output during shearing

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry shearing techniques and positions and method of shearing
- aspects of safe handling techniques for catching, dragging, shearing and releasing sheep.
- basic anatomy of male and female sheep as it relates to the safe humane removal of wool.
- the impacts of sheep behaviour on moving and handling sheep and shearing sheep
- personal protective clothing and equipment, and when and how it should be used
- Federal and/or State shearing awards and agreements associated with shearing sheep

- work health and safety legislation and codes of practice applying to the job role
- animal welfare legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG306 Carry out post-shearing procedures

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to care for shorn livestock.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity requirements and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor weather	1.1 Monitor weather during and after shearing operations, and revise

Element	Performance criteria
conditions	<p>work programs in response to changing circumstances</p> <p>1.2 Identify adverse weather conditions and assess and report the likely impacts on livestock, feed and property</p> <p>1.3 Determine the appropriate actions required to minimise loss or damage to livestock during adverse weather conditions</p>
2. Assess and monitor livestock condition	<p>2.1 Assess and record livestock condition and health status</p> <p>2.2 Identify and report abnormal behaviour or evidence of sickness</p> <p>2.3 Determine and provide water and feed requirements for livestock, and arrange supplementary feeding as required</p> <p>2.4 Apply enterprise animal welfare policies</p>
3. Maintain livestock environment	<p>3.1 Maintain livestock yards and facilities so that they are clean, secure and safe</p> <p>3.2 Maintain suitable shelter for shorn livestock to prevent losses</p> <p>3.3 Identify existing and potential hazards, assess risks and implement control measures</p>
4. Complete post-shearing operations	<p>4.1 Monitor and control environmental implications associated with shearing activities</p> <p>4.2 Clean shearing facilities and equipment and dispose of waste</p> <p>4.3 Record relevant information and report to appropriate personnel</p> <p>4.4 Follow enterprise biosecurity policies where required</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG306A Carry out post-shearing procedures

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG306 Carry out post-shearing procedures

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed caring for shorn livestock.

The candidate must provide evidence that they can:

- identify existing and potential hazards implement control measures
- relate weather conditions to livestock requirements
- prepare contingency plan and anticipate emergency action
- handle livestock with due care
- weigh livestock and assess condition
- observe and monitor livestock behaviour, health and condition
- read and interpret weather information
- provide feed and water based on livestock numbers
- rug animals where required
- apply enterprise work health and safety policies in the context of own work
- apply enterprise animal welfare and biosecurity policies in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- impacts of adverse weather conditions on shorn livestock
- physiological conditions brought on by stress post shearing, and treatment of same
- types and constructs of livestock shelter
- livestock handling techniques in response to adverse weather
- condition scoring
- appropriate types of feed for stressed livestock

- enterprise biosecurity policies applying to the job role
- work health and safety legislation and codes of practice applying to the job role
- animal welfare legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG402 Conduct equipment experting for machine shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare a comb for shearing, or experting the comb.

All work must be carried out to comply with workplace procedures and work health and safety policies.

This unit applies to individuals who take responsibility for their own work and use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Trim and finish combs	1.1 Identify signs of non-optimal equipment performance and remedy 1.2 Identify potential and existing work health and safety hazards and

Element	Performance criteria
	implement control measures 1.3 Confirm that the trim and finish meet the requirements of the current shearing task 1.4 Maintain control of comb and tools throughout the experting process 1.5 Adapt the comb in a form that meets individual shearing style
2. Scallop comb	2.1 Recognise and apply the principles and method of scalloping 2.2 Determine the interrelationship between correctly scalloped combs and shearing performance in terms of density of wool, time of year, and breed 2.3 Scallop combs to meet the shearing style of individual shearers

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG402A Conduct equipment experting for machine shearing

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG402 Conduct equipment experting for machine shearing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must be observed conducting equipment experting for machine shearing.

The candidate must provide evidence that they can:

- trim and finish combs
- scallop combs
- identify work health and safety hazards and implement safe work practice

Knowledge Evidence

The candidate must demonstrate knowledge of:

- different types of combs and cutters
- trimming and finishing techniques
- tools and equipment used in experting
- scalloping techniques
- the relationship of comb preparation to shearing performance.
- work health and safety legislation and codes of practice applying to the job role

Assessment Conditions

Competency is to be assessed in the workplace or workplace and simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSHG405 Arrange employment for shearing operations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to arrange employment for shearing operations.

All work must be carried out to comply with workplace procedures and legislative requirements.

This unit applies to individuals who take responsibility for their own work and use discretion and judgement in the selection, allocation and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Shearing (SHG)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine staffing requirements	1.1 Assess the numbers and types of staff required for wool harvesting

Element	Performance criteria
	1.2 Prepare a list of duties for additional staff 1.3 Define the required capabilities of staff prior to selection
2. Seek applicants	2.1 Make informal enquiries and advertise vacancies 2.2 Follow up possible staff by telephone and in person
3. Select staff	3.1 Interview potential staff against selection criteria 3.2 Select staff with due regard to equal employment opportunity
4. Induct staff	4.1 Brief new staff on relevant awards, enterprise agreements, pay rates and related administration 4.2 Advise new staff of terms and conditions and sign on 4.3 Familiarise new staff with the workplace and colleagues 4.4 Outline work health and safety and animal welfare requirements in detail to staff

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCSHG405A Arrange employment for shearing operations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCSHG405 Arrange employment for shearing operations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine staff needs
- advertise vacancies and recruit staff
- select and induct staff into shearing team
- carry out induction processes

Knowledge Evidence

The candidate must demonstrate knowledge of:

- industry awards and conditions
- duty statements for each category of wool harvesting staff
- interviewing techniques
- advertising mechanisms for staff vacancies
- telephone techniques
- equal employment opportunity legislation
- staff selection process
- induction procedures.
- work health and safety legislation and animal welfare legislation and codes of practice applying to the job roles

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWHS101 Work safely

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to work safely. It applies to new employees working under supervision, within established and well-known parameters and with limited autonomy.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) and occupational safety and health (OSH) are equivalent and generally either can be used in the workplace. In jurisdictions where the Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State and Territory OHS legislative requirements.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work Health and Safety (WHS)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify safety issues at work	1.1 Identify and explain employee and employer duty of care requirements

Element	Performance criteria
	1.2 Identify and explain own responsibilities to comply with safe work practices
2. Observe safe work practices	2.1 Read, follow and observe instructions, notices and workplace safety signs 2.2 Use protective clothing and equipment when completing work tasks 2.3 Check safety of machines, tools and equipment before use 2.4 Operate machines, tools and equipment safely 2.5 Use correct manual handling techniques
3. Participate in workplace safety meetings	3.1 Report work health and safety hazards to supervisor 3.2 Participate in workplace safety meetings
4. Follow incident and emergency response procedures	4.1 Follow workplace procedures for dealing with accidents, fire and emergencies 4.2 Follow enterprise procedures for the provision of first aid

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCOHS101A Work safely

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWHS101 Work safely

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- comply with their responsibilities to work safely
- following workplace procedures for hazard identification
- read and follow safety warning signs, symbols and work instructions
- safely operate machines, tools and equipment
- report workplace safety hazards
- participate in workplace safety meetings
- follow enterprise incident and emergency response procedures

Knowledge Evidence

The candidate must demonstrate knowledge of:

- employee and employer work health and safety duty of care responsibilities
- enterprise procedures relating to hazards, fires, emergencies, accidents and risk control
- hazards and risks in the industry sector
- relevant machinery and equipment operator manuals
- relevant work health and safety legislation, codes of practice and enterprise workplace policies
- work health and safety signs and symbols relevant to area of work

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWHS201 Participate in work health and safety processes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to recognise and report hazards in the workplace. It also describes the skills and knowledge required to follow workplace safety procedures and directions.

This unit is applicable to supervised workers who are required to follow work health and safety policies and procedures.

All work must be carried out in accordance with enterprise procedures, recommended safe practices and the relevant legislation.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) and occupational safety and health (OSH) are equivalent and generally either can be used in the workplace. In jurisdictions where the Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State and Territory OHS legislative requirements.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work Health and Safety (WHS)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Follow workplace procedures for hazard identification and risk control	1.1 Recognise hazards in the workplace and report them to designated personnel 1.2 Assess risks associated with identified hazards 1.3 Follow workplace procedures and work instructions to control risks 1.4 Follow workplace procedures for dealing with accidents, fire and emergencies within the scope of responsibilities and competencies 1.5 Recognise risks to fellow workers, other people and animals and take action to eliminate or reduce them 1.6 Recognise and carry out employee responsibilities prescribed in work health and safety legislation 1.7 Undertake safety training as directed
2. Observe safe practices during work operations	2.1 Identify, use, maintain and store personal protective equipment (PPE) 2.2 Undertake safety checks on all machinery and equipment before operation 2.3 Identify and report hazards associated with handling hazardous substances and assess risk 2.4 Identify noise hazards, notify relevant personnel and assess associated risks 2.5 Assess risks associated with manual handling jobs prior to commencing activity or carrying out work 2.6 Access information on work health and safety as required
3. Participate in arrangements for maintaining the health and safety of all people in the workplace	3.1 Raise work health and safety issues with designated personnel 3.2 Make contributions to participative arrangements in the workplace within the scope of own responsibilities and competencies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCOHS201A Participate in OHS processes

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWHS201 Participate in work health and safety processes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- follow workplace procedures for hazard identification and risk control
- read safety warning signs
- observe safety during work operations
- follow workplace procedures for dealing with accidents, fire and emergencies within the scope of responsibilities and competencies
- participate in arrangements for maintaining the health and safety of all people in the workplace
- recognise caution or hazard signs and symbols
- identify tasks or information from labels, manuals or written instructions
- record information accurately or verbally reporting information

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant work health and safety legislation, codes of practice and enterprise policies
- employee and employer work health and safety responsibilities
- enterprise procedures relating to hazards, fires, emergencies, accidents and risk control
- relevant machinery and equipment operator manuals
- work health and safety signs and symbols relevant to area of work
- hazards and risks in the industry sector

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWHS301 Contribute to work health and safety processes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to carry out enterprise work health and safety policies and procedures.

This unit is applicable to individuals. They typically work within clear reporting lines and procedures.

All work must be carried out to comply with workplace procedures and work health and safety and other relevant legislation and codes.

This unit applies to individuals who actively participate in the workplace safety system and work under broad direction and take responsibility for their own work. They work in a range of known contexts and complete routine activities.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) and occupational safety and health (OSH) are equivalent and generally either can be used in the workplace. In jurisdictions where the Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State and Territory OHS legislative requirements.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work Health and Safety (WHS)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Apply work health and safety policies and procedures	1.1 Make information regarding organisation work health and safety policies and procedures readily accessible to all employees 1.2 Identify and carry out employee responsibilities prescribed in work health and safety legislation, codes of practice and national standards 1.3 Identify and carry out employee responsibilities prescribed in enterprise work health and safety policies, including emergency procedures
2. Assist in workplace hazard identification and risk control	2.1 Provide and explain information regarding hazard identification and risk control regularly 2.2 Recognise hazards in the workplace and report them to designated personnel 2.3 Assess risks associated with identified hazards 2.4 Follow workplace procedures, safety signs and work instructions for controlling risks accurately 2.5 Recognise risks to fellow workers, other people and animals and take action to eliminate or reduce them 2.6 Undertake or provide safety training where required
3. Observe safe practices during work operations	3.1 Identify, use, maintain and store Personal Protective Equipment (PPE) required for work 3.2 Read and follow safety warning signs 3.3 Undertake basic safety checks on all machinery and equipment before operation 3.4 Identify hazards associated with handling hazardous substances, assess risks and implement risk controls in accordance with enterprise procedures and work health and safety requirements 3.5 Identify noise hazards, notify relevant personnel, assess associated risks and implement controls in accordance with work health and safety requirements 3.6 Assess manual handling risks prior to commencing activity and use safe lifting practices 3.7 Access information on work health and safety for specific work operations

Element	Performance criteria
4. Participate in arrangements for maintaining the health and safety of all people in the workplace	4.1 Contribute to ongoing monitoring and reporting of all aspects of workplace safety 4.2 Raise work health and safety issues with designated personnel in accordance with enterprise procedures and relevant work health and safety legislation 4.3 Make contributions to participative arrangements in the workplace within the scope of responsibilities and competencies 4.4 Make suggestions to assist the development of effective solutions and control the level of risk associated with enterprise activities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCOHS301A Contribute to work health and safety processes

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWHS301 Contribute to work health and safety processes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply work health and safety policies and procedures
- apply workplace procedures for hazard identification and risk control
- read safety warning signs
- participate in arrangements for maintaining the health and safety of all people in the workplace
- work safely during work operations
- record incidents in the work area in accordance with relevant work health and safety legal requirements
- observe and direct others to follow safe working operations
- communicate safety information within and to work team

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant employee and employer responsibilities under work health and safety legislation and relevant national and industry codes of practice
- enterprise procedures relating to hazards, fires, emergencies, accidents, and risk control
- work health and safety signs and symbols relevant to work area
- hazard identification and risk assessment process
- manual handling principles and procedures
- safe systems of work

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWHS401 Maintain work health and safety processes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to facilitate meetings and document actions that relate to the consideration of work health and safety issues in the workplace.

This unit is applicable to nominated work health and safety representatives in a workplace.

All work must be carried out to comply with workplace and legislative requirements.

This unit applies to individuals who take responsibility for their own work. They provide and communicate solutions to a range of predictable and unpredictable problems.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) and occupational safety and health (OSH) are equivalent and generally either can be used in the workplace. In jurisdictions where the Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State and Territory OHS legislative requirements.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work Health and Safety (WHS)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Provide information about work health and safety	1.1 Explain, with accuracy and clarity, relevant provisions of work health and safety legislation and Codes of Practice to the work group 1.2 Provide information on enterprise work health and safety policies, procedures and programs in a readily accessible manner, and accurately and clearly explain the information to the work group 1.3 Regularly provide, and accurately and clearly explain, information about identified hazards, the outcomes of risk assessment and control procedures
2. Facilitate the participation of workers in work health and safety observance and decision-making	2.1 Implement and monitor enterprise procedures for consultation on work health and safety issues to ensure that all members of the work group have the opportunity to contribute 2.2 Describe, with clarity, procedures used by workers to report work health and safety hazards, assess risks, and take action to control risks, to the work group 2.3 Deal with and resolve issues raised through consultation or refer them to the appropriate personnel 2.4 Communicate, with promptness, the outcomes of consultation over work health and safety issues to the work group
3. Implement procedures for identifying hazards and assessing and controlling risks	3.1 Identify existing and potential hazards and report them to ensure the implementation of adequate risk assessment and effective control measures 3.2 Check that the work group implements procedures to control work health and safety risks and undertakes regular monitoring to ensure ongoing adherence and effectiveness of risk control 3.3 Identify inadequacies in existing risk control measures in accordance with the hierarchy of control and report inadequacies to designated personnel 3.4 Identify and report inadequacies in allocation of resources to management to ensure safe work practice 3.5 Monitor and regularly report existing risk control measures in accordance with workplace procedures
4. Implement workplace procedures for dealing with emergencies and hazardous events	4.1 Implement workplace procedures for dealing with work health and safety emergencies, where necessary, to ensure prompt and effective control action 4.2 Report work health and safety emergencies in accordance with established enterprise procedures 4.3 Implement control measures based on the hierarchy of control to

Element	Performance criteria
	prevent recurrence and minimise the risk of emergencies and hazardous events, or alternatively, refer measures to designated personnel for implementation
5. Implement and monitor enterprise procedures for providing work health and safety training	5.1 Identify work health and safety induction and training needs accurately, specifying the gaps between the required work health and safety competencies and those held by the work group 5.2 Make arrangements for meeting identified work health and safety training needs in both on and off-the-job training programs in consultation with relevant parties
6. Implement and monitor enterprise procedures for maintaining work health and safety records	6.1 Accurately and legibly complete work health and safety records for work area 6.2 Use aggregate information from work health and safety records to identify hazards and monitor risk control procedures within the work area in accordance with own responsibilities

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCOHS401A Maintain occupational health and safety (OHS) processes

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWHS401 Maintain work health and safety processes

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- facilitate the participation of workers in work health and safety observance and decision-making
- establish procedures to document the identification of hazards and assessment of risk covering the operations of the enterprise
- identify work health and safety hazards and conducting the risk assessment process
- implement enterprise emergency procedures and organise safety drills
- provide staff with work health and safety training in risk assessment, and other areas nominated by risk controls
- respond to emergencies and work health and safety issues in an appropriate and timely manner
- facilitate meetings and document actions to consider work health and safety issues in the workplace
- distribute information concerning work health and safety processes and requirements to staff
- maintain work health and safety records

Knowledge Evidence

The candidate must demonstrate knowledge of:

- hazards in the workplace
- relevant work health and safety legislation and Codes of Practice
- hazard identification and risk control processes
- the hierarchy of work health and safety risk control and its implementation for hazards in land-based industries

- work health and safety training
- communication and engagement strategies with workers
- relevant enterprise management systems and procedures
- accident and incident investigation
- enterprise emergency procedures
- participative work practices

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL101 Support woolshed activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide support to others during shearing and wool preparation operations.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work alongside a supervisor in most situations and exercise limited autonomy.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare materials, tools and equipment for	1.1 Identify the required materials, tools and equipment from provided lists and supervisor's instructions

Element	Performance criteria
woolshed activities	1.2 Check all materials, tools and equipment and inform supervisor if there are insufficient or faulty items 1.3 Use techniques when loading and unloading materials that demonstrate correct manual handling and minimise damage to the load and the vehicle 1.4 Select and use suitable personal protective equipment 1.5 Identify work health and safety hazards and inform supervisor
2. Undertake woolshed activities as directed	2.1 Follow instructions and directions provided by supervisor and seek clarification when necessary 2.2 Undertake work in a safe and environmentally appropriate manner 2.3 Carry out interactions with other workers and owners and classers in a positive and professional manner 2.4 Move animals humanely into pens as directed 2.5 Undertake board duties as directed 2.6 Provide support to shearing as directed 2.7 Provide support to wool sorting, replacing butts and wool pressing as directed 2.8 Inform supervisor if there are problems or difficulties in completing work to required standards or timelines
3. Handle materials and equipment	3.1 Store waste material produced during woolshed activities in a designated area as directed by supervisor 3.2 Handle and transport materials, equipment and machinery as instructed 3.3 Maintain a clean and safe work site while completing woolshed activities
4. Clean up on completion of woolshed activities	4.1 Return materials are returned to store or dispose of appropriately 4.2 Clean, store and maintain tools and equipment 4.3 Inform supervisor of the work outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL101A Support woolshed activities

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL101 Support woolshed activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- use safe work procedures
- prepare materials, tools and equipment for woolshed activities
- provide support to shearing and crutching
- move and pen animals
- assist with wool handling
- undertake woolshed activities as directed
- handle materials and equipment
- clean up on completion of woolshed activities
- communicate with supervisor and team members using industry standard terminology
- apply work health and safety procedures in the context of own work
- apply enterprise animal welfare practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- features of safe work practices
- characteristics of wool types and sheep breeds that relate to sorting wool
- features of shearing and wool preparation tools and equipment
- basic wool handling practices
- relevant sections of federal, state and territory industrial awards that relate to working conditions in the woolshed
- enterprise work health and safety, environmental protection and animal welfare policies and procedures

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL201 Pen sheep

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor and maintain the supply of sheep to shearer catching pens.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Provide continuous supply of sheep to	1.1 Identify work health and safety hazards and report to the

Element	Performance criteria
shearers	supervisor 1.2 Select and use suitable personal protective equipment 1.3 Apply animal welfare principles to the movement and penning of sheep 1.4 Pen sheep in their separate mobs as instructed 1.5 Secure gates to prevent sheep escaping on to the board 1.6 Monitor the speed of shearers and arrange numbers of sheep in catching pens so that shearers all complete shearing at or near mob cutout 1.7 Monitor sheep numbers in catching pens and fill pens as they empty to ensure continuous supply to shearers 1.8 Refill other pens as required
2. Keep mobs separate	2.1 Secure gates to prevent mixing of mobs 2.2 Fill pens with sheep from only one mob at any given time to avoid mixing mobs and wool types 2.3 Inform supervisor of mob cutout 2.4 Move sheep to other catching pens to ensure that mob cutout is simultaneous 2.5 Use safe workplace practices and observe animal welfare requirements with regard to livestock handling
3. Prevent contamination of wool	3.1 Arrange pen density at optimum numbers 3.2 Monitor pens to maintain sheep in standing position to avoid crushing, trampling or soiling of wool 3.3 Minimise and remove potential contaminants within pens 3.4 Follow enterprise biosecurity policies where required

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL201A Pen sheep

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL201 Pen sheep

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards minimise risks and use safe work procedures
- accept and interpret advice from the shed supervisor
- observe differences between mobs of sheep
- monitor shearers workflow and estimate rates for refilling the catching pens and for mob cutout
- move sheep in a shed and pen them up
- use the accepted communications signals in the shed when shearing and sheep movement is in full force
- apply work health and safety in the context of own work
- follow enterprise biosecurity policies where required
- apply animal welfare practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- types of shearing sheds, boards and catching pens
- types of gates and catches in shearing sheds
- safe handling techniques for catching, dragging, and releasing sheep
- animal welfare requirements in relation to sheep
- features of sheep behaviour in the shearing sheds and yards
- hazards associated with handling livestock
- safety features of personal protective equipment and clothing, and when and how it should be used
- relevant industry awards and conditions that relate to working conditions in the wool industry

- relevant sections of State/Territory legislation, regulations and codes of practice with regard to work health and safety, animal welfare, and biosecurity as applied to working in the wool industry

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL202 Perform board duties

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to handle wool from the board, throw fleeces and place wool into bins or press as directed.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Remove contamination	1.1 Identify work health and safety hazards and report to the

Element	Performance criteria
from the fleece	supervisor 1.2 Select and use suitable personal protective equipment 1.3 Remove stained wool, black/coloured wool and contamination on the shearing board as instructed 1.4 Apply safe working practices and using the available safety equipment
2. Remove fleeces and component parts from the shearing board	2.1 Pick wool up after the shearing handpiece has been disengaged and not before 2.2 Identify wet wool and remove for drying 2.3 Pick belly wool up and remove stained wool 2.4 Remove crutch wool and reposition the hind leg if necessary 2.5 Arrange the hind legs of the fleece to allow for the fleece to be picked up efficiently 2.6 Pick fleece up in a controlled bundle and remove from shearing stand as soon as sheep is shorn 2.7 Carry fleece to the wool table and throw to land flat and spread out ready for skirting 2.8 Collect loose wool remaining in the let-out chute 2.9 Place all wool removed from the fleece and from the shearing board in the correct bins or on the correct table
3. Handle non-fleece wool	3.1 Sweep up locks and place in correct bins 3.2 Separate board and table locks where directed 3.3 Remove shanks and jowls if directed and placed in appropriate bin 3.4 Remove pizzle stain from bellies and place in stains line 3.5 Remove brisket wool if directed by the wool classer 3.6 Sweep crutchings clear of the board, remove stain and dags and place in appropriate bins 3.7 Carry lambs wool and prematurely shorn wools to the wool table using boards or paddles, if required 3.8 Place lambs wool on tables for sorting
4. Skirt fleeces under supervision	4.1 Seek information on wool classer requirements for mob 4.2 Remove ribs and sweats and place in appropriate bins 4.3 Remove short crutch wool and wiggings and place with locks 4.4 Remove wool carrying vegetable matter under wool classer supervision 4.5 Seek feedback on accuracy of skirting and fleece to skirtings ratio 4.6 Assist wool classer or wool roller in separating fleece wool, which has been identified as defective or lacking uniformity

Element	Performance criteria
5. Sweep the board and wool room	5.1 Sweep shearing boards, wool room and area beneath the wool table regularly and when necessary during the shearing operation 5.2 Keep the shearing boards and the wool room free of potential contamination 5.3 Remove waste and place appropriately in full consideration of environmental implications
6. Empty bins and other wool containers	6.1 Empty bins and other wool containers as necessary, and replace as directed
7. Perform cut-out duties	7.1 Empty all butts and bins and press wool 7.2 Stack bales 7.3 Sweep wool working area 7.4 Store equipment 7.5 Wash board down and disinfect

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL202A Perform board duties

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL202 Perform board duties

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and follow safety directions
- remove fleeces and sweep boards before the next sheep is dragged for shearing
- pick up and throw fleeces safely onto wool table
- remove non-fleece wools from the board and place in correct bins
- identify and accurately remove stains
- use correct technique for skirting and rolling fleece
- check quantities in bins
- sweep floors and remove contamination
- work rapidly within specified timeframes
- communicate with supervisor, the wool classer and the shearers
- apply work health and safety practices in the context of own work
- apply enterprise environmental sustainability practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- features of the parts of a fleece
- types of shearing shed layouts
- duties and responsibilities of a board person
- types and sources of contamination of the fleece and be able to explain the requirements of Code of Practice for the Preparation of Australian Wool Clips as it relates to the preparation of skirtings and oddments

- methods of handling fleece that minimise risk to own health, including safe lifting and bending techniques.

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL203 Carry out wool pressing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to press wool into bales and related tasks.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They identify and provide solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for wool	1.1 Identify work health and safety hazards and report to the

Element	Performance criteria
pressing	supervisor 1.2 Select and use suitable personal protective equipment 1.3 Identify the lines of wool to be pressed and confirm with the supervisor 1.4 Check the wool press for safe operation and report any issues to supervisor 1.5 Carry out any required lubrication and maintenance as directed by supervisor 1.6 Prepare the work area in readiness for pressing as instructed 1.7 Check the scales to be used for accuracy and calibrate if necessary, as instructed 1.8 Check the press and its location for safety 1.9 Identify any defective equipment and report to the supervisor
2. Press wool	2.1 Apply safe working practices using the available safety equipment 2.2 Remove contamination from the woolpack and place in the appropriate location 2.3 Place all wool correctly and evenly in the press, as directed 2.4 Press bales safely for weight and length as directed 2.5 Keep work area in a condition that avoids contamination of the wool
3. Close and stack bales	3.1 Use approved bale dividers as instructed and ensure flaps are correctly fastened 3.2 Identify bales for branding before removing them from the press 3.3 Store bales safely, avoiding injury to presser, risk to other workers, and damage to bales and equipment
4. Complete recording requirement	4.1 Brand bales as directed 4.2 Weigh bales and have weight checked by supervisor 4.3 Record bale weights, numbers and descriptions using the appropriate recording system, as directed and arrange a check by the supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL203A Carry out wool pressing

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL203 Carry out wool pressing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- observe and report on work health and safety hazards and risks
- apply standard operating procedures for the press and equipment
- operate different types of wool presses under supervision
- operate the various types of scales and manual handling devices and supervision
- maintain uniform bale weights for each line
- brand bales clearly and accurately
- handle and stack wool bales efficiently and without risk to self, other people or machinery
- record bale information to be interpreted and used by other people
- communicate with wool classer/supervisor
- apply work health and safety practices in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- sources of contamination of the fleece
- the requirements of Code of Practice for the Preparation of Australian Wool Clips as it relates to wool pressing
- methods of handling fleece and bales that minimise risk to own health, including safe lifting and bending techniques
- features of industry standards for weight, length of bales, fastening methods and type of pack
- industry standards for bale branding
- features of the recording system for bale details in use in the organisation

- enterprise work health and safety policies

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL301 Appraise wool using industry descriptions

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to appraise wool by applying the industry description system (AWEX-ID) to classed lines of wool.

All work is carried out to industry standards using the AWEX system for the appraisal and description of non-measured characteristics of greasy wool (AWEX-ID) and Code of Practice for the Preparation of Australian Wool Clips.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Source and prepare information on wool to	1.1 Identify and access sources of information on wool appraisal

Element	Performance criteria
be appraised	1.2 Describe the features of AWEX - ID the system for the appraisal and description of non-measured characteristics of greasy wool 1.3 Identify and classify the visual characteristics to be appraised using the relevant descriptors
2. Apply the industry description to lines in a clip	2.1 Check wool clip classing lines for compliance with the Code of Practice 2.2 Appraise wool clip classing lines and record the AWEX-ID 2.3 Evaluate the consistency of appraisal across a wool clip against appraisals for the clip in the sale catalogue
3. Use the industry description to establish a market value for lines made	3.1 Access market information 3.2 Identify premiums and discounts for wool characteristics 3.3 Determine a value for each line made
4. Review clip preparation strategies using an industry description	4.1 Check clip preparation strategies and revise using the AWEX-ID descriptors, and the market value applied to the lines made 4.2 Provide feedback on market information, the effect of management on the wool clip and possible future selection strategies to the woolgrower using the AWEX-ID descriptors applied to the lines

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Wool appraised must include wool from Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Unit Mapping Information

This unit is equivalent to AHCWOL301A Appraise wool using industry descriptions

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL301 Appraise wool using industry descriptions

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- source and prepare information on wool to be appraised for industry description (AWEX-ID)
- apply an industry description (AWEX-ID) to lines in a clip and record appraisal result
- use an industry description (AWEX-ID) to establish a market value for lines made
- review clip preparation strategies using industry standard terminology to communicate feedback to the grower

Knowledge Evidence

The candidate must demonstrate knowledge of:

- features of Code of Practice for the Preparation of Australian Wool Clips
- features of AWEX system for the appraisal and description of non-measured characteristics of greasy wool (AWEX-ID)
- features of the Australian Wool Exchange Wool Selling Rules
- interpretation of the wool sale catalogue
- interpretation of wool testing data
- relevant sources of wool sale lot information
- features of subjective assessment of style, colour, type of vegetable matter fault, degree of stain and faults, and defects.

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Evidence of competency must be demonstrated in Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Assessors must satisfy current standards for RTOs and be currently registered with the Australian Wool Exchange as Australian Wool classers.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL303 Prepare wool based on its characteristics

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare wool based on its characteristics.

All work must be carried out to comply with the requirements of Code of Practice for the Preparation of Australian Wool Clips, workplace procedures, work health and safety and biosecurity requirements and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Separate wools with characteristics outside	1.1 Make assessment of sheep breed and wool type

Element	Performance criteria
the uniformity requirements of the Code of Practice.	1.2 Separate wools into different lines based on fibre diameter, length and strength, colour and character and handle and style 1.3 Check staple formation and tip 1.4 Separate pigmented wool and wool which includes medulated fibres
2. Separate wool showing faults that impact on processing or fabric quality.	2.1 Separate wool for dogginess that will impact on fabric quality 2.2 Separate cotted wool that will require extra processing 2.3 Identify and remove skin pieces 2.4 Check wool for dermatitis and kept separate 2.5 Identify and separate wool based on the level and type of vegetable matter contamination where it requires different processing 2.6 Identify mobs with high pigmented fibre risk and keep their wool completely separate from low risk wool 2.7 Identify wool from sheep with shedding characteristics and keep completely separate from non-shedding white woolled sheep, record risk of exposure to shedding breeds on the classer's report 2.8 Keep fleeces containing pigmented fibre in a white woolled flock separate 2.9 Keep wool containing stain separate
3. Recognise impurities of greasy wool and their effect on processing and yield.	3.1 Examine wool for natural impurities 3.2 Identify applied impurities and assess their effect on processing 3.3 Identify acquired impurities and assess their effect on processing and yield of clean fibre

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Preparation must include wool from Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Unit Mapping Information

This unit is equivalent to AHCWOL303A Prepare wool based on its characteristics

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL303 Prepare wool based on its characteristics

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess key wool characteristics
- identify and separate wool faults
- identify and separate wool with impurities
- separate wool that does not meet Code of Practice requirements for uniform, predictable low risk lines of wool
- identify and separate wool from shedding sheep breeds
- identify and separate wools with a high pigmented fibre risk

Knowledge Evidence

The candidate must demonstrate knowledge of:

- characteristics of the breeds of sheep
- inherent wool characteristics - diameter, length and strength, colour, yield, VM type, curvature, and comfort factor and explain how these characteristics impact on processing and final wool product
- features of impurities in wool and explain their impact on processing and yield of clean fibre after processing
- types and sources of contamination and explain their impact on processing and final wool product
- features of the main wool faults and explain their impacts on processing
- techniques used to measure wool characteristics
- processing methods - woollen and worsted, stages of processing
- wool growth, skin and fibre biology, and discuss the effect of genetics and environment on fibre characteristics

- requirements for handling shedding and pigmented fibres
- relevant aspects of the Code of Practice for the Preparation of Australian Wool Clips and other relevant quality standards that related to preparing wool.

Assessment Conditions

Competency is to be assessed in the work place or simulated environments that accurately reflect performance in a real workplace setting.

Evidence of competency must be demonstrated in Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Assessors must satisfy current standards for RTOs and be currently registered with the Australian Wool Exchange as Australian Wool classers.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL304 Prepare fleece wool for classing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare fleece wool for classing to comply with the requirements of the Code of Practice for the Preparation of Australian Wool Clips.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under broad direction of the wool classer and take responsibility for their own work and use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify characteristics	1.1 Identify characteristics of wool important in processing and assess

Element	Performance criteria
of greasy wool and relate to processor requirements	uniformity within the fleece 1.2 Determine the portion of fleece to be removed to ensure uniformity of the fleece with the other fleeces from the mob
2. Check fleeces for impurities	2.1 Identify natural impurities of the wool and determine the portion of fleece to be removed 2.2 Identify vegetable matter types and determine the portion of fleece to be removed 2.3 Identify mineral impurities and relate to yield potential and determine the portion of fleece to be removed 2.4 Identify and remove any contamination from the fleece 2.5 Check work regularly with the wool classer and adjust procedures if required
3. Check fleeces for presence of wool faults	3.1 Identify hairy breeches and cotted wool and determine the portion of fleece to be removed 3.2 Identify unscourable colour, water stain and dermatitis and handled as directed 3.3 Remove skin pieces and place where directed 3.4 Carry out work safely and at a rate appropriate to the enterprise
4. Skirt and roll fleeces	4.1 Skirt fleeces to remove those portions determined above that adversely affect the uniformity and value of the remaining fleece 4.2 Double skirt fleeces containing clumpy vegetable matter or prepared as directed 4.3 Assess necks and backs for soundness, dust and VM levels, and handled as directed 4.4 Roll fleeces and present to classer 4.5 Place skirtings in the nominated bins 4.6 Remove waste and dispose of appropriately taking into account environmental implications

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Classing must include the preparation of Fine/Superfine Merino, Medium/Strong Merino and Crossbred fleece wools

Unit Mapping Information

This unit is equivalent to AHCWOL304A Prepare fleece wool for classing

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL304 Prepare fleece wool for classing

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- assess fleece characteristics and prepare fleeces as directed by wool classer
- assess levels of vegetable matter and other impurities
- accurately skirt fleeces at commercial pace
- roll fleeces in preparation for classing
- communicate with wool classer and other team members using industry standard terminology
- follow enterprise work health and safety procedures

Knowledge Evidence

The candidate must demonstrate knowledge of:

- characteristics wool and their impacts on processing
- principles and requirements of wool processing methods-woollen and worsted
- features of wool growth
- features of the parts of a fleece
- features of wool faults and impurities
- enterprise the work health and safety procedures
- requirements of Code of Practice for the Preparation of Australian Wool Clips as they relates to the preparation of fleece wool

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Evidence of competency must be demonstrated in Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL305 Prepare skirtings and oddments

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare non-fleece wool to comply with the requirements of the Code of Practice for the Preparation of Australian Wool Clips.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare skirtings	1.1 Identify types of skirtings and oddments

Element	Performance criteria
	1.2 Identify types of pieces and separate 1.3 Prepare Merino skirtings as directed 1.4 Prepare Crossbred skirtings as directed by wool classer
2. Prepare belly wool	2.1 Identify and separate belly wool 2.2 Remove stains and briskets as directed 2.3 Prepare Crossbred and Merino belly wool as directed by wool classer
3. Prepare lambs wool	3.1 Identify types of lambs' wool 3.2 Separate lambs' wool 3.3 Remove stains and trimmings 3.4 Prepare Merino lambs wool as directed 3.5 Prepare Crossbred lambs wool as by wool classer
4. Prepare locks	4.1 Identify types of locks 4.2 Separate board and table locks 4.3 Prepare Crossbred and Merino locks as by wool classer
5. Prepare crutchings	5.1 Identify types of crutchings 5.2 Remove stains and other impurities 5.3 Prepare Merino and Crossbred crutchings as by wool classer
6. Prepare stain	6.1 Identify types of stain 6.2 Prepare Merino and Crossbred stain as by wool classer
7. Prepare other oddments	7.1 Define and identify other oddments 7.2 Describe the preparation of other oddments 7.3 Identify and remove medulated fibre and shedding breeds wool

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Preparation must include the preparation of Fine/Superfine Merino, Medium/Strong Merino and Crossbred skirtings and oddments

Unit Mapping Information

This unit is equivalent to AHCWOL305A Prepare skirtings and oddments

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL305 Prepare skirtings and oddments

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- accurately skirt fleeces at commercial rates
- recognise and remove contamination
- recognise wool faults
- identify impurities in wool
- identify and remove stain
- identify oddments
- prepare skirtings and oddments
- communicate with team members, wool classer and the shearer

Knowledge Evidence

The candidate must demonstrate knowledge of:

- processing methods - woollen and worsted and stages of processing
- features of wool growth, skin and fibre biology
- features of fleece parts, skirtings, locks, crutchings, wool faults, impurities, contamination and stain and their impact on processing
- methods of handling fleece that minimise risk to own health, including safe lifting and bending techniques
- requirements of Code of Practice for the Preparation of Australian Wool Clips as it relates to the preparation of skirtings and oddments

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Evidence of competency must be demonstrated in Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL306 Supervise clip preparation

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to supervise board persons, wool handlers and the wool presser in preparing the wool clip.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Explain organisation requirements for clip	1.1 Explain the organisation's requirements for quality and standard of wool clip preparation to the wool handlers

Element	Performance criteria
preparation	1.2 Explain the organisation's procedures for operating safely and for the use of personal protective equipment to the wool handlers 1.3 Explain the impact of contamination in the wool to the wool handlers 1.4 Introduce or indicate the key personnel in the wool shed or room to the wool handlers 1.5 Allocate and explain responsibilities for specific functions or procedures are to wool handlers 1.6 Identify work health and safety hazards, assess risks and implement suitable controls 1.7 Confirm that all personal protective equipment and clothing is selected, used and maintained appropriately by wool handlers
2. Supervise shed hands	2.1 Monitor board persons performance including picking up and throwing fleece, sweeping board and preparing non fleece wools 2.2 Monitor wool handlers performance to ensure they follow the set procedures for each of the clip preparation tasks 2.3 Monitor penner up performance to ensure mobs are handled humanely in line with animal welfare policies and kept separate, and catching pens are monitored and filled as required 2.4 Monitor wool pressers' activities including keeping wool press area clean, pressing, branding, weighing and recording bale details in the wool book
3. Oversee preparation of wool	3.1 Supervise shed staff to maintain a clear board and ensure fleeces are thrown correctly 3.2 Supervise shed staff in the removal and preparation of fleece wool

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCWOL306A Supervise clip preparation

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL306 Supervise clip preparation

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe work practices
- explain clip preparation requirements to shed staff and monitor their performance
- oversee shed staff to ensure quality clip preparation
- communicate preparation requirements with shed staff
- implement enterprise animal welfare policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- features of the parts of fleece
- procedures for handling skirtings, bellies, lambs wool, premature shorn wool, locks and crutchings, and stained wool and oddments
- responsibilities of board and table staff
- characteristics of different wool types and parts of the fleece
- premiums and discounts for wool characteristics
- pressing and branding requirements
- skirting technique and appropriate skirting ratios for different clip types
- personal protective clothing and equipment requirements for shed staff
- on job training techniques
- principles of staff supervision
- requirements of work health and safety legislation and animal welfare codes of practice

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Evidence of competency must be demonstrated in Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Assessors must satisfy current standards for RTOs and be currently registered with the Australian Wool Exchange as Australian Wool classers.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL307 Document a wool clip

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare the documentation for a wool clip to meet the requirements of the Code of Practice for the Preparation of Australian Wool Clips, relevant legislation and the enterprise.

It includes instructing others in the use of the system, maintaining the records and advising the owner or manager of issues where appropriate.

The documentation of a wool clip contributes to the wool harvesting operation by optimising efficiency for the grower.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Establish recording system and documentation	1.1 Select documentation that complies with the requirements of the Code of Practice for the Preparation of Australian Wool Clips, relevant legislation and the enterprise 1.2 Establish guidelines for the use of the recording system including the type, frequency and format of recording 1.3 Inform those who are to use the recording system of their obligations and any specific instructions that are necessary 1.4 Check documentation regularly to confirm that it is accurately completed and updated at the proper times
2. Complete records for wool classing	2.1 Complete documents and records required by the organisation and the market 2.2 Complete wool clip specification prior to consignment, to ensure that the correct lotting advice is provided to the selling broker or buyer 2.3 Make any additional notes or give advice necessary on the documents so that they are clearly understood 2.4 Obtain all signatures and registrations that are required and include on documentation 2.5 Prepare wages statements for contractors according to the agreements reached in employment conditions
3. Provide information and advice to the woolgrower	3.1 Make suggestions for improved safety and fleece quality that are derived from observations, smoothness of workflow, and discussions with operators within the wool shed 3.2 Communicate the wool clip specification to the appropriate authority at shed cutout

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL307A Document a wool clip

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL307 Document a wool clip

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop the recording system for wool clips and bales
- communicate recording requirements clearly to wool handlers and pressers
- prepare and maintain records as required by the Code of Practice for the Preparation of Australian Wool Clips, legislation or enterprise
- observe, identify and react appropriately to work health and safety hazards
- observe the work and identify areas of the work or the facilities that could be improved
- communicate information and advice to the woolgrower on improvements

Knowledge Evidence

The candidate must demonstrate knowledge of:

- features of the Code of Practice for the Preparation of Australian Wool Clips and other relevant quality standards
- features of quality assurance schemes used in the organisation and in the industry, and their documentation requirements
- requirements for the completion of a clip specification
- employment conditions and agreements for a range of workers in a wool harvesting and preparation team
- documentation requirements for wool clip preparation and shearing operations

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Evidence of competency must be demonstrated in Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Assessors must satisfy current standards for RTOs and be currently registered with the Australian Wool Exchange as Australian Wool classers.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL308 Prepare facilities for shearing and crutching

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to ensure the safety and hygiene standards of facilities and equipment prior to shearing and crutching operations, and is undertaken by growers with assistance from wool handlers.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Inspect facilities and	1.1 Inspect facilities and assess for hygiene and safety

Element	Performance criteria
equipment	1.2 Identify equipment faults or malfunctions and report for repair or replacement 1.3 Identify potential and existing hazards, assess risks and implement control measures and report 1.4 Select, use and maintain suitable personal protective equipment
2. Prepare facilities	2.1 Engage shed staff in the removal of contaminating substances according to industry Quality Assurance (QA) and environmental requirements 2.2 Direct and assist shed staff in the cleaning of facilities and equipment and eliminate hazards
3. Prepare equipment and materials	3.1 Direct and assist shed staff in the positioning of tables and equipment 3.2 Place bins and wool pack holders in strategic positions 3.3 Direct and assist shed staff in the positioning of brooms and scrapers 3.4 Hold discussions with the presser in relation to their understanding of the property requirements
4. Organise the supply of sheep to shearers	4.1 Convey the order of shearing and information on mob cut-outs to staff 4.2 Move humanely sheep to be shorn first into catching pens 4.3 Monitor and coordinate the supply of sheep throughout shearing 4.4 Implement enterprise biosecurity policies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL308A Prepare facilities for shearing and crutching

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL308 Prepare facilities for shearing and crutching

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and implement safe work practices
- maintain contamination and hazard-free environment for shearing and wool handling
- recognise and remedy health and safety hazards
- carry out minor maintenance and repairs to equipment and facilities
- disposal of waste in an environmentally responsible manner
- pen sheep humanely in line with enterprise animal welfare policies
- communicate with shed staff and direct operations

Knowledge Evidence

The candidate must demonstrate knowledge of:

- maintenance and hygiene requirements of shearing sheds, boards and catching pens
- sources and types of contamination
- principles of moving and penning animals
- shearing requirements
- features of efficient shed and board layouts
- requirements of work health and safety legislation and animal welfare codes of practice as they relate to the shearing and wool preparation sector

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL310 Press wool for a clip

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to press wool into bales and carry out related tasks such as branding the bales, recording bale weights and numbers, and subsequently storing the wool bales.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes.

This unit applies to wool pressers who work in close cooperation with the wool classer and maintain a rate of pressing that ensures wool flow can be maintained. The work is carried out within established routines, methods and procedures.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Prepare for wool pressing	1.1 Identify the lines of wool and confirm with the wool classer 1.2 Check the wool press for safe operation, and lubricate and maintain it as required 1.3 Inspect the work area to confirm it is free of all contaminants in readiness for pressing 1.4 Confirm that supplies of wool packs, bale fasteners and hooks, stencils and bale-branding inks are located in appropriate place 1.5 Identify the appropriate recording system 1.6 Check the scales to be used for accuracy and calibrate if necessary 1.7 Check the press and its location for safety 1.8 Identify any defective equipment and report to the appropriate person
2. Press wool	2.1 Consult the wool classer to determine mob cut-outs and pressing requirements 2.2 Apply safe work practices at all times and use available safety equipment in line with work health and safety policies 2.3 Remove contamination from the woolpack and place in the appropriate location 2.4 Check woolpacks for conformity 2.5 Seek directions for order of pressing and any special requirements from the wool classer 2.6 Place all wool correctly and evenly in the press to produce even density bales
3. Carry out the role and responsibilities of the wool presser	3.1 Press bales to optimal weights to reduce selling costs and within specified weight and length dimensions in compliance with Code of Practice 3.2 Press lines to avoid mixed bales 3.3 Monitor wool flow and build-up in bins 3.4 Maintain work area in a condition that avoids contamination of wool 3.5 Carry out pressing within time restrictions and workflow of the wool room
4. Close and store bales	4.1 Use approved bale dividers as instructed, and fasten flaps correctly 4.2 Identify bales for branding before removing them from the press 4.3 Store bales safely, avoiding injury to presser, risk to other workers, and damage to bales and equipment 4.4 Store bales to maximise shed space and to avoid weather damage
5. Complete recording	5.1 Brand bales appropriately

Element	Performance criteria
requirements	5.2 Weigh bales appropriately 5.3 Record bale weights, numbers and descriptions clearly using the appropriate recording system

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL310A Press wool for a clip

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL310 Press wool for a clip

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify work health and safety hazards and implement safe work practices
- operate different types of wool presses and carry out basic lubrication and maintenance according to manufacturer instructions
- operate the various types of scales and manual handling devices
- check woolpacks and wool to ensure freedom from contamination
- assess and monitor wool-flow and build-up in bins
- maintain uniform bale weights for each line
- brand bales clearly and accurately to meet the requirements of the Code of Practice for the Preparation of Australian Wool Clips
- handle and store wool bales efficiently and without risk to self, other people or machinery
- record bale information to be interpreted and used by other people
- communicate with wool classer
- work safely in compliance with enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- sources of contamination of wool
- the requirements of Code of Practice for the Preparation of Australian Wool Clips as it relates to wool pressing
- operating requirements for different types of wool presses
- methods of handling wool and bales that minimise risk to own health, including safe lifting and bending techniques
- industry standards for weight, length of bales, fastening methods and type of pack
- industry standards for bale branding

- features of the recording system for bale details in use in the organisation
- enterprise work health and safety policies

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL311 Perform shed duties

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to perform shed duties covering the board and table and to provide mentoring to less experienced staff.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Perform board duties	1.1 Remove stained wool, black wool, and contamination on the shearing board

Element	Performance criteria
	<p>1.2 Pick up belly wool and remove stained wool</p> <p>1.3 Remove crutch wool and reposition the hind leg if necessary</p> <p>1.4 Pick up fleece and throw or park and retrieve later if wool table is not clear</p> <p>1.5 Monitor removal of wool and maintenance of the board and provide extra support when needed</p> <p>1.6 Provide mentoring and demonstration of work skills to inexperienced board staff as required</p> <p>1.7 Apply safe work practices at all times and use available safety equipment</p> <p>1.8 Comply with enterprise animal welfare and biosecurity policies and procedures</p>
2. Prepare wool	<p>2.1 Sweep up locks and keep board and table locks separate where directed</p> <p>2.2 Remove shanks and jowls if directed and place in correct bin</p> <p>2.3 Remove pizzle stain from bellies and placed in stains line</p> <p>2.4 Remove brisket wool if directed by the wool classer</p> <p>2.5 Sweep crutchings clear of the board, remove stain and dags and place in correct bins</p> <p>2.6 Carry lambs wool and prematurely shorn wools to the wool table using boards or paddles if required</p> <p>2.7 Provide mentoring and support in wool handling to inexperienced staff as part of the work team role</p>
3. Skirt fleeces	<p>3.1 Seek information on wool classer requirements for mob</p> <p>3.2 Remove fribs and sweats and place in appropriate bins</p> <p>3.3 Remove short crutch wool and wiggings and place with locks</p> <p>3.4 Remove wool carrying clumpy vegetable matter if directed by the wool classer</p> <p>3.5 Seek feedback on accuracy of skirting and fleece to skirtings ratio</p> <p>3.6 Remove fleece wool which is defective or lacks uniformity if directed by the wool classer</p>
4. Maintain wool flow and minimise contamination risk	<p>4.1 Sweep the immediate shearing area after each sheep is shorn</p> <p>4.2 Sweep shearing boards, wool room, and area beneath the wool table as regularly as necessary during the shearing operation</p> <p>4.3 Keep the shearing boards and the wool room free of potential contamination</p> <p>4.4 Remove waste and place appropriately in full consideration of environmental implications</p> <p>4.5 Minimise the risk of mixing wool between lines through regular sweeping and maintenance of bins, other containers and the wool</p>

Element	Performance criteria
	area 4.6 Complete all tasks and cover contingencies through a professional, team-based approach
5. Carry out tasks to support the shearing operation	5.1 Observe the rate of shearing and estimate the frequency of refilling the catching pens and for mob cutout 5.2 Keep different mobs of sheep separate 5.3 Implement directions from the wool classer and provide feedback on sheep supply and wool flow 5.4 Empty all butts and bins and press wool 5.5 Store bales as directed 5.6 Sweep wool working area clean 5.7 Store equipment at the end of shearing 5.8 Wash board down and disinfect after shearing cutout

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL311A Perform shed duties

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL311 Perform shed duties

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- remove fleeces and sweep boards before the next sheep is dragged for shearing
- pick up and throw fleeces safely
- remove non-fleece wools from the board and place in correct bins
- identify and accurately remove stain
- use correct technique for skirting and rolling fleece
- sweep floors and remove contamination
- work rapidly within specified timeframes
- interpret verbal and visual communication signals within the wool shed given by the supervisor, the wool classer and the shearers
- monitor sheep supply in pens and fill as necessary
- monitor wool flow and the wool working area to ensure risk of mixing between lines is minimised
- provide mentoring to less experienced staff
- deal with contingencies by supporting other staff in tasks as required
- observe and report on adverse environmental impacts
- apply work health and safety requirements in the context of own work
- apply enterprise animal welfare policies in the context of own work

Knowledge Evidence

The candidate must demonstrate knowledge of:

- maintenance and hygiene requirements of shearing sheds, boards and catching pens
- types of contamination and their sources
- properties of the parts of a fleece

- principles of moving and penning animals
- shearing requirements
- shearing shed and board layouts
- environmental codes of practice with regard to shearing
- relevant work health and safety and animal welfare legislation, codes of practice and enterprise requirements that apply to wool harvesting and pressing

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL401 Determine wool classing strategies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop classing strategies to be used for classing a wool clip and communicating the strategy to shed staff and owner and/or manager, then evaluating the strategy for the clip.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Source information for	1.1 Obtain information on previous year's clip preparation and sale

Element	Performance criteria
input to classing strategies	<p>results, including classer's specification, test results, skirting ratios, AWEX-ID, sale prices, and any grower or processor feedback</p> <p>1.2 Obtain information on growing and management history for the mobs over the last twelve months from the grower</p> <p>1.3 Research current market trends and premiums and discounts</p> <p>1.4 Identify current recommendations appropriate to the specific wool clip in the Code of Practice for Preparation of Australian Wool Clips</p> <p>1.5 Obtain current specific exporter and processor requirements and limitations and record relevant details</p> <p>1.6 Identify marketing and selling methods and end uses for the wool from the marketing plan and determine their implications on clip preparation</p> <p>1.7 Identify estimated prices for specific lines from market information</p> <p>1.8 Identify factors that will influence the classing process in the organisation</p>
2. Develop strategies for classing this clip	<p>2.1 Identify fleece type and set up suitable fleece, skirting and oddment lines</p> <p>2.2 Select clip preparation methods and standards to suit the fleece type and market requirements in consultation with the manager and other shed personnel</p> <p>2.3 Adopt operating procedures that eliminate contamination</p> <p>2.4 Select wool classing procedures, methods and criteria in line with fleece type, market requirements and industry standards</p> <p>2.5 Select shed layout and facilities that will permit efficient workflow</p> <p>2.6 Identify work health and safety hazards, assess risks and implement suitable control measures</p> <p>2.7 Select requirements for labelling and placement of bins and containers</p>
3. Communicate classing strategy	<p>3.1 Prepare the shed layout, equipment and facilities required and convey requirements for clip preparation to shed staff</p> <p>3.2 Clip preparation methods and classing procedures are clearly communicated to, and confirmed with, the wool handlers</p>
4. Review the success of the strategies for the clip	<p>4.1 Analyse classed clips and review strategies based on lines made, AWEX-ID, test results, selling costs and prices obtained</p> <p>4.2 Compare alternative clip preparation and classing strategies for profitability of the clip</p> <p>4.3 Incorporate conclusions and actions of review processes into</p>

Element	Performance criteria
	future classing decisions and instructions to shed staff 4.4 Discuss a review of classing and marketing alternatives is with owner or manager

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL401A Determine wool classing strategies

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL401 Determine wool classing strategies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop a classing strategy based on owners enterprise goals, research of past performance of the clip, current management, growing season, market and processor requirements which conforms with the Code of Practice for the Preparation of Australian Wool Clips
- establish and maintain consistent methods of clip preparation
- analyse classed clips and test alternative classing strategies for profitability
- review classing strategies based on broker and buyer feedback
- adapt classing strategies for buyer requirements, marketing systems and owner manager
- value lines of wool using industry descriptions and test results
- incorporate review of classing strategies into instructions for shed staff
- discuss clip test results, prices and alternative classing strategies with owner/shed manager
- observe, identify and react appropriately to environmental implications and work health and safety hazards
- provide feedback to grower/manager on performance of clip preparation strategy adopted.
- communicate classing strategy to shed staff and owner/manager
- implement work health and safety policies and procedures into classing strategy
- implement animal welfare practices into classing strategy

Knowledge Evidence

The candidate must demonstrate knowledge of:

- features of the industry description system (AWEX-ID)
- requirements of the organisation's wool marketing and production plans
- implications of wool testing, broking and export organisations on clip preparation

- clip preparation and analysis processes for the major wool types
- requirements and standards of the national wool processing industry
- methods used for processing wool and their impact on clip preparation and marketing
- marketing alternatives and their implications for classing
- wool brokering services
- features of efficient wool room layout
- sale catalogue and market reports
- specifications for classers
- features of the Code of Practice for the Preparation of Australian Wool Clips and other relevant quality standards
- requirements of the relevant work health and safety legislation, environmental protection, biosecurity and animal welfare legislation and codes of practice

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Evidence of competency must be demonstrated in Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Assessors must satisfy current standards for RTOs and be currently registered with the Australian Wool Exchange as Australian Wool classers.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL402 Use individual fleece measurements to prepare wool for sale

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to use individual fleece measurements to prepare wool for sale as required by the enterprise's classing strategy and marketing plan.

All work must be carried out to comply with workplace procedures, work health and safety and biosecurity legislation and codes.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Gather objectively measured data.	1.1 Arrange shed or wool room layout for efficient sampling operation where required 1.2 Identify potential and existing work health and safety hazards, assess risks and implement control measures 1.3 Collate available information 1.4 Assess tested sample to determine its appropriateness as a representative sample 1.5 Determine the requirements for additional information needed to validate measurements
2. Analyse collected data	2.1 Review and evaluate available data to determine possible lines 2.2 Make comparisons with previous measurements if available
3. Analyse market trends	3.1 Review information produced by industry to determine market trends 3.2 Evaluate the potential for movement in prices against available data 3.3 Determine the extent to which discounts are applied
4. Prepare wool to meet requirements of the market	4.1 Analyse the impact on the market of variable quantities 4.2 Use available information to prepare the wool to best advantage 4.3 Package wool in the most appropriate manner

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL402A Use individual fleece measurements to prepare wool for sale

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL402 Use individual fleece measurements to prepare wool for sale

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- arrange shed or wool room layout for sampling efficient operation where required
- understand and interpret the individual fleece measurements
- class wool to standards in accordance with the Code of Practice for the Preparation of Australian Wool Clips, or as required by the enterprise classing strategy and marketing plan
- communicate specific and detailed requirements for wool preparation and classing to wool handling staff
- identify wool of higher and lower market value and make lines which maximise return to woolgrower
- implement enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- features of wool room layouts which promote efficient wool flow and handling
- characteristics different breeds of sheep
- inherent wool characteristics , including fibre diameter, staple length and strength, colour, yield, VM type, curvature, comfort factor
- fleece measurement criteria - techniques used to measure wool characteristics
- interpretation of test results
- principles of classing , including mob/flock concept, variability for fibre diameter and staple length, soundness, defects
- classing scenarios requiring detail of clip break-ups
- clip analysis reports and comparisons

- clips and other relevant quality standards
- requirements of work health and safety legislation, codes of practice and enterprise procedures

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Evidence of competency must be demonstrated in Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Assessors must satisfy current standards for RTOs and be currently registered with the Australian Wool Exchange as Australian Wool classers.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL403 Plan, implement and review wool harvesting and clip preparation

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to prepare for, implement and review wool harvesting, clip preparation and classing.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Plan and implement wool harvesting and preparation operations	1.1 Consult the flock owner or manager about their requirements and inform them of any planning issues taking into account weather and environmental issues 1.2 Determine the order of mobs for wool harvesting and preparation 1.3 Determine staffing needs by negotiation with owner or manager according to clip type, enterprise requirements, legislative requirements, employment agreements and awards 1.4 Allocate staff duties and give staff directions where necessary 1.5 Arrange the shed equipment and materials in line with shearing plan, work health and safety requirements and the quality management system 1.6 Implement the wool harvesting and preparation plan and adjust as required
2. Implement plan and monitor work flows	2.1 Monitor sheep numbers, mob cut outs and shearing speeds to match wool preparation capacity 2.2 Supervise shed staff to maintain a clear board and ensure fleeces are thrown correctly 2.3 Direct shed staff to use appropriate skirting strategies and monitor fleece to skirting ratios 2.4 Direct staff to close off bins and lines for mob cut outs 2.5 Manage wool harvesting and preparation team to comply with quality management system requirements 2.6 Monitor compliance with enterprise and legislative requirements including work health and safety, animal welfare, biosecurity, industrial, and environmental practices 2.7 Manage staff performance and provide direction where necessary
3. Supervise wool pressing	3.1 Instruct presser on pressing strategies to reduce mixed bales while meeting code of practice requirements for uniformity in bales 3.2 Inform presser of order for pressing and procedures to minimize contamination 3.3 Monitor rate of build up in lines by consulting with wool presser 3.4 Monitor bale weights to ensure efficiencies are achieved for the grower without creating overweight bales 3.5 Brand bales appropriately 3.6 Monitor wool book to ensure it is up to date, accurate and legible
4. Provide feedback to grower on classing strategies, clip performance and wool harvesting and preparation operations	4.1 Review staff performance in clip preparation 4.2 Provide feedback on classing strategies, clip preparation in relation to mob characteristics, skirting ratios, bale weights and any workflow issues 4.3 Provide feedback on possible improvements to wool handling

Element	Performance criteria
	facilities 4.4 Report on equipment effectiveness and maintenance requirements 4.5 Explain lines made and bale details in relation to mob characteristics 4.6 Provide feedback on lotting advice 4.7 Complete wool clip documentation and present to owner or manager for signature

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

Unit is equivalent to AHCWOL403A Prepare for, implement and review wool harvesting, clip preparation and classing

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL403 Plan, implement and review wool harvesting and clip preparation

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan and implement wool harvesting and preparation operations
- organise and schedule staff and work tasks
- supervise staff and monitor productivity
- implement risk management strategies
- monitor environmental impacts and implement control measures
- implement relevant legislative requirements associated with the shearing industry including employment agreements and awards
- communicate using industry standard terminology written and oral information to team members and management
- review and evaluate operational performance and clip preparation standards
- provide feedback to grower on the shearing operation and the preparation and classing of the clip
- calculate resources and bale weights for mob cut outs
- implement and monitor work health and safety requirements for work team
- implement relevant enterprise biosecurity policies and procedures
- implement animal welfare practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- supervisory procedures with regard to operations and personnel
- principles staff management including team building and conflict resolution
- wool industry codes of practice and quality systems

- industry requirements with regard to hygiene and safety for wool harvesting and preparation facilities and equipment
- how weather conditions can impact on wool harvesting programs
- features of workplace documentation required for wool harvesting and preparation
- employment agreements, industrial awards, relevant to the wool harvesting sector
- the Code of Practice for the Preparation of Australian Wool Clips and other relevant quality standards
- requirements of work health and safety legislation, biosecurity and animal welfare codes of practice

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs and be currently registered with the Australian Wool Exchange as Australian Wool classers.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL404 Establish work routines and manage wool harvesting and preparation staff

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to establish work routines and manage wool harvesting and preparation staff.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Define work roles for shed staff	1.1 Define the roles and responsibilities of shed staff 1.2 Identify the skills of shed staff and match with available tasks and duties 1.3 Identify the requirements of job duties and Code of Practice and communicate to shed staff 1.4 Explain work health and safety policy and procedures to staff and monitor implementation 1.5 Explain animal welfare and biosecurity policies to staff and monitor implementation
2. Induct shed staff	2.1 Identify work health and safety hazards, assess risks and implement suitable controls 2.2 Communicate the details of shearing, including flock and mob details to staff 2.3 Brief new staff on relevant awards, enterprise agreements, pay rates and related administration 2.4 Advise new staff of terms and conditions and sign on 2.5 Familiarise new staff with the workplace and colleagues 2.6 Explain the enterprise's environmental policy and procedures and monitor implementation
3. Support on-the-job training	3.1 Encourage individuals to self-evaluate performance and identify areas for improvement 3.2 Determine training needs through appraisal of staff and monitoring of work performance 3.3 Analyse practical skills and then explained and demonstrated as required 3.4 Provide workplace learning opportunities with coaching and mentoring to support learning 3.5 Adjust staff responsibilities to allow for practice and skills development where required
4. Performance manage shed staff	4.1 Establish performance standards for clip preparation and communicate to individuals and the team 4.2 Explain skirting requirements and monitor skirtings ratio 4.3 Describe the requirements for separating specific parts of the fleece to wool handlers using the Code of Practice and processor requirements 4.4 Use motivation strategies for shed staff to maintain a consistent focus on clip preparation standards and timing of operations
5. Maintain effective working relations with the team	5.1 Recognise problems and address through discussion with work group 5.2 Seek assistance from work group members when difficulties arise

Element	Performance criteria
	in achieving allocated tasks 5.3 Use discussion and information sharing to communicate requirements of work activities through a participative approach 5.4 Manage disagreements and conflicts constructively using appropriate conflict management strategies
6. Provide feedback to shed staff	6.1 Provide confirmatory feedback to emphasise good performance and technique and its importance for clip quality 6.2 Provide corrective feedback in a constructive way, including an explanation of the effects of poor performance or incorrect technique and strategies for improvement 6.3 Address under performance both on an individual and team basis 6.4 Use clip data to share feedback on clips prepared with team members

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWOL404A Establish work routines and manage wool harvesting and preparation staff

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL404 Establish work routines and manage wool harvesting and preparation staff

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- supervise and instruct staff to achieve work activities
- delegate and allocate tasks
- identify staff training needs and provide on job training, mentoring and coaching as required
- implement effective time management
- use problem solving techniques to address staffing and resource issues motivate and performance manage work team
- manage conflicts within work team
- communicate with team members
- implement and monitor work health and safety policies and procedures
- implement enterprise biosecurity policies and procedures
- implement and monitor enterprise animal welfare policies and procedures
- implement enterprise environmental policies and procedures

Knowledge Evidence

The candidate must demonstrate knowledge of:

- shearing industry awards, agreements and personnel processes
- principles of team work, negotiation and time management
- principles of workplace instruction/training and coaching techniques
- principles of conflict management
- features of effective communication for feedback and motivation
- principles of staff performance management

- features of the Code of Practice for the Preparation of Australian Wool Clips and other relevant quality standards
- requirements of the relevant work health and safety legislation, environmental protection, biosecurity and animal welfare legislation and codes of practice

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Assessors must satisfy current standards for RTOs and be currently registered with the Australian Wool Exchange as Australian Wool classers.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWOL405 Class fleece wool

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to class fleece wool from merino and crossbred sheep into lines that meet the requirements of the Code of Practice for the Preparation of Australian Wool Clips.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes.

The unit applies to wool classers who class wool as a professional service after consultation with the grower or shed manager.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Wool (WOL)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for wool classing	1.1 Arrange the layout of the shed, equipment and facilities according to the determined classing strategy for efficient wool flow, quality management and pressing 1.2 Identify potential and existing work health and safety hazards, assess risks and implement control measures 1.3 Place clearly labelled bins and containers in line with the classing strategy, quality management system and enterprise requirements 1.4 Establish and maintain sufficient staffing ratio
2. Carry out classing of fleece wool	2.1 Identify hazards, apply safe working practices and use available safety equipment 2.2 Handle and skirt fleece wool to the required standards 2.3 Check wool to ensure freedom from contamination and stain 2.4 Check wool to ensure adequate and optimum skirting 2.5 Assess pigmented fibre risk and keep wool separate as required 2.6 Identify wet wool, stained, cotted and coloured wool and keep separate 2.7 Appraise wool for its characteristics 2.8 Class wool to standards of the enterprise classing strategy, the Code of Practice and as required by alternative selling methods 2.9 Identify wool of higher and lower market value and processing requirements and make lines to maximise return to the wool owner
3. Place wool in bins for pressing	3.1 Place wool in the correct bins ready for pressing and ensure that cross contamination does not occur 3.2 Check wool flow into bins and communicate with wool presser

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Classing must include the classing of Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Unit Mapping Information

This unit is equivalent to AHCWOL405A Class fleece wool

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWOL405 Class fleece wool

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and apply safe work procedures
- arrange layout of bins and wool table for optimum efficient wool flow and pressing in a variety of sheds
- label bins and containers correctly
- monitor clip preparation and skirting
- assess pigmented fibre risk and separate wool as required
- identify and appraise wool characteristics
- class wool to standards in accordance with the Code of Practice for the Preparation of Australian Wool Clips or as required by alternative selling methods
- identify wool of higher and lower market value and lines made which maximise return to grower.
- separate wools of different processing or end user requirements
- identify and keep separate wet wool, stained, cotted and coloured wool and contamination
- communicate with team members in completing tasks associated with classing fleece wool.
- implement enterprise work health and safety policies

Knowledge Evidence

The candidate must demonstrate knowledge of:

- shed layouts which promote safe, efficient wool flow and classing
- characteristics of the breeds of sheep
- types and sources of contamination
- impact of the wool production areas of Australia on clip characteristics

- inherent wool characteristics - diameter, length and strength, colour, yield, VM type, curvature, and comfort factor and explain how these characteristics impact on classing
- techniques used to measure wool characteristics
- processing methods - woollen and worsted, and stages of processing
- effect of raw wool characteristics on wool processing and final product
- features of wool growth, skin and fibre biology, and discuss the effect of genetics and environment on fibre characteristics
- requirements for handling shedding and pigmented fibres
- interpretation of test results, clip feedback and reports
- principles of classing (mob/flock concept, variability for fibre diameter and staple length, soundness, defects)
- documentation requirements for wool clips
- features of the Code of Practice for the Preparation of Australian Wool Clips and other relevant quality standards
- requirements of work health and safety legislation in a wool preparation workplace

Assessment Conditions

Competency is to be assessed in the work place or workplace and simulated environments that accurately reflect performance in a real workplace setting.

Evidence of competency must be demonstrated in Fine/Superfine Merino, Medium/Strong Merino and Crossbred wool clips.

Assessors must satisfy current standards for RTOs and be currently registered with the Australian Wool Exchange as Australian Wool classers.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK101 Maintain the workplace

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain a range of work areas.

All work is carried out to comply with workplace procedures.

This unit applies to individuals who work alongside a supervisor in most situations and exercise limited autonomy within established and well known parameters.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare and use tools, equipment and machinery	1.1 Identify required materials, tools and equipment according to lists provided and supervisor's instructions 1.2 Check all materials, tools and equipment and inform supervisor of

Element	Performance criteria
	insufficient or faulty items 1.3 Use correct manual handling techniques at all times 1.4 Use suitable personal protective equipment selected as directed by supervisor and ensure correct fit 1.5 Inform supervisor if any risks are identified 1.6 Clarify channels for communicating with workers
2. Maintain a clean and safe workplace	2.1 Locate services using site plans and clarify with the supervisor 2.2 Sweep, wash and treat floors, benches and other flat work surfaces to minimise nuisance level environmental disturbance 2.3 Store tools, equipment and materials not in use neatly and remove waste and used materials and place in disposal containers as instructed 2.4 Identify potential hazards, assess risks and implement control measures 2.5 Apply sustainability practices relative to workplace and activity
3. Maintain structures and workplace surroundings	3.1 Identify maintenance requirements of structures and workplace surroundings and clarify with supervisor 3.2 Maintain structures and workplace surroundings as instructed 3.3 Identify structural damage and deterioration in the workplace and inform supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK101A Maintain the workplace.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK101 Maintain the workplace

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- follow safe work practices
- participate in teams and contribute to team objectives
- understand instructions
- read labels, site plan measurements and work health and safety symbols
- communicate effectively with team members and supervisor
- tally work hours, calibrating tools and equipment, measuring volumes to apply cleaning agents, measuring quantities of materials and estimating areas
- minimise noise, dust and water run-off to prevent nuisance-level environmental disturbance
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- enterprise standards for presentation of buildings, structures and surroundings
- the effect of outdoor climatic conditions (including rain, hail, extreme heat and wind, and very high ultraviolet radiation), which may prevent or impede maintenance activities, or influence the selection of tools, equipment and safety equipment to minimise the hazards presented
- the relationship between specific maintenance activities and the external environment, and reasons for procedures that help to minimise the impact that these activities may have on the environment
- workplace hazards and work health and safety symbols, signs and practices in the context of own work

- sustainability practices in the context of own work.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK201 Observe and report on weather

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to observe and contribute to positive environmental work practices.

The skills and knowledge described in this unit underpin a broad range of activities applicable to a variety of job roles throughout industries at various levels.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to work	1.1 Clarify work instructions with supervisor 1.2 Select and use tools and equipment and carry out pre-operational

Element	Performance criteria
	safety checks 1.3 Select and use personal protective equipment 1.4 Identify hazards and inform supervisor 1.5 Identify and action work health and safety policies and procedures and legislative requirements
2. Check weather and climate information	2.1 Check weather and climate information to determine likely conditions 2.2 Recognise changed weather and climate situations 2.3 Anticipate likely impact of changes in weather and climate in respect to work tasks, safety of others, property, natural resources and local environment 2.4 Report anticipated impact of weather and climate to supervisor
3. Carry out preventative action	3.1 Disseminate information and advice to relevant personnel 3.2 Determine the preventative action required according to the known effects on livestock, crops and work tasks 3.3 Implement actions to minimise loss and damage 3.4 Adjust livestock, horticultural or crop management program or schedule of work tasks according to weather and climatic changes
4. Monitor weather and climate	4.1 Access regular updates to determine ongoing suitability of current programs 4.2 Review the viability of livestock, horticultural or crop management practices to ensure suitability within meteorological conditions 4.3 Research forecasting techniques to maintain currency of information 4.4 Document relevant information

Foundation Skills

This unit of competency describes the skills and knowledge required to observe and contribute to positive environmental work practices.

The skills and knowledge described in this unit underpin a broad range of activities applicable to a variety of job roles throughout industries at various levels.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK201A Observe and report on weather

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK201 Observe and report on weather

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- monitor physical signs of weather in the context of available information
- relate forecasts to impact on current operations and activities
- communicate information on weather and situations that may be impacted
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- effects of wind and rain on wind chill
- effects of wind shear and wind chill exposure
- enterprise and industry policies for monitoring weather and climate conditions, and recording and reporting weather and climate conditions
- weather and climate conditions impact upon farming and grazing activities
- effects of wind chill on metabolism of animals
- effects of prolonged dry periods on pastures and animal production, and natural resources
- effects of extreme heat on animals, including during birthing, and effects of heat stress on neonates
- work health and safety requirements and practices, especially as they relate to weather and climate monitoring and preparations for hazardous weather
- sustainability practices in the context of own work.

Assessment Conditions

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK202 Observe environmental work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to observe and contribute to positive environmental work practices.

The skills and knowledge described in this unit underpin a broad range of activities applicable to a variety of job roles throughout industries at various levels.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Follow environmental workplace practices	1.1 Recognise and follow workplace practices and work instructions relating to potential environmental impacts and seek clarification

Element	Performance criteria
	where necessary 1.2 Respond to changes to work practices and procedures positively and promptly
2. Contribute to improved environmental work practices	2.1 Gather information and suggest improvements to support the development of improved workplace approaches to environmental practices 2.2 Discuss environmental issues and their relationship to workplace practices in the workplace with colleagues and designated personnel 2.3 Make contributions to the review of environmental practices and policies within limits of responsibility
3. Recognise and report on a potential environmental threat	3.1 Recognise signs or symptoms of a potential environmental threat 3.2 Report information about or observations of a potential environmental threat to supervisors or appropriate authorities 3.3 Record the location and extent of the potential environmental threat
4. Maintain environmental records	4.1 Prepare and maintain environmental records as required 4.2 Store environmental records securely in a form accessible for reporting purposes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK202A Observe environmental work practices

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK202 Observe environmental work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- communicate with supervisors and workplace colleagues
- recognise basic environmental hazards and threats
- follow workplace directions and instructions related to environment
- keep simple environmental records
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant legislation from all levels of government on environmental issues
- relevant environmental policies and workplace and industry practices and procedures
- good practice approaches relevant to work area particularly in regard to minimising environment hazards and risks, and improving environmental performance
- environmental issues, especially in regard to water catchments, air, noise, ecosystems, habitat, efficient use of resources, sustainability and waste minimisation
- potential environmental threats and problems relevant to a given region and occupation
- general work place practices and their potential impact on the environment
- work health and safety in the context of own work.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK204 Work effectively in the industry

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to work effectively on an individual basis and with others as well as within a hierarchy of management.

The skills and knowledge described in this unit underpin a broad range of activities applicable to a variety of job roles throughout industries at various levels.

The unit applies to individuals who work at various levels and should be contextualised to accommodate the responsibility of the individual.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Obtain information about the industry	1.1 Identify and access sources of information about the industry 1.2 Collect information to assist effective and safe work performance

Element	Performance criteria
	<p>within the industry</p> <p>1.3 Obtain and update specific information on sector of work</p> <p>1.4 Apply industry and work health and safety information to day-to-day work activities</p> <p>1.5 Identify employment terms and conditions</p> <p>1.6 Identify career pathways within the industry</p> <p>1.7 Maintain biosecurity protocols and procedures at all times</p>
2. Observe employment requirements	<p>2.1 Use industry developments in the workplace context to improve quality, productivity and conditions</p> <p>2.2 Confirm that work practices comply with Codes of Practice and workplace expectations</p> <p>2.3 Recognise faults and abnormalities in workplace practices and take remedial action as required</p> <p>2.4 Ensure that dress and personal requirements comply with workplace standards</p> <p>2.5 Observe punctuality in work attendance</p> <p>2.6 Meet employer's expectations through completion of workplace routines and specific instructions within enterprise policies and procedures</p>
3. Accept responsibility for quality of own work	<p>3.1 Keep personal work space in a well organised and safe condition, and meets relevant standards and policies</p> <p>3.2 Adhere to the workplace code of conduct</p> <p>3.3 Detect variations in the quality of service or products from required standards and report as required</p>
4. Plan and conduct own work	<p>4.1 Interpret and follow instructions</p> <p>4.2 Identify factors affecting work requirements and take appropriate action</p> <p>4.3 Assess work load and prioritise within allocated timeframes</p> <p>4.4 Communicate the need for assistance to improve performance clearly to the appropriate person</p>
5. Promote workplace cooperation	<p>5.1 Undertake responsibilities and duties in a positive manner to promote co-operation and good relationships</p> <p>5.2 Conduct co-operation with others in a courteous manner and is appropriate to culture, special needs and linguistic background and position in the organisation</p> <p>5.3 Recognise problems and conflict and resolve, where possible, through personal communication or refer to a supervisor, manager or employer for resolution</p>
6. Contribute to a productive work	<p>6.1 Fulfil commitments to undertake work or assist co-workers</p> <p>6.2 Share information relevant to work with co-workers to ensure</p>

Element	Performance criteria
environment	<p>designated work goals are met</p> <p>6.3 Share knowledge and skills co-workers through conversations and meetings</p> <p>6.4 Recognise and seek contributions of individuals of different gender and social and cultural backgrounds</p> <p>6.5 Observe and implement the principles of equal employment opportunity</p> <p>6.6 Ensure work is consistent with workplace standards relating to anti-discrimination and workplace harassment</p>
7. Undertake an activity to workplace requirements	<p>7.1 Interpret work schedules with the schedule and tasks defined</p> <p>7.2 Discuss knowledge and skills required for task with supervisors and co-workers</p> <p>7.3 Check the availability of materials and equipment to ensure they are consistent with work schedules and the requirements of the tasks</p> <p>7.4 Create a daily schedule for completing workplace activities and allocated tasks including priorities, allocated start times, estimation of completion times and materials, equipment and assistance required for completion is decided upon</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK204A Work effectively in the industry.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK204 Work effectively in the industry

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- collect information on the industry
- observe employment requirements
- accept responsibility for quality of own work
- manage own work
- maintain the safety of others
- contribute to a productive work environment
- interpret work schedules
- meet the industry standard for dress and work practices
- communicate effectively with team members and supervisors
- use industry standard terminology

Knowledge Evidence

The candidate must demonstrate knowledge of:

- industry and workplace awards and conditions
- employer's expectations
- relevant legislation and Codes of Practice applying to the industry
- workplace policies and procedures including those relating to quality systems
- emergency procedures
- organisational structure
- workplace communication channels
- awareness of workplace health and safety in the context of own work
- biosecurity in the context of own work

- animal welfare practices in the context of own work where applicable
- sustainability practices in the context of own work

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK205 Participate in workplace communications

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to participate in workplace communications.

The skills and knowledge described in this unit underpin a broad range of activities applicable to a variety of job roles throughout industries at various levels.

The unit applies to individuals who work at various levels and should be contextualised to accommodate the responsibility of the individual.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Follow routine spoken messages	1.1 Gather required information by listening and interpret information

Element	Performance criteria
	1.2 Follow instructions and procedures in an appropriate sequence for the task and in accordance with the information received 1.3 Seek clarification from the workplace supervisor on all occasions when any instruction or procedure is not understood
2. Perform workplace duties following routine written notices	2.1 Read and interpret written notices and instructions 2.2 Follow routine written instructions and procedures in sequence 2.3 Seek clarification from the workplace supervisor on all occasions when any instruction or procedure is not understood 2.4 Follow enterprise work health and safety policies
3. Obtain and provide information in response to workplace requirements	3.1 Obtain and interpret specific, relevant information 3.2 Write any required information completely, accurately and legibly 3.3 Identify sources of required information and establish appropriate contact 3.4 Ensure personal interaction is courteous and make enquiries clearly and concisely 3.5 Use defined procedures for the location and storage of information
4. Complete relevant work-related documents	4.1 Complete a range of forms relating to conditions of employment accurately and legibly 4.2 Record workplace data manually or electronically using standard workplace forms and documents 4.3 Use basic mathematical processes for routine calculations 4.4 Identify and rectify errors in recording information on forms and documents 4.5 Complete reporting requirements to supervisor as required by workplace procedures
5. Participate in workplace meetings and discussion	5.1 Attend team meetings on time 5.2 Express own opinions clearly and listen to those of others without interruption 5.3 Make contributions to meetings that are consistent with the meeting purpose and established protocols 5.4 Ask and respond to questions about routine workplace procedures and matters concerning conditions of employment 5.5 Interpret and implement meeting outcomes

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK205A Participate in workplace communications.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK205 Participate in workplace communications

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- following simple spoken messages
- performing routine workplace duties following simple written instructions
- gathering and providing information in response to workplace requirements
- completing relevant work-related documents
- estimating, calculating and recording routine workplace measures
- using basic mathematical processes of addition, subtraction, division, multiplication, percentages, decimal points and ratios
- participating in workplace meetings and discussions
- use of industry standard terminology
- awareness of work health and safety in the context of own work
- appropriate sustainability practices in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- effective communication, including the role of body language
- different modes of communication (e.g. written and non-verbal)
- effective communication in a work team
- communication procedures and systems, and technology relevant to the organisation and the individual's work responsibilities.

Assessment Conditions

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK206 Observe enterprise quality assurance procedures

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to observe enterprise quality assurance procedures.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Apply basic quality assurance practices	1.1 Recognise elements of the enterprise's quality assurance system 1.2 Identify hazards to quality in work area 1.3 Identify critical control points for immediate work area 1.4 Complete basic record-keeping as required by quality process
2. Follow work	2.1 Follow work instructions for quality control for work area

Element	Performance criteria
instructions	2.2 Complete quality documentation
3. Check quality of product	3.1 Check the quality of the product or service as prescribed in work instructions 3.2 Inform supervisor of problems that affect or could potentially affect quality 3.3 Take action to correct the problem under supervision

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK206A Observe enterprise quality assurance procedures

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK206 Observe enterprise quality assurance procedures

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- apply basic quality assurance practices
- follow work instructions
- check quality of work
- identify and report quality issues
- keep records
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- production processes in the context of own work
- HACCP (Hazard Analysis Critical Control Point) approach to Quality Assurance (QA)
- enterprise QA policies, guidelines and standard operating procedures relating to work being undertaken and at a level that reflects the level of responsibility.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK207 Collect and record production data

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to collect and record production data obtained from a variety of sources.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify data to be collected	1.1 Determine the specific requirements of the data to be collected by discussion with the supervisor or by reading work instructions 1.2 Select materials or tools required for data collected and calibrate where necessary 1.3 Identify difficulties that may be encountered in collecting the data and seek advice from the supervisor if needed

Element	Performance criteria
	1.4 Communicate advice about the proposed data collection to others as required 1.5 Select and use suitable personal protective equipment 1.6 Determine whether notices relating to site quarantine are in effect and, where required, follow site quarantine procedures
2. Record production data	2.1 Record production data in the correct format and to meet specific requirements
3. Present and store production data	3.1 Present production data in the correct format and to meet specific requirements 3.2 Store production data sheets appropriately 3.3 Download or enter production data into a computer where required, using specified formats and applications

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK207A Collect and record production data

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK207 Collect and record production data

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- collecting data as part of the work role or job function
- entering data into specified written or electronic formats
- storing data in the prescribed location and format
- referring to data to complete work activities if necessary
- use of industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- purposes for which the recorded data might be used
- software programs used for recording or storing data
- the enterprise's recording methods
- workplace health and safety in the context of own work.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK208 Provide information on products and services

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide information on products and services in a range of settings.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify information requirements	1.1 Use appropriate interpersonal skills identify customer's information needs 1.2 Handle customer enquiries courteously and promptly 1.3 Update knowledge and understanding of products and services via authoritative sources and appropriate personnel 1.4 Identify personal and professional limitations in addressing

Element	Performance criteria
	customer information needs and seek assistance from appropriate personnel when required 1.5 Follow enterprise work health and safety policies
2. Provide information	2.1 Provide information that addresses customer requirements to customers in a timely and professional manner 2.2 Exhibit product and services that may meet customer requirements to customer as required 2.3 Refer enquiries that fall outside own areas of responsibility and knowledge within enterprise for follow up and completion

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK208A Provide information on products and services.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK208 Provide information on products and services

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- respond to customer requests for information
- use questioning to identify customer requirements
- refer or seek advice from supervisor when required
- engage customer, especially in relation to giving and receiving information
- assess initial customer needs
- access and research product information
- seek assistance as required
- recommend products
- encourage repeat business
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- customer service techniques
- how to effectively engage and communicate with a range of customers
- customer requirements in various rural and horticultural settings
- the enterprise's business values, structure, products and services
- work health and safety in the context of own work.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK209 Participate in environmentally sustainable work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to follow workplace procedures and instructions and to participate in environmentally sustainable work practices.

This unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify current resource use	1.1 Identify workplace environmental and resource efficiency issues 1.2 Identify resources used in own work role 1.3 Document and measure current usage of resources using appropriate techniques

Element	Performance criteria
	1.4 Record and file documentation measuring current usage, using technology (such as software systems) where applicable 1.5 Identify and report workplace environmental hazards to supervisor
2. Comply with environmental regulations	2.1 Follow workplace procedures to ensure compliance 2.2 Report breaches or potential breaches to appropriate personnel
3. Seek opportunities to improve resource efficiency	3.1 Follow organisational plans to improve environmental practices and resource efficiency 3.2 Work as part of a team, where relevant, to identify possible areas for improvements to work practices in own work area 3.2 Make suggestions for improvements to workplace practices in own work area

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK209A Participate in environmentally sustainable work practices

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK209 Participate in environmentally sustainable work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify workplace environmental and resource efficiency issues
- identify and measure resources used in own work role
- record measurements of current usage and filing documentation using appropriate technology
- identify and report workplace environmental hazards to supervisor
- follow workplace procedures to ensure compliance
- report breaches or potential breaches to supervisor
- follow organisational plans to improve environmental practices and resource efficiency
- work as part of a team to identify possible areas for improvements
- use industry standard terminology
- apply work health and safety in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- environmental and resource hazards and risks
- environmental or sustainability legislation, regulations and codes of practice applicable to own work role
- work health and safety issues and requirements applicable to own role
- organisational structure, and reporting channels and procedures
- relevant environmental and resource efficiency systems and procedures
- sustainability in the workplace

- terms and conditions of employment including policies and procedures, such as daily tasks, employee and employer rights, equal opportunity.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK301 Collect samples for a rural production or horticulture monitoring program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to collect samples as part of a rural production or horticulture monitoring program or while conducting post-mortem examination of livestock or other animals.

Samples collected will usually be analysed by laboratory staff, although collection staff may undertake some testing.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Plan for collection of samples	1.1 Confirm the purpose and scope of sample collection activity from discussion with supervisor or work instructions 1.2 Confirm the sample collection schedule with supervisor 1.3 Confirm the sampling site location and gain approval for site access where required 1.4 Identify the samples to be collected and preserved with supervisor 1.5 Assess the range of likely operating conditions, hazards and difficult or sensitive environments for impact on sampling and testing
2. Prepare equipment and resources	2.1 Source equipment required for sampling and preserving as outlined in sampling procedures 2.2 Check equipment for availability and serviceability 2.3 Select and use appropriate personal protective equipment 2.4 Collect data or record sheets or books for use 2.5 Move equipment, data sheets and personnel to sampling sites and prepare for use 2.6 Apply safe work practices at all times
3. Carry out sampling and preserving procedures	3.1 Collect samples as outlined in sampling plan 3.2 Preserve and record samples 3.3 Prepare and package samples for external analysis in line with laboratory standards and send to laboratory 3.4 Package and transport hazardous materials appropriately 3.5 Make observations including information on the surrounding area and environmental conditions 3.6 Report and deliver collection outcomes including presentation of samples
4. Complete sample collection activities	4.1 Clean, sanitise and store equipment and clothing 4.2 Repair damaged or malfunctioning equipment on site or sent to manufacturer or specialist 4.3 Record sampling results and observations on data sheets and forward to appropriate person 4.4 Advise supervisor of changes in field conditions and equipment

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK301A Collect samples for a rural production or horticulture monitoring program

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK301 Collect samples for a rural production or horticulture monitoring program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- plan for collection of samples and moving equipment to the site
- collect and preserve samples for a given site
- record sampling results and observations on data sheets
- carry out sampling procedures
- distinguish atypical circumstances
- prepare samples
- package samples for transport to laboratory
- use and operate relevant tools and equipment
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- hydrological cycle
- field procedures for sampling and preservation
- collecting equipment and methods
- preservation equipment and processes
- basic habitat assessment
- water quality issues
- fauna and flora recognition relevant to sampling activities
- topographical, climatic or environmental influence on material or sampling procedure.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK302 Monitor weather conditions

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to monitor and interpret weather and climate conditions and assess the likely impact on work functions and activity.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Work (WRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Interpret weather and climate information	1.1 Monitor weather and climate information and warnings to determine likely conditions according to workplace procedures 1.2 Anticipate and assess potential variations in weather and climate conditions according to warnings, weather patterns and historical

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>experience</p> <p>1.3 Identify the possible impacts of weather and climate on workplace activity</p> <p>1.4 Identify and review options for appropriate preventative actions</p>
2. Carry out preventative actions within the workplace	<p>2.1 Disseminate information and advice according to workplace procedures</p> <p>2.2 Plan preventative action according to the known effects on workplace activities</p> <p>2.3 Implement actions to minimise adverse effects on workplace activities according to workplace procedures</p> <p>2.4 Adjust and revise workplace activities and schedules according to weather conditions</p>
3. Monitor weather and climate	<p>3.1 Access regular weather updates to determine the ongoing suitability of current programs</p> <p>3.2 Review the viability of management practices and scheduling of work tasks to ensure suitability within weather conditions</p> <p>3.3 Maintain currency of forecasting skills according to workplace procedures and personal requirements</p> <p>3.4 Record weather information according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Analyses and consolidates weather reports, warning and data from a range of sources to interpret for actions
Writing	<ul style="list-style-type: none"> Accurately documents weather warning for dissemination and records weather and climate data according to workplace procedures using appropriate language, grammar and terminology
Numeracy	<ul style="list-style-type: none"> Performs mathematical calculations to interpret and compare weather data

Skill	Description
Learning	<ul style="list-style-type: none"> Plans and implements professional development to maintain weather interpretation and forecasting skills
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for following explicit and implicit policies, procedures
Interact with others	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when disseminating weather warning to co-workers in a range of work contexts
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks and workload Uses familiar digital technologies and systems to access weather information Makes routine decisions and implements standard procedures for tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCWRK302 Monitor weather conditions Release 2	AHCWRK302 Monitor weather conditions Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK302 Monitor weather conditions

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have monitored weather conditions, including:

- monitored and interpreted weather and climate information and considered the impact on work activities and current operations
- interpreted weather and climate conditions to determine preventative actions
- communicated warnings and concerns to others according to workplace procedures
- determined and implemented preventative actions to minimise impact of adverse weather conditions on workplace activities
- monitored ongoing changes to weather conditions and reviewed prevention actions
- reviewed personal currency of skills in weather forecasting and implemented a personal development plan
- recorded weather information according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- weather and climate conditions and its impact upon agriculture, horticulture and conservation activities, including:
 - humidity
 - temperature
 - sunlight light
 - delta T (ΔT)
 - frosts
 - inversions

- dew point
- wind - force and direction
- rainfall - precipitation rate and frequency
- effect of adverse weather conditions on agriculture, horticulture and conservation activities
- strategies to mitigate effects of adverse weather and climatic conditions on agriculture, horticulture and conservation activities
- methods of monitoring and interpreting weather and climatic conditions, including:
 - bureau of meteorology
 - local weather stations
 - weather meters
- enterprise and industry procedures for monitoring weather and climate conditions and recording and reporting
- strategies for maintaining personal development in weather monitoring and forecasting skills.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an agriculture or horticulture or conservation environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - weather stations or weather meter relevant to workplace
 - computer or similar technologies to access weather data
- specifications:
 - workplace procedures, instructions or job specifications relevant to assessing the effects of weather conditions
 - weather reports, warnings and climate data relevant to workplace
- relationships:
 - team members for dissemination of weather warning information.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK303 Respond to emergencies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to recognise and respond to workplace emergencies.

Workplace emergencies may include such incidents as a small fire that can be controlled using a nearby fire extinguisher; or a chemical spill that can be controlled using personal protective clothing and equipment, and a small spill kit; or other workplace accident where there is no significant injury or damage.

Responding to emergencies may also include application of basic first aid to injured persons. A first aid certificate will be required.

All aspects of the unit must be undertaken in line with legislative requirements, workplace policies and procedures, and accepted safe practices

This unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for emergency situations	1.1 Identify potential workplace emergency situations and appropriate responses, within the range of current skills and relevant workplace emergency procedures 1.2 Identify relevant emergency resources and their location in the work area 1.3 Carry out regular checks of the workplace to minimise potential hazards and report any issues 1.4 Select, use and maintain personal protective equipment, safety equipment and other aids as required for emergencies and store properly after use 1.5 Identify problems with the serviceability of the emergency resources and report to relevant people
2. Identify and evaluate the emergency	2.1 Recognise and assess the identified or potential emergency situation and evaluate the risks and effectiveness of initial response actions 2.2 Seek advice in evaluating the emergency with appropriate personnel 2.3 Determine emergency needs and priority, including any assistance that may be required 2.4 Evaluate the potential for further development of the emergency and assess any hazards or risks to staff, clients or animals 2.5 Maintain high standards of hygiene and infection control to reduce the risk of infection or cross infection where necessary
3. Implement fire protection and control procedures	3.1 Minimise the risk of fire hazards and any hazardous fuelling procedures in the workplace 3.2 Use fire extinguishers and equipment appropriate to the fire situation and notify authorities 3.3 Follow procedures for evacuation to nominated assembly points 3.4 Carry out safety procedures for the handling and use of industrial gases
4. Safely confine the emergency where possible	4.1 Confine emergency to the immediate area using available resources within current skill limits 4.2 Carry out emergency procedures and operate equipment using safe practices and as trained 4.3 Coordinate use of equipment with other emergency actions 4.4 Implement strategies for group control, including removal of staff, clients and animals from danger and monitor ongoing

Element	Performance criteria
	condition 4.5 Acquire and document information required to assist emergency services and notify as appropriate 4.6 Amend plan of action to accommodate changes in situational variables
5. Manage the emergency situation	5.1 Evacuate casualties using established emergency procedures 5.2 Minimise the risk to self and casualty's health by isolating the hazard if possible 5.3 Assess vital signs and reassure casualty in a calm and caring manner using available resources 5.4 Provide first aid in accordance with established first aid procedures 5.5 Seek first aid assistance and advice from others where necessary 5.6 Implement organisational procedures and policies in the event of a near miss, major injury or death

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK303A Respond to emergencies

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK303 Respond to emergencies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- evaluate the emergency
- avoid and controlling escalation of the emergency
- develop a plan of action decisively
- implement a plan of action
- render first aid care
- deal with contingencies
- operate emergency equipment according to manufacturer's specifications and training
- use appropriate fire protection and control techniques relevant to the organisation and industry
- apply basic first aid to individuals across a range of incident situations applicable to the job role, organisation or sector
- use industry standard terminology
- apply work health and safety in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the use of safe working practices
- the emergency network and contacts
- enterprise plan and evacuation procedures
- work health and safety legislative requirements and Codes of Practice
- legal responsibilities and duty of care
- use of communications equipment

- organisational and legal policies and procedures in the event of an accident/incident
- local call out procedures to access emergency services personnel
- practical first aid skills using prepared and improvised materials
- the emergency evacuation procedure and assembly point/s
- techniques to emergency response network and procedures to access relevant emergency personnel
- legal responsibilities and duty of care for persons and animals as appropriate to industry and emergency situation
- the proper use and technique for handling industrial gases
- hazard identification and risk assessment techniques and tools relevant to the organisation and industry
- use of communications equipment and protocols in the event of an emergency
- procedures to minimise infection and cross infection
- procedures for dealing with major injury or death prepare for, evaluate and act appropriately in emergency situations.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK304 Respond to rescue incidents

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to respond to emergency and rescue incidents.

Work health and safety requirements should be followed at all times and form part of the planning and response activities.

This unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for response	1.1 Check equipment to ensure availability and serviceability

Element	Performance criteria
	1.2 Obtain task and operational instructions 1.3 Confirm location details of incident 1.4 Select and use personal protective equipment 1.5 Notify local environment conditions
2. Respond to incident	2.1 Travel to incident location in a safe and efficient manner 2.2 Maintain communication with base station and other personnel at all times 2.3 Carry out on site search activities as necessary
3. Rescue is effected	3.1 Assess and monitor incident scene for hazards and appropriateness of planned procedures 3.2 Modify planned procedures where necessary in response to local circumstances 3.3 Provide support to other rescue services as appropriate 3.4 Obtain access to casualties safely 3.5 Operate equipment safely and appropriately 3.6 Communicate the progress of the rescue to appropriate people 3.7 Treat and monitor casualties and move to safety
4. Implement post incident responses	4.1 Recover, clean and service equipment 4.2 Complete documentation 4.3 Report incidents

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK304A Respond to rescue incidents.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK304 Respond to rescue incidents

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- investigate the circumstances and logistics for the emergency
- carry out preparation and move to the rescue site
- assess the situation and establish communication with additional or specialist help
- carry out the required rescue or response to emergency
- implement post incident responses
- use industry standard terminology
- apply workplace health and safety in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- local environmental conditions
- search and rescue methods
- operation and characteristics of rescue equipment, tools and vehicles
- environmental, public health and safety issues
- types of hazards and how they should be handled
- enterprise procedures, legislative and work health and safety requirements
- first aid, life preservation.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK305 Coordinate work site activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to coordinate work site activities for small scale projects.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for work site activities	1.1 Clarify the requirements of the work with supervisor 1.2 Identify personnel, equipment and material resource requirements according to the scope of the project and supervisors instructions 1.3 Identify and document the order of activities and time allocation and present to the supervisor for verification

Element	Performance criteria
	1.4 Identify the environmental implications of the proposed work site activities and assess the likely outcomes and report to supervisor 1.5 Carry out a work health and safety risk assessment 1.6 Select, use and maintain personal protective equipment according to the type of work site activities to be undertaken
2. Organise resources	2.1 Purchase materials and hire equipment and machinery as authorised by the supervisor 2.2 Obtain external agency permits in the correct order as necessary 2.3 Notify neighbours and affected parties of works to be undertaken as necessary 2.4 Organise delivery of materials, equipment and machinery to site as outlined in the order of activities 2.5 Organise personnel to be on site when they are required
3. Coordinate and report on activities	3.1 Coordinate all resources to suit the scope of the project and order of activities 3.2 Direct personnel in activities for each period of work 3.3 Monitor and document personnel, activities, timelines and resource usage 3.4 Identify contingency situations and report to the supervisor and take corrective actions as required 3.5 Write a simple project report to inform management of work site activities undertaken and completed

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK305A Coordinate work site activities.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK305 Coordinate work site activities

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- read and interpreting documentation associated with work site activities
- prepare and planning worksite activities
- calculate material and resource requirements
- schedule activities and allocating tasks and responsibilities
- coordinate a team to achieve optimum performance
- communicate with personnel at all levels
- monitor activities and recording costs and production levels
- document results clearly and concisely
- perform a work health and safety risk assessment
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- environmental awareness associated with undertaking project works to ensure the impact on the environment is minimal
- work schedule programming
- possible causes of disruption to work activities and their effect on quality and time schedules
- responsibilities and requirements for obtaining external agency permits as necessary
- the range, use and availability of materials, equipment and machinery that may be required for the project
- work health and safety issues, legislative requirements and Codes of Practice.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK306 Comply with industry quality assurance requirements

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to comply with industry quality assurance requirements in the production of food, fibre, fuels and raw materials produced from agriculture and horticulture activities.

The unit applies to individuals who work under broad direction and take responsibility for their own work to complete tasks according to quality assurance for food safety, biosecurity, environmental management and/or animal welfare requirements. They use discretion and judgement in the selection and use of available resources and to solve problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Work (WRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Follow quality assurance	1.1 Identify elements of quality assurance applicable to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
practices	industry sector 1.2 Identify hazards to food safety and product quality standards applicable to industry sector 1.3 Determine critical control points for work area 1.4 Complete record keeping according to workplace requirements 1.5 Conduct a safety hazard analysis and risk assessment 1.6 Implement the Hazard Analysis Critical Control Point (HACCP) approach to quality assurance
2. Implement standard operating procedures	2.1 Identify and comply with standard operating procedures according to workplace requirements 2.2 Report non-conformances or defective product according to workplace procedures 2.3 Take corrective action according to procedures
3. Report problems that affect quality	3.1 Identify potential or existing quality problems 3.2 Identify instances of variation in quality from specifications or work instructions 3.3 Report variations and potential problems according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret standards and quality documentation to determine requirements
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format
Navigate the world of work	<ul style="list-style-type: none"> Takes full responsibility for following policies, procedures and industry specific quality standards including HACCP

Skill	Description
Get the work done	<ul style="list-style-type: none"> Contributes to continuous improvement of quality practices by recognising and reporting non-conformances and variations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCWRK306 Comply with industry quality assurance requirements Release 2	AHCWRK306 Comply with industry quality assurance requirements Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK306 Comply with industry quality assurance requirements

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that on at least one occasion the individual has demonstrated the ability to apply quality assurance procedures, including:

- identified elements of quality, food safety hazards and quality standards for an industry sector
- assessed work area for critical control points, safety hazards and risks
- identified and reported issues that impact on product quality
- implemented standard operating procedures for operations and corrective action
- recognised, responded and reported non-conformances and variations of product against quality standards
- completed records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- industry quality assurance requirements for a specified sector of industry
- work processes for specified field of work
- State and territory food safety requirements
- Hazard Analysis and Critical Control Point (HACCP) approach to quality assurance
- procedures, policies, guidelines and standard operating procedures for field of work
- reporting and record keeping requirements for quality assurance.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a primary production or a manufacturing setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - products or services relevant to the specific primary production sector
- specifications:
 - workplace policies and procedures related to quality assurance
 - workplace specifications and/or quality standards relevant to the industry sector
 - access to legislation/codes of practice relevant to quality including HACCP

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK307 Develop and apply fertiliser and soil ameliorant product knowledge

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop and apply fertiliser and soil ameliorant product knowledge.

The unit applies to contractors and employees working in a number of roles within the fertiliser and soil ameliorant industry, including those involved in fertiliser and soil ameliorant spreading or application, warehousing, wholesale and retail sales and transport and the storage of fertilisers and soil ameliorants.

Work is carried out to comply with industry codes of practice, quality assurance requirements, environmental best practices and relevant legislative requirements.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify fertiliser and soil ameliorant products and associated work health and safety, food safety and environmental issues	1.1 Source information about new products and developments continually 1.2 Provide information about fertiliser and soil ameliorant product to customers 1.3 Explain work health and safety, food safety and environmental issues relating to particular products to customers, with particular reference to their safe storage, handling and application 1.4 Identify bulk fertiliser and soil ameliorant products using a combination of visual and physical examination of product characteristics 1.5 Use correct terminology when distinguishing between different products and services 1.6 Maintain biosecurity protocols and quarantine procedures at all times
2. Work with fertiliser and soil ameliorant products	2.1 Identify and apply storage and handling requirements of products consistently 2.2 Identify work health and safety hazards associated with particular products and take appropriate action to minimise risks to self and others 2.3 Identify environmental risks associated with particular products and take appropriate action to minimise any likely risks to self and others 2.4 Select, use and maintain suitable personal protective equipment 2.5 Use inventory and labelling systems to locate products within the workplace or store

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK307A Develop and apply fertiliser and soil ameliorant product knowledge.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK307 Develop and apply fertiliser and soil ameliorant product knowledge

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify fertiliser and soil ameliorant products using information about their characteristics
- provide information to customers about fertiliser and soil ameliorant products
- refer customers to other appropriate sources of information about products
- work safely with products
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- characteristics and key label components (including product analysis, impurities and warnings) of the range of fertiliser and soil ameliorants sold or handled in the workplace
- key environmental, work health and safety and food safety risks associated with the use, spreading, storage, handling and transport of fertilisers and soil ameliorants.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK308 Handle bulk materials in storage area

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to safely receive, move and sample bulk materials in a storage area to minimise loss or damage according to industry standards and storage program.

The unit applies to individuals who work in a bulk storage environment under broad direction and take responsibility for their own work. They use discretion and judgement in the selection and use of available resources and to solve problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Work (WRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to work in bulk materials storage area	1.1 Confirm job requirements according to workplace procedures 1.2 Identify health and safety in the workplace hazards, assess risks and implement control measures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Select, fit, use and maintain suitable personal protective equipment</p> <p>1.4 Select, check and maintain tools and equipment for bulk storage work</p> <p>1.5 Identify environmental implications of undertaking work in the bulk materials storage area, assess likely outcomes and determine action required</p> <p>1.6 Maintain biosecurity protocols</p> <p>1.7 Identify and comply with legislative, regulatory and industry requirements</p>
2. Sample bulk materials for testing	<p>2.1 Take representative samples of bulk material for testing according to workplace procedures</p> <p>2.2 Follow workplace safety procedures when taking samples</p> <p>2.3 Prepare and label representative bulk material samples for dispatch according to workplace procedures</p> <p>2.4 Dispatch samples according to workplace procedures</p>
3. Move bulk materials into and out of storage	<p>3.1 Identify bulk materials for handling and storage according to job requirements</p> <p>3.2 Segregate bulk materials by volume, type, variety and quality characteristics according to workplace specifications</p> <p>3.3 Check and take measures to minimise infestation and contamination of bulk materials during movement according to workplace procedures</p> <p>3.4 Select storage type and handling equipment for each bulk material according to the material characteristics and properties</p> <p>3.5 Implement suitable measures to minimise the effect of product properties on the flow of bulk materials</p> <p>3.6 Operate, clean and store equipment used for bulk storage according to workplace practices and environmental guidelines</p> <p>3.7 Update and store records according to workplace procedures</p>
4. Repair and maintain storage facility	<p>4.1 Identify equipment and facilities requiring repair or maintenance</p> <p>4.2 Conduct maintenance and repairs according to workplace procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.3 Complete maintenance records according to workplace procedures</p> <p>4.4 Clean and maintain work areas according to workplace and environmental guidelines</p> <p>4.5 Report maintenance and repairs, damage, malfunctions or irregular performance for machinery, tools and equipment according to workplace procedures</p> <p>4.6 Clean, maintain and store tools and equipment according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace documentation to determine requirements
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate terminology and in required format
Navigate the world of work	<ul style="list-style-type: none"> Takes responsibility for identifying and following workplace procedures, legislative, regulatory and industry requirements
Interact with others	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with clients and co-workers in a range of work contexts
Get the work done	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising workload Makes routine decisions and implements procedures for tasks, using decision making processes

Unit Mapping Information

Code and title current	Code and title	Comments	Equivalence

version	previous version		status
AHCWRK308 Handle bulk materials in storage area Release 2	AHCWRK308 Handle bulk materials in storage area Release 1	Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK308 Handle bulk materials in storage area

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they can handle bulk materials in storage, including:

- confirmed work instructions for tasks required and bulk materials to be handled according to workplace procedures
- identified work safety hazards and risks, selected and used appropriate personal protective equipment (PPE) and implemented control measures
- prepared and safely used equipment for bulk storage activities
- assessed work implications for the storage environment and determined actions and activity to address possible outcomes
- maintained records for bulk storage, handling and equipment maintenance according to procedures
- identified bulk materials legislative, regulatory and biosecurity implications and implemented appropriate protocols and procedures for compliance
- collected, prepared, labelled and despatched samples of bulk materials for testing according to workplace procedures
- selected appropriate storage type and equipment and moved bulk material in storage area according to required bulk material characteristics
- maintained quality and minimised infestations and contamination of the product
- cleaned, maintained, secured and stored machinery and equipment and related work facilities according to workplace procedures and maintenance requirements
- recognised, reported and rectified operational faults of storage facilities and equipment according to workplace procedures
- applied measures to ensure product flow was maintained.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of materials and their characteristics suitable for bulk storage
- sampling techniques, quality and classification
- common bulk material biological and product contamination and the problems they can cause for storage
- effect of product properties, including contaminants and desiccant dusts, on the flow of the product
- bulk storage legislative requirements, manufacturer's instructions and workplace procedures
- storage operations and configuration
- work place safety requirements for equipment and facilities in a bulk storage environment
- organisation and industry guidelines for segregation of bulk materials and related quality assurance principles
- bulk storage tools and equipment and their operation including:
 - pre-start checks
 - safety checks
 - maintenance requirements
- cleaning and storage of machinery and equipment
- environmental impact associated with bulk storage operations
- safety hazards, and risks associated with bulk storage
- safety risk controls associated with bulk storage, including PPE
- work place recording and reporting procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a bulk storage facility or an environment that accurately represents workplace conditions for the relevant industry sector
- resources, equipment and materials:
 - access to bulk materials
 - tools, equipment and machinery used to handle bulk materials
 - PPE
- specifications:
 - workplace procedures for bulk storage environment operations
 - operating instructions for required tools, equipment and machinery
 - safety data sheets for cleaning products
 - workplace job specifications or client briefs

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK309 Apply environmentally sustainable work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to apply environmentally sustainable work practices.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others.

Work routines meet organisational and compliance requirements for ethical handling and welfare of animals, environmental sustainability, work health and safety, and biosecurity appropriate to the work role.

No licencing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Identify current practices in relation to resource usage and sustainability	1.1 Identify current environmental regulations and associated procedures applying to the workplace 1.2 Identify environmental sustainability policy and procedures applicable to the workplace 1.3 Identify resource usage in the workplace using purchasing and other relevant data 1.4 Access information on impact of resource usage on environmental sustainability 1.5 Conduct a safety hazard analysis and risk assessment
2. Contribute to the review of workplace environmental sustainability practices	2.1 Collect information on environmental sustainability and resource efficiency systems relevant to the workplace 2.2 Review current practices and identify potential areas for improvement 2.3 Seek suggestions and ideas from stakeholders to improve the management of the environment and resource efficiency 2.4 Contribute to development of tools or resources to help make improvements in the workplace, using collected information 2.5 Communicate proposed improvements to management
3. Apply improvement strategies	3.1 Use appropriate techniques and tools to assist in achieving efficiencies and environmental targets 3.2 Apply life cycle management principles 3.3 Apply strategies to minimise waste and employ recycling, re-use or re-purposing where appropriate 3.4 Apply strategies to minimise environmental risks and impacts
4. Record and report on work practices	4.1 Use monitoring and evaluation tools and technology where available 4.2 Record incidents where sustainability policy and procedures have been breached 4.3 Record and report on progress against resource efficiency and environmental targets 4.4 Provide feedback to management on environmental sustainability review and improvement process 4.5 Promote organisational improvement strategies

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCWRK313A Implement and monitor environmentally sustainable work practices. No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK309 Apply environmentally sustainable work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify current procedures and practices related to environmental regulations
- identify current procedures and practices related to minimising impact of resource usage on environment
- make contributions to the review of environmental sustainability procedures and practices through research and development of tools or techniques
- use appropriate techniques and tools to assist in achieving resource efficiencies and environment targets
- use communication skills to:
 - convey proposed improvements
 - provide feedback on improvement processes
 - promote organisational improvement strategies
- apply life cycle management principles in strategies to improve resource usage, reduce waste, employ recycling, re-use, or re-purposing, and to minimise environmental risks and impacts
- use tools and technology to monitor effectiveness of improvement strategies, and incidents that breach sustainability policy and procedures
- record and report on progress against resource efficiency and environmental targets.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- basic environmental sustainability principles
- environmental legislation, regulations, standards, codes of practices as may be relevant to industry sector and workplace

- relevant internal and external sources of information that can be used to identify sustainability improvements
- common environmental and energy efficiency issues within the industry
- environmental hazards and risks associated with the relevant industry sector
- organisation's sustainability work policies and procedures
- principles of resources efficiency and life cycle management
- practices for disposal or recycling of waste associated with relevant industry sector
- organisation's recording and reporting systems.

Assessment Conditions

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK310 Provide on-job training support

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to provide on-job training support.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify needs for on-the-job training support	1.1 Determine training needs in consultation with supervisor and employee or trainee 1.2 Obtain agreement on the extent and scope of training support to be provided with the supervisor 1.3 Define outcomes from training prior to commencement

Element	Performance criteria
	1.4 Clarify methods of providing on-job training support and obtain agree from supervisor
2. Support on-the-job training	2.1 Confirm training outcomes with the learner 2.2 Deliver training as directed and in accordance with workplace procedures and relevant legislation 2.3 Practice opportunities are provided to re-enforce the training
3. Provide follow-up and support to learner	3.1 Opportunities to apply competencies on-the-job are provided 3.2 Constructive feedback and coaching are provided to assist learning 3.3 Feedback of employee's progress is given to the supervisor in the workplace

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK310A Provide on-job training support.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK310 Provide on-job training support

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and providing a safe learning environment
- determine training needs and required outcomes
- deliver training in work skills
- identify needs for on-the-job training support
- provide follow-up and support to learner
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- adult learning principles
- setting up on-job training support
- approaches to on-job training support
- resources required for on-job training support
- reviewing and reporting on on-job training support
- work health and safety issues related to on-job training support.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK311 Conduct site inspections

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to conduct a site inspection, including verification of the location, ownership, orientation and boundaries of a site.

This unit applies to individuals who work under broad direction and take responsibility for their own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Collect information	1.1 Obtain site location and relevant details 1.2 Source site maps and plans where available and review 1.3 Identify the scope of inspection in line with client-stakeholder needs and local regulations

Element	Performance criteria
	1.4 Determine climate and weather conditions from historical data 1.5 Seek formal approval is sought to visit site where required 1.6 Identify and record covenants 1.7 Check remote sensing systems for status
2. Prepare for a site visit	2.1 Identify and prepare requirements for inspection 2.2 Plan methods for recording inspection and confirm forms are available for use 2.3 Evaluate the scope of proposed work and prepare field notes to checklist specific concerns 2.4 Evaluate environmental conditions in preparation for likely site conditions 2.5 Consider traffic management requirements where required
3. Conduct site inspection	3.1 Carry out site orientation and verify ownership and site boundaries 3.2 Identify site hazards for a site inspection, assess risks and implement appropriate control measures 3.3 Identify, estimate and record site dimensions and gradients 3.4 Identify soil types from soil identification reference chart guidelines 3.5 Test soil samples in the field and record detailed notes for analysis of potential problems 3.6 Inspect relevant vegetation to determine the identity, health, condition and location 3.7 Investigate observable signs of fauna 3.8 Identify and record existing on-site services and adjacent site features
4. Document information	4.1 Prepare a base plan of the site 4.2 Document site inspection information in an inspection or site inventory report or on the base plan if required 4.3 Complete documents and forward to client or supervisor

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK311A Conduct site inspections.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK311 Conduct site inspections

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify a wide range of vegetation common to the region
- recognise plant health problems and defects
- perform hazard identification and risk control procedures
- conduct soil field tests
- estimate dimensions and gradients
- report findings to the client or supervisor
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- plan and map interpretation
- soil pH, texture, structure and type
- plant identification and plant physiology
- measuring and estimating methods
- current land use and environmental threats to site hazards associated with undertaking site inspections
- protocols of accessing and visiting a site
- relevant legislative and regulatory requirements including environmental protection legislation
- local government regulations relating to the proximity of trees to buildings, services and roads
- local tree protection and preservation regulations

- relevant Codes of Practice.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK312 Operate in isolated and remote situations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to plan, prepare for and work safely in isolated and remote situations.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Work (WRK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan for operating in remote environments	1.1 Collate and record information relating to the operating environment and location 1.2 Establish detailed operating plans for work, travel, emergencies, timeframes and contingencies with supervisor 1.3 Notify appropriate authorities of the action plans and time schedules according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Identify and source relevant maps</p> <p>1.5 Conduct a risk assessment for possible health, safety and environmental hazards for remote location</p>
2. Prepare for operating in remote environments	<p>2.1 Prepare personal needs for remote situation according to plan</p> <p>2.2 Prepare transportation and equipment required for prescribed work according to workplace procedures</p> <p>2.3 Obtain and review relevant maps prior to departure to orient and plan route</p> <p>2.4 Record planned activities and itinerary prior to departure according to workplace procedures</p> <p>2.5 Identify weather conditions and assess effect on travel and operating outcomes</p>
3. Prepare for emergency situations	<p>3.1 Ensure that provisioning complies with expected operational and emergency requirements</p> <p>3.2 Monitor available provisions and resources to ensure appropriate usage according to operating plan</p> <p>3.3 Identify personal gaps in remote area survival skills and arrange training prior to departure</p> <p>3.4 Ensure emergency management operational plans are applied according to workplace policies</p>
4. Operate in remote environment	<p>4.1 Complete activities according to instructions within time schedules according to work instructions</p> <p>4.2 Use appropriate skills to modify the living environment according to prevailing conditions</p> <p>4.3 Carry out activities in remote situations according to prescribed plans and procedures</p> <p>4.4 Use appropriate technologies to maintain communication according to workplace procedures</p> <p>4.5 Handle emergency situations according to prescribed plans and procedures</p> <p>4.6 Comply with workplace reporting procedures on return to base</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Reads and interprets symbols and features on maps to determine special awareness
Oral Communication	<ul style="list-style-type: none"> Uses clear language and concepts, and tone and pace appropriate for discussions with supervisor when planning and reporting
Learning	<ul style="list-style-type: none"> Demonstrates awareness of learning strengths and areas of need and applies a limited range of learning strategies to developing remote area survival skills
Navigate the world of work	<ul style="list-style-type: none"> Understands roles and responsibilities for task and makes basic decisions on work completion parameters Complies with explicit policies and procedures
Interact with others	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with co-workers
Get the work done	<ul style="list-style-type: none"> Plans and implements routine tasks and workload making limited decisions on sequencing, timing and collaboration, seeks assistance in setting priorities Responds to predictable routine problems and implements standard solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCWRK312 Operate in isolated and remote situations	AHCWRK203 Operate in isolated and remote situations	Minor changes to Performance Criteria for clarity Code changed to reflect AQF alignment Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK312 Operate in isolated and remote situations

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that on at least one occasion the individual has demonstrated that they have operated in an isolated and remote environment, including:

- planned and prepared for operating in remote environments in conjunction with supervisor
- conducted a risk assessment for health, safety and environmental hazards for remote location
- prepared and implemented procedures for emergency situations
- sourced and interpreted maps of the remote area
- conducted work activities safely in a remote environment
- implemented workplace communication procedures to notify location, activities and travel to appropriate personnel
- prepared and monitored provisions and resources for essential and emergency needs
- used bushcraft skills to modify the living environment and reduced risks
- maintained records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- planning and preparations required for working in isolated environments
- map reading and navigation skills, including:
 - direction finding; GPS, compass, astronavigation
 - local topography
 - habitation
 - geographic indicator
- basic survival and bushcraft skills to maintain human needs in survival situations, including:
 - making a fire

- cooking
- distress signalling
- basic rope skills and useful knots
- personal protective clothing requirements for adverse weather conditions
- basic first aid procedures for common injuries
- emergency vehicle and mechanical equipment repair
- communication procedures and operation and maintenance of communications equipment, including:
 - field communications by two-way radio
 - satellite telephony
 - HF radio
- work health and safety in the context of work in isolated and remote situations
- environmental impacts of work in isolated and remote situations including weather patterns and indicators.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an isolated environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - provisions and resources required for an isolated worksite
 - tools and equipment for work activities
 - personal protective equipment for use in isolated working environments
- specifications:
 - workplace documents including policies, procedures, processes, instructions and job specifications
 - manufacturers' operating instructions for specific communications and navigational equipment
- relationships:
 - supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK401 Implement and monitor quality assurance procedures

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to implement and monitor quality assurance procedures.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Establish quality specifications for product	1.1 Source market specifications 1.2 Identify legislated requirements

Element	Performance criteria
2. Identify hazards and critical control points in the production of quality product	2.1 Identify critical control points impacting on quality 2.2 Determine the degree of risk for each hazard
3. Assist in planning of quality assurance procedures	3.1 Develop procedures for each identified control point to ensure optimum quality 3.2 Minimise hazards and risks by application of appropriate controls 3.3 Develop processes to monitor the effectiveness of quality assurance procedures
4. Implement quality assurance procedure	4.1 Allocate responsibilities for carrying out procedures to staff and contractors 4.2 Prepare instructions 4.3 Provide staff and contractors with induction training on the quality assurance policy 4.4 Provide staff and contractors with in-service training relevant to their allocated procedures

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK401A Implement and monitor quality assurance procedures.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK401 Implement and monitor quality assurance procedures

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify hazards and critical control points in the production of quality product
- assist in planning of quality assurance procedures
- provide induction and in-service staff training
- implement quality assurance procedures
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- market requirements for product
- definition of quality
- quality specifications for product
- enterprise and industry quality assurance systems
- Hazard Analysis and Critical Control Points (HACCP) techniques
- strategies for control of hazards to quality
- work place training strategies
- delegation and empowerment
- contingency management.

Assessment Conditions

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK402 Provide information on issues and policies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to research, extract and provide information on issues and policies.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Process a request for information on issues and policies	1.1 Document the request using the appropriate recording system 1.2 Record relevant notes from dialogue with the client and from correspondence 1.3 Seek and obtain approval to access information and forward requests where appropriate

Element	Performance criteria
	1.4 Listen actively to the client and question appropriately to clarify and elicit information 1.5 Follow enterprise work health and safety policies
2. Identify sources and extract information	2.1 Identify, access and research relevant sources and locations of information 2.2 Provide clear sequenced verbal instructions to colleagues who require assistance 2.3 Evaluate workplace policies and documentation relevant to the request 2.4 Locate and extract information relevant to the particular request 2.5 Use alternative methods to locate identified gaps in information
3. Evaluate information for meeting client request	3.1 Evaluate information for its validity and reliability and appropriateness to the client request 3.2 Engage client in effective dialogue to clarify indistinct or incorrect information 3.3 Obtain additional information if available information is inadequate, unclear, conflicting or incorrect
4. Prepare and finalise report	4.1 Develop, write, format and proof read report 4.2 Check report for accuracy and intention 4.3 Arrange report's review and sign off with designated person where required 4.4 Make a record of report and correspondence 4.5 Forward report and correspondence to client

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK402A Provide information on issues and policies.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK402 Provide information on issues and policies

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- process a request for information
- access information to respond to a request
- collate information to deal specifically with the request
- prepare a response using chosen media
- maintain a record of the information provided and file for future reference
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- workplace policies and documentation on local, regional, state and national issues
- relevant workplace documentation on international treaties, agreements and charters
- types of information sources
- methods and means of accessing and extracting the required information
- methods of validating information
- types of reports and their uses.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK403 Supervise work routines and staff performance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to supervise work routines and staff performance.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Communicate work roles	1.1 Define and document the roles and responsibilities of staff 1.2 Identify the skills of staff and match with available tasks and duties 1.3 Identify the requirements of jobs and communicate to personnel 1.4 Develop information on activities and provide to personnel

Element	Performance criteria
	1.5 Implement work health and safety policy and procedural requirements for supervisors
2. Coordinate activities	2.1 Prioritise work activities to ensure completion of tasks within available timelines 2.2 Develop work plans to establish targets and objectives of activities, and to define tasks and timelines 2.3 Identify training and learning opportunities and incorporate into work activities 2.4 Clarify supervisory and reporting responsibilities and maintain 2.5 Implement enterprise environmental policy and procedures for supervisors
3. Maintain effective working relations	3.1 Recognise and address problems through discussion with work group 3.2 Seek assistance from work group members when difficulties arise in achieving allocated tasks 3.3 Use discussion and information sharing routinely to communicate requirements of work activities through a participative approach 3.4 Manage disagreements and conflicts constructively using appropriate conflict management strategies
4. Provide feedback	4.1 Provide clear and constructive feedback to individuals to support achievement of outcomes 4.2 Identify difficult situations and use negotiation techniques to achieve results 4.3 Monitor team and individual performances regularly to ensure personnel are able to achieve goals 4.4 Maintain supervisory structures and lines of reporting

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK403A Supervise work routines and staff performance.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK403 Supervise work routines and staff performance

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- supervise and instruct staff to achieve work activities
- delegate and allocate tasks
- assess and evaluate staff capability
- identify and provide training requirements
- plan timesheets and timetables to meet deadlines
- demonstrate safe workplace and environmentally responsible practices
- solve staffing and resourcing problems
- evaluate performance, provide feedback and prepare reports and performance appraisals
- promote and maintain effective relationships between staff
- monitor productivity and maintain staff records as required
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- enterprise personnel processes
- enterprise organisational structure and responsibilities
- techniques for building trust and relationships
- principles of team work and negotiation
- leadership for the work team
- performance appraisal systems and procedures
- principles of time management
- conflict management techniques

- enterprise training requirements and processes
- relevant State and Territory legislation, regulations and Codes of Practice with regard to work health and safety, environmental protection and employment
- work health and safety hazard identification, risk assessment and development of risk controls.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK405 Implement and monitor environmentally sustainable work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to effectively analyse the workplace in relation to environmentally sustainable work practices and to implement improvements and monitor their effectiveness.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters. They provide and communicate solutions to a range of predictable and sometimes unpredictable problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Investigate current practices in relation to resource usage	1.1 Identify environmental regulations applying to the enterprise 1.2 Analyse procedures for assessing compliance with environmental and sustainability regulations

Element	Performance criteria
	<p>1.3 Collect information on environmental and resource efficiency systems and procedures, and provide to the work group where appropriate</p> <p>1.4 Collect, analyse and organise information from a range of sources to provide information, advice, tools and resources for improvement opportunities</p> <p>1.5 Measure and document current resource usage of members of the work group</p> <p>1.6 Analyse and document current purchasing strategies</p> <p>1.7 Analyse current work processes to access information and data to assist in identifying areas for improvement</p> <p>1.8 Follow enterprise work health and safety policies</p>
<p>2. Set targets for improvements</p>	<p>2.1 Seek input from stakeholders, key personnel and specialists</p> <p>2.2 Access external sources of information and data as required</p> <p>2.3 Determine alternative solutions to workplace environmental issues</p> <p>2.4 Set efficiency targets</p>
<p>3. Implement performance improvement strategies</p>	<p>3.1 Source and use appropriate techniques and tools to assist in achieving efficiency targets</p> <p>3.2 Apply continuous improvement strategies to own work area of responsibility, including ideas and possible solutions to communicate to the work group and management</p> <p>3.3 Implement and integrate environmental and resource efficiency improvement plans for own work group with other operational activities</p> <p>3.4 Supervise and support team members to identify possible areas for improved practices and resource efficiency in work area</p> <p>3.5 Seek suggestions and ideas about environmental and resource efficiency management from stakeholders and act upon where appropriate</p> <p>3.6 Implement costing strategies to fully value environmental assets</p> <p>3.7 Implement efficient supply chain procedures</p>
<p>4. Monitor performance</p>	<p>4.1 Use and develop evaluation and monitoring, tools and technology</p> <p>4.2 Document and communicate outcomes to report on efficiency targets to key personnel and stakeholders</p> <p>4.3 Analyse strategies and improvement plans</p> <p>4.4 Set new efficiency targets, and investigate and apply new tools and strategies</p> <p>4.5 Promote successful strategies and reward participants where possible</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK313A Implement and monitor environmentally sustainable work practices.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK405 Implement and monitor environmentally sustainable work practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify the environmental regulations applicable to the enterprise
- analyse information on environmental and resource efficiency systems and explain it to the work group
- measure and document current resource use
- analyse current work processes to identify areas for improvement
- set targets for improvement
- implement environmental improvement plans for own work group
- develop and use evaluation and monitoring tools
- apply supervisory skills to work effectively with a team
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant compliance requirements in own area of work
- hazards and risks associated with work area
- environmental and energy efficiency issues, systems and procedures specific to industry practice
- external benchmarks and support for particular benchmarks to be used within enterprise, including approaches to improving resource use for work area and expected outcomes
- work health and safety issues and requirements
- organisational structure and reporting channels and procedures
- quality assurance systems relevant to own work area

- strategies to maximise opportunities and to minimise impact relevant to own work area
- supply chain procedures
- terms and conditions of employment including policies and procedures, such as daily tasks, work area responsibilities, employee, supervisor and employer rights, equal opportunity.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK502 Collect and manage data

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to collect, analyse and manage data.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in a specific technical area and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

Element	Performance criteria
1. Determine the type and extent of data to be collected	1.1 Define data requirements and communicate to all staff involved in data collection 1.2 Identify relevant data sources 1.3 Define the type and extent of data required 1.4 Identify work health and safety hazards associated with data collecting 1.5 Define data collection methods and techniques relative to data requirements
2. Access and collate data	2.1 Format data collection sheets to assist collection 2.2 Research or collect data from field source 2.3 Collate data by appropriate electronic means 2.4 Monitor appropriateness of data and record during collection 2.5 Research information using appropriate methods and technologies 2.6 Review sources of information regularly for usefulness, validity, reliability and cost 2.7 Use channels and sources of information effectively 2.8 Take opportunities to establish and maintain contacts with those who may provide useful information 2.9 Follow appropriate work health and safety requirements and work practices
3. Evaluate data	3.1 Collect data that is relevant, valid and sufficient 3.2 Seek clarification and assistance where data is unclear or difficult to interpret 3.3 Obtain additional data where data is inadequate 3.4 Analyse information for its validity and reliability
4. Manage and retrieve data	4.1 Store data by appropriate electronic means 4.2 Present data using appropriate graphical aids and techniques 4.3 Assemble data and provide to the manager or client as required 4.4 Retrieve data as required 4.5 Suggest and introduce new methods of recording and storing data as needed
5. Analyse and interpret data	5.1 Analyse data using appropriate statistical and analytical techniques 5.2 Interpret data to determine its significance, validity and reliability 5.3 Report findings based on the analysis and interpretation of the data 5.4 Organise data into a suitable report format to aid decision making

Element	Performance criteria
	5.5 Ensure conclusions drawn are based on reasoned argument and appropriate evidence

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK502A Collect and manage data.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK502 Collect and manage data

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify data requirements and establish sampling and data collection techniques
- collect and collate data using standardised recording sheets and systems
- review sampling and data collection techniques based on validity and reliability of the data
- manage data to facilitate retrieval and analysis
- analyse data using appropriate statistical and analytical techniques
- draw conclusions based on reasoned argument and appropriate evidence
- produce a report in required format with information and data presented to support decision making
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- data collection techniques and procedures
- data recording and evaluation techniques
- data analysis and interpretive techniques
- data storage and retrieval methods
- data reporting methods.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK504 Assess new industry developments

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to assess new developments of enterprises and of the industry sector as a whole.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in a specific technical area and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Analyse the industry sector	<p>1.1 Develop and maintain knowledge of own and related industry sectors, products, equipment, supply chain, organisations, people, resource management processes and policies, work practices, legislation and regulations</p> <p>1.2 Identify and undertake opportunities for participation in relevant</p>

Element	Performance criteria
	<p>organisations</p> <p>1.3 Identify and access likely sources of credible information as required</p> <p>1.4 Recall and apply relevant historical events, sensitivities and positions of people involved</p> <p>1.5 Analyse state, territory, national and international issues for their relevance to the industry and impact on the enterprise</p>
2. Assess new developments for impact on enterprises and industry sector	<p>2.1 Source industry research and development information and evaluate for relevance</p> <p>2.2 Evaluate risks and opportunities of new developments in industry processes, technologies and quality and environmental requirements</p> <p>2.3 Identify emerging stakeholders and interest groups and assess for their potential benefit or impact on the enterprise and industry sector as a whole</p> <p>2.4 Analyse trends in production, marketing, resource management and research</p> <p>2.5 Identify potential impacts of proposed government initiatives and assess for significance</p> <p>2.6 Assess success and failure of relevant or related initiatives in other industries or enterprises for their relevance</p> <p>2.7 Monitor changing community and customer beliefs, attitudes and expectations</p> <p>2.8 Follow enterprise work health and safety policies</p>
3. Report on new developments	<p>3.1 Integrate evaluated research information in the enterprise or industry sector planning processes</p> <p>3.2 Share research information with others and explore and encourage opportunities for cooperative approaches</p> <p>3.3 Consider implications for use of research information in a wider context with other producers, associates or colleagues</p> <p>3.4 Prepare a report on new industry developments</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK504A Assess new industry developments.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK504 Assess new industry developments

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- critically evaluate information and research findings of relevance to enterprises and industry sector
- integrate research and development into enterprise planning
- evaluate the potential of research proposals with other producers, associates or colleagues
- document a report on new industry developments
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- appropriate avenues to disseminate industry sector information to a range of stakeholders
- correct names and terminology relevant to one's industry sector
- credible sources of information
- key industry development and promotion programs relevant to one's industry sector
- roles and responsibilities of stakeholders and organisation's relevant to own industry sector
- supply chain for industry sector enterprises.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK507 Implement professional practice

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to apply ethical standards in dealing with clients, contractors and other stakeholders and conducting business contracts to the required standard.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in a specific technical area and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Investigate and analyse business structures and working practices	1.1 Define the roles and responsibilities of the job role 1.2 Define the roles of various personnel working in a business practice or organisation 1.3 Formulate a range of management approaches and methodologies

Element	Performance criteria
	suitable for business development
2. Develop legal, professional and ethical responsibilities working in industry	2.1 Develop methods of sourcing policies, regulations and standards relevant to a project 2.2 Observe the legal and ethical responsibilities of the job role 2.3 Identify and describe legislation governing protection of intellectual property in Australia and internationally 2.4 Identify issues that need to be addressed when entering into a client and practitioner agreement 2.5 Undertake a range of contracts and agreements used in the industry and demonstrate their application 2.6 Implement the ethical and legal responsibilities in expert witness roles, provision of legal evidence and provision of expert advice 2.7 Apply enterprise work health and safety policies
3. Evaluate and reflect upon own practice	3.1 Demonstrate and promote sustainable practices in own work and the work of others 3.2 Analyse own work to identify influences, style, market relevance and quality in conjunction with supervisors or peers 3.3 Seek feedback actively and accept non defensively
4. Develop a professional practice plan to meet professional goals	4.1 Develop personal and professional goals and objectives 4.2 Identify strengths and weaknesses in relation to goals and objectives 4.3 Evaluate own capacity to meet goals and objectives 4.4 Develop a professional development plan to enhance professional capabilities 4.5 Document a professional practice plan designed to support the achievement of goals
5. Operate within an agreed ethical code of practice/ethics	5.1 Assess own practice against identified objectives or code of ethics using a range of valid evidence 5.2 Identify the effect of values, beliefs and behaviour in work with clients 5.3 Build client relationships in accordance with identified objectives or code of ethics 5.4 Establish realistic goals and targets for self development

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK507A Implement professional practice.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK507 Implement professional practice

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- investigate and analyse business structures and working practice
- develop legal, professional and ethical responsibilities working in an industry
- evaluate and reflect on own work practice
- develop a professional practice plan to meet professional goals
- operate within an agreed ethical code of practice and ethics
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- typical business management structures
- issues of professional practice for the job role
- team roles, responsibilities and accountabilities
- legislation, ethical and financial considerations
- legislation covering protection of copyright and intellectual property
- local and international professional organisations relevant to the industry
- workplace occupational health and safety policies and procedures
- understanding of relevant theories, principles, practices and their application and other aspects of knowledge, desirable or necessary in order to practise effectively within the industry
- expert witness roles and processes
- personal goal setting strategies
- measuring performance

- time management strategies
- marketing principles
- professional practice considerations
- communication principles
- strategies for promoting awareness of a product.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK508 Interpret legislation

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to interpret and apply legislation.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in a specific technical area and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine applicable legal framework	1.1 Identify and access current legislation, regulations, organisational procedures, standards and codes of practice affecting the workplace, industry, occupation or client 1.2 Determine legal accountability obligations in relation to workplace, industry, occupation or client

Element	Performance criteria
	1.3 Identify consequences of non-compliance with legislation, regulations, organisational procedures, standards and codes of practice
2. Research, interpret and apply appropriate legislation	2.1 Monitor sources of information for changes to the legal framework 2.2 Regularly update and communicate information and changes to legal framework components which impact on work activities
3. Promote compliance with relevant legislation	3.1 Access current information about the range of legislation and other legally binding policies and protocols relating to own work 3.2 Clarify compliance requirements to confirm understanding and ensure consistency of interpretation and application 3.3 Obtain advice to assist in applying relevant legislation to own work and identifying compliance requirements 3.4 Identify areas of uncertainty in own work related to compliance requirements and take action to clarify issues 3.5 Identify possible implications of non-compliance and use these to guide own work practices
4. Assess situations which may potentially present legal problems and issues	4.1 Identify and document details of suspected or actual incidences of illegal conduct by self or others in the workplace 4.2 Contribute to ongoing monitoring and compliance with legal framework 4.3 Ensure that work is undertaken in a legally compliant manner 4.4 Recognise limits of own expertise, legal accountability obligations and access appropriate sources of expertise as required 4.5 Assess conduct of self and others in the workplace against specific components of the legal framework applicable to the workplace 4.6 Take appropriate actions to resolve or report illegal conduct, as required by applicable legislation, regulations, organisational procedures, standards and codes of practice

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK508A Interpret legislation

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK508 Interpret legislation

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- determine legislation and legal framework applicable to task
- research, interpret and apply appropriate legislation
- promote compliance with relevant legislation
- assess situations which may potentially present legal problems and issues
- maintain knowledge of legal frameworks and relevant legislation
- develop and implement strategies to manage compliance with appropriate legislation
- provide advice and documentation regarding applicable legislation, regulations, organisational procedures and codes of practice
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- the provisions contained in key relevant legislation and other legally binding legal policies and protocols from all levels of government that affect the relevant industry
- relevant Australian Standards
- organisational policies and procedures relating to legislation in organisation's functional area
- penalties for non-compliance with legislative requirements
- auditing requirements
- work health and safety requirements applicable to own work and functional area
- the scope of legal practitioner and support role and own responsibilities and obligations to provide legal advice, complete or sign off on legal work and appear in court as described by relevant jurisdictions
- how to encourage and support own compliance and that of others in the workplace

- relevant conventions, treaties, agreements, guidelines, declarations, recommendations, laws and rules
- how to apply legal information to the workplace
- techniques to monitor compliance and identify illegal conduct
- where to find appropriate sources of information and specialist personnel when limits of own expertise are reached in determining applicable legislation
- accepted codes of practice relevant to the workplace including those relating to:
 - privacy and confidentiality
 - use of company property
 - duty of care
 - ethical behaviour
 - non-discriminatory practice
 - conflict of interest
 - compliance with reasonable direction
 - relevant general legal terminology.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK509 Provide specialist advice to clients

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to maintain technical currency for specialist knowledge and provide specialist advice to clients.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in a specific technical area and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop and maintain specialist knowledge	<p>1.1 Use research skills regularly to build a comprehensive knowledge and understanding of specialist information from industry and other sources</p> <p>1.2 Identify characteristics of industry practices, products and services and analyse using available documentation</p>

Element	Performance criteria
	1.3 Document information and maintain in a format consistent with enterprise requirements 1.4 Apply acquired knowledge to improve quality within personal work areas 1.5 Identify legislative, regulatory and industry requirements relating to own work
2. Consult with clients	2.1 Conduct consultation with clients in a professional and courteous manner at all times 2.2 Use appropriate interpersonal skills to facilitate accurate and relevant exchange of information 2.3 Use work practices that reflect sensitivity to client's requirements, specific needs and cultural, family and individual differences
3. Provide a response to client enquiries and need	3.1 Prepare information relevant to client's needs 3.2 Use research skills to find verifiable evidence in support of information and document in the appropriate format 3.3 Structure information to identify clear benefits to clients and the organisation 3.4 Document and present information in a professional format and style to the client for consideration and discussion 3.5 Evaluate client feedback by survey to improve future provision of technical information and professional services

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK509A Provide specialist advice to clients

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK509 Provide specialist advice to clients

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- develop and maintain industry wide specialist knowledge
- provide a professional service to client enquiries and needs
- show discretion and judgement in stakeholder interaction
- implement professional practice in stakeholder consultation and report documentation
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- products, treatments services of the industry
- environmental sustainability and land use issues relevant to the industry
- enterprise policy and procedures for customer service including handling customer complaints
- service standards and best practice models
- strategies for planning and monitoring activities
- consultation methods, techniques and protocols
- current enterprise, government and local council policy, legislation and regulations
- mechanisms to obtain and analyse customer feedback.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK510 Audit site operations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to audit site operations.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in a specific technical area and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine the scope of the audit	1.1 Prepare objectives and scope of the audit 1.2 Confirm expectations of client or organisation 1.3 Determine the pattern of random or non-random audit events 1.4 Identify individual and personal actions for audit requirements 1.5 Identify groups and processes for audit for audit requirements

Element	Performance criteria
	1.6 Prepare a list of audit items 1.7 Identify legislative, regulatory and industry requirements for audit
2. Specify the audit requirements	2.1 Identify and document precise parameters of acceptable conditions and results 2.2 Describe the relevant sections of Codes of Practice and specific clauses in Australian Standards 2.3 Communicate written guidelines to the audited group and individual staff members 2.4 Provide detailed information to audit groups in a durable format for working conditions
3. Define the audit process	3.1 Determine and assign responsibilities for audit implementation and evaluation 3.2 Determine the timing and frequency of the audit events of audit events 3.3 Confirm schedules and logistical arrangements and plan contingency arrangements 3.4 Confirm expectations with the audited group and individual staff members 3.5 Document audit process and communicate to appropriate people
4. Manage the audit implementation	4.1 Organise an audit meeting in advance at a mutually agreed time 4.2 Examine the activities of audited group and individual staff members 4.3 Identify and record items of compliance and non compliance 4.4 Interview appropriate persons for detailed information, clarification and feedback 4.5 Gather and record relevant information and sample documentation 4.6 Take contingency actions as required and record
5. Evaluate and document the audit findings into a report	5.1 Examine results and findings against audit objectives and present to the audited group or individual 5.2 Seek and reach agreement on corrective action reports 5.3 Explain and discuss context and consequences of audit during follow-up meetings 5.4 Provide feedback on results to client or organisation 5.5 Document the final audit report and present to client or organisation

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK510A Audit site operations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK510 Audit site operations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- identify client or organisation expectations
- determine the scope of items for audit
- specify parameters of audit requirements
- define the audit process
- identify compliance and noncompliance items
- implement an audit
- manage the implementation of audits
- plan for and act on contingencies
- evaluate audit findings
- organise scheduling and meetings
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- audit methodology and techniques
- product or service
- quality principles and techniques
- interview techniques
- workplace documentation and policies
- logistics of operations of organisation
- legal issues and terminology relating to quality auditing
- award and enterprise agreements and relevant industrial instruments
- relevant legislation and regulations from all levels of government

- relevant codes of practice, regulations and Standards.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK511 Develop workplace policy and procedures for sustainability

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop workplace policy and procedures for sustainability.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They demonstrate deep knowledge in a specific technical area and analyse, design and communicate solutions to sometimes complex problems.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop workplace sustainability policy	1.1 Define scope of sustainability policy 1.2 Gather information from a range of sources to plan and develop policy 1.3 Identify and consult stakeholders as a key component of the

Element	Performance criteria
	<p>policy development process</p> <p>1.4 Include appropriate strategies in policy at all stages of work for minimising resource use, reducing toxic material and hazardous chemical use, and employing life cycle management approaches</p> <p>1.5 Make recommendations for policy options based on likely effectiveness, timeframes and cost</p> <p>1.6 Develop policy that reflects the organisation's commitment to sustainability as an integral part of business planning and as a business opportunity</p> <p>1.7 Agree to appropriate methods of implementation</p> <p>1.8 Identify legislative, regulatory and industry requirements relating to environmental sustainability, employment conditions and work health and safety</p>
2. Communicate workplace sustainability policy	<p>2.1 Promote workplace sustainability policy, including its expected outcome to key stakeholders</p> <p>2.2 Inform those involved in implementing the policy as to outcomes expected, activities to be undertaken and responsibilities assigned</p>
3. Implement workplace sustainability policy	<p>3.1 Develop and communicate procedures to help implement workplace sustainability policy</p> <p>3.2 Implement strategies for continuous improvement in resource efficiency</p> <p>3.3 Establish and assign responsibility to use recording systems for tracking continuous improvements in sustainability approaches</p>
4. Review workplace sustainability policy implementation	<p>4.1 Document outcomes and provide feedback to key personnel and stakeholders</p> <p>4.2 Investigate successes or otherwise of policy</p> <p>4.3 Monitor records to identify trends that may require remedial action and use to promote continuous improvement of performance</p> <p>4.4 Modify policy and or procedures as required to ensure improvements are made</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK511A Develop workplace policy and procedures for sustainability

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK511 Develop workplace policy and procedures for sustainability

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- participate in planning, development and implementation of organisational policy that complies with legislative requirements
- communicate with stakeholders to discuss approaches to policy development and implementation and contribute to the resolution of disputes that may arise due to different points of view
- develop and monitor policies for analysing data on enterprise resource consumption
- review policies and identify improvements while benchmarking against industry best practice
- implement new approaches as required
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- best practice approaches relevant to own work area
- environmental or sustainability legislation, regulations and codes of practice applicable to industry and organisation
- equal employment opportunity, equity and diversity principles and work health and safety implications of policy being developed
- policy development processes and practices
- principles, practices and available tools and techniques of sustainability management relevant to the particular industry context
- quality assurance systems relevant to own organisation
- relevant industry competency

- relevant organisational policies, procedures and protocols
- relevant systems and procedures to aid in the achievement of workplace sustainability.

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK601 Monitor projects in a program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to monitor and report on requirements at a program level including interim, annual and final project reporting.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and exercise judgement to complete a range of advanced skilled activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Review project milestones	1.1 Log project milestones for approved projects within the program for monitoring 1.2 Use negotiated and approved changes to milestones to adjust the monitoring records
2. Check progress against	2.1 Maintain contact with groups and coordinators to monitor project

Element	Performance criteria
milestones	progress against agreed timelines 2.2 Keep records of progress for reporting purposes 2.3 Identify variations from agreed progress for reporting and response purpose 2.4 Submit requests for change in project milestones and timelines for approval as required
3. Summarise progress	3.1 Prepare regular progress reports as required by program and agency 3.2 Discuss progress reports with groups, coordinators and others 3.3 Consolidate project reports into program reports as required
4. Assist groups maintain project timeline	4.1 Review group activities and resources where required achievement may not or has not been met 4.2 Develop strategies to place the project back onto required plan with coordinator and community group leaders 4.3 Submit documented proposed changes in project for approval by group initially, and then to program and agency requirements

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK601A Monitor projects in a program.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK601 Monitor projects in a program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- review project milestones
- check progress against milestones
- summarise progress
- assist groups maintain project timelines
- monitor resource usage against the project plan
- use industry standard terminology to describe.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- group and regional cultures including diverse groups of people
- program and agency reporting requirements
- reporting formats
- project management
- financial reporting
- project management computer applications.

Assessment Conditions

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK602 Lead and manage community or industry organisations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to lead and manage community or industry organisations.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and exercise judgement to complete a range of advanced skilled activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Guide the organisation in the achievement of its aims	1.1 Examine and confirm the strategic direction of the organisation 1.2 Undertake a leadership role in the strategic planning, goal setting and action planning of the organisation 1.3 Promote a clear understanding of organisational purpose is with

Element	Performance criteria
	stakeholders 1.4 Define and document clear roles and responsibilities for those in the organisation
2. Design and implement communication	2.1 Communicate the organisation's policies and directions through documents and presentations 2.2 Define reporting mechanisms clearly and produce reports in line with organisational policy and guidelines 2.3 Define protocols for communication
3. Establish and maintain effective relationships	3.1 Establish a code of behaviour covering disagreements and negotiation in consultation with others in organisation 3.2 Employ different strategies to deal with a variety of personality types 3.3 Manage conflict to seek mutually beneficial solutions 3.4 Achieve consensus in decision-making within the organisation where appropriate 3.5 Maintain and promote stakeholder relationships 3.6 Apply and promote effective meeting procedures within the organisation
4. Establish and manage professional and business networks	4.1 Influence decision-making in other relevant forums to align with organisation's best interests 4.2 Gather and acknowledge views for consideration and representation 4.3 Achieve win-win outcomes through lobbying and negotiations 4.4 Maintain contemporary knowledge of issues and political factors
5. Build effective teams in the organisation	5.1 Demonstrate and maintain ethical behaviour and appropriate inter-personal skills in all dealings 5.2 Adapt leadership style to suit a range of differing contexts 5.3 Canvas opinion leaders and gain institutional support for the organisation 5.4 Recruit new members for the organisation 5.5 Provide relevant information to new and potential members

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK602A Lead and manage community or industry organisations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK602 Lead and manage community or industry organisations

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- guide the organisation in the achievement of its aims
- design and implement communication
- establish and maintain effective relationships
- establish and manage professional and business networks
- promote team building
- use industry standard terminology.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- leadership styles, roles and responsibilities
- strategic planning
- development and implementation of organisational policy and procedures
- ethics and codes of behaviour
- conflict management
- meeting procedures and protocols
- negotiation and consensus in decision-making.

Assessment Conditions

Assessors must satisfy current standards for RTOs

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCWRK603 Design and conduct a field-based research trial

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to design and conduct a field-based research trial.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and exercise judgement to complete a range of advanced skilled activities.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Work (WRK)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Design the trial	<p>1.1 Identify problems and opportunities that support undertaking a trial and define the trial subject and projected outcomes as required by enterprise guidelines, market research, client requirements, cost analysis and cost benefits to the enterprise</p> <p>1.2 Undertake research into available evidence to establish the</p>

Element	Performance criteria
	<p>performance criteria of the subject, product or treatment to be trialled and the trial design</p> <p>1.3 Locate trial sites according to trial design requirements and enterprise capabilities and identify site factors and incorporate into the trial design</p> <p>1.4 Identify and obtain approvals and permits required to conduct the trial</p> <p>1.5 Establish data collection and recording specifications according to the trial design and follow proper conventions and controls to satisfy statistical audit requirements and eliminate variables according to sound clinical practice</p>
2. Prepare to conduct the trial	<p>2.1 Identify workplace health and safety hazards, assess risks and develop control measures, and cost and document in the trial design</p> <p>2.2 Identify environmental implications associated with implementation of the trial and document in the trial design</p> <p>2.3 Identify and cost materials, tools, equipment and machinery required for the trial and confirm availability with suppliers, contractors and appropriate personnel</p> <p>2.4 Establish and prepare trial sites for implementation of the trial</p> <p>2.5 Document detailed trial site plans, trial specifications and trial procedures clearly and comprehensively in the trial design</p>
3. Conduct the trial	<p>3.1 Undertake staged data collection throughout the course of the trial</p> <p>3.2 Monitor trial implementation for accuracy, compliance to the trial design and out-of-specification procedures or events</p> <p>3.3 Record all monitoring and trial data</p>
4. Assess practical application of trial outcome	<p>4.1 Undertake statistical auditing for the trial outcomes and follow proper conventions and controls to eliminate variables according to sound clinical practice</p> <p>4.2 Draw conclusions from relevant information that are based on appropriate evidence and reasoned arguments</p> <p>4.3 Assess trial outcomes for practical application, based on conclusions drawn from the trial</p>

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHCWRK603A Design and conduct a field-based research trial

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCWRK603 Design and conduct a field-based research trial

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- establishing sound research parameters that enables achievable results
- conducting research consistent with recognised scientific practice
- calculate the cost and spatial and logistical requirements of components of the trial
- enter, analyse and organise data in a mathematically sound and accurately graphed, charted or tabled representation, consistent with the trial design
- comply with legislative requirements
- use of industry standard terminology
- awareness of workplace health and safety in the context of own work
- appropriate sustainability practices in the context of own work.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- growth habits, physiological properties and taxonomic specification of animals and plants involved in the trial
- physical and biochemical properties of products involved in the trial
- properties and current, best practice application of treatments involved in the trial
- scientific and mathematical trialling, data collection, processing and analytical techniques and procedures
- auditing and reporting procedures
- the enterprise business and marketing plans
- enterprise work team management guidelines
- bio-ethics (where animals are involved in the trial).

Assessment Conditions

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

ACMHBR201 Check and treat horses

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to carry out routine checks on horses, provide treatments under direction and assist with veterinary procedures when required.

The unit applies to workers who carry out work under routine supervision within organisation guidelines, while exercising limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context within horse breeding and other horse industry environments.

No occupational licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

Prerequisite unit of competency for this unit is:

- ACMEQU202 Handle horses safely.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Carry out routine horse checks	1.1 Identify and minimise risks relating to safe handling of horses in open and confined spaces 1.2 Observe signs of good health and condition in horses 1.3 Check horses for signs of lameness or soreness 1.4 Check horses for signs of heat or swelling in legs 1.5 Check horses for signs of distress 1.6 Report all abnormalities according to organisational guidelines
2. Carry out horse treatments	2.1 Check safety controls or required support and assistance are in place prior to treating horses 2.2 Ensure all horse restraints are suitable for the task 2.3 Provide routine medications and treatments, and record in workplace forms according to instructions 2.4 Clean hooves and examine shoes for wear and damage 2.5 Report faulty, broken or loose shoes
3. Support veterinary procedures	3.1 Report life-threatening ailments promptly to supervisor 3.2 Carry out basic emergency or first aid procedures 3.3 Report serious cuts and abrasions 3.4 Provide assistance during veterinary treatment 3.5 Treat cuts, abrasions and bruises 3.6 Report and record treatments and procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information in work instructions and organisational guidelines
Writing	<ul style="list-style-type: none"> Record data and information about checking and treating horses accurately
Navigate the world of work	<ul style="list-style-type: none"> Follow instructions and workplace guidelines for safe work and horse handling practices in own role and work area
Interact with others	<ul style="list-style-type: none"> Follow accepted practices and protocols for reporting issues to supervisors and knowing to act immediately in emergency situations
Get the work done	<ul style="list-style-type: none"> Plan tasks and assemble resources needed to complete horse treatments and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMHBR201 Check and treat horses	AHCHBR201A Monitor horse health and welfare	Updated to meet Standards for Training Packages Code and title changed to reflect outcomes and appropriate industry sector usage	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMHBR201 Check and treat horses

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has checked and treated at least two horses. Each horse must be checked on three separate occasions and include:

- identifying and minimising risks while handling each horse
- performing duties around each horse in a firm but calm, gentle and unhurried manner
- monitoring basic horse health and observing and identifying signs of:
 - ill health, injury or lameness
 - abnormal or depressed appetite
 - non-routine behaviour
- cleaning hooves and examining each horse for loose or broken shoes
- reporting signs of illness or injury
- controlling, leading and handling each horse in an open and a confined space.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic horse husbandry techniques
- animal welfare requirements, including ethical and humane treatment
- key horse breeds and characteristics
- indicators and signs of:
 - lameness or soreness
 - heat or swelling in legs
 - distress in horses
- detecting signs of illness
- recordkeeping systems

- hazard identification and actions to minimise risks working with horses in open and confined areas
- safe horse handling techniques.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - various live horses assessed as suitable for the experience and skill of the individual
 - materials and equipment for checking and treating horses
 - appropriate tack for horse and activity
 - personal protective equipment (PPE) correctly fitted and appropriate for checking and treating horses
 - workplace recording forms
- specifications:
 - work instruction and organisation guidelines for checking and treating horses.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

ACMHBR203 Provide daily care for horses

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to provide daily care for horses.

The unit applies to individuals who carry out work under routine supervision within organisation guidelines and with limited autonomy for their own work. They undertake defined activities and work in a structured context within horse breeding and other horse industry environments.

No occupational licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) generally have the same meaning in the workplace. In jurisdictions where the national model WHS legislation has not been implemented, RTOs must contextualise the unit of competency by referring to current OHS legislative requirements.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- ACMEQU205 Apply knowledge of horse behaviour.

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to work with horses	<p>1.1 Interpret and confirm work program with management</p> <p>1.2 Discuss work with others to ensure smooth operation of horse routines</p> <p>1.3 Identify work hazards, minimise risks and report safety concerns</p> <p>1.4 Select, check and maintain work tools and equipment and personal protective equipment (PPE)</p>
2. Clean stables and surrounding areas	<p>2.1 Observe horse behaviour and characteristics, assessing potential risks before handling</p> <p>2.2 Check horse for condition, health and soundness and remove from stable or yard, or tie up safely in stable or yard</p> <p>2.3 Inspect and remove manure, soiled bedding and stale feed, and report abnormalities</p> <p>2.4 Rake or fork bedding and add fresh quantities</p> <p>2.5 Clean feed bins, hay nets and water troughs, and fill troughs with fresh water</p> <p>2.6 Report buildings or fixtures that are in need of maintenance or are unsafe</p>
3. Select, catch and tie up horses	<p>3.1 Identify individual horses, catch using safe handling techniques and fit any required working gear</p> <p>3.2 Inspect legs and hooves for abnormalities, cuts or damage, and report according to workplace practices</p> <p>3.3 Lead horse to work area and secure to rail or another suitable tie-up point</p>
4. Perform daily work program	<p>4.1 Prepare horses for specified daily work program</p> <p>4.2 Carry out work program for individual horses</p> <p>4.3 Select and prepare horses for professional services</p> <p>4.4 Wash down, dry, and return horses to their stable</p> <p>4.5 Measure quantities of feed and provide feed to horses</p> <p>4.6 Keep and maintain work routines and performance records</p>
5. Groom and rug horses	<p>5.1 Groom horses and check for illness or injury, and report any irregularities</p> <p>5.2 Clean hooves, check for cracks, heat and other abnormalities, and check shoes if applied</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.3 Report abnormalities according to workplace practices 5.4 Fit rugs if required by workplace or other conditions to avoid chafing and rubbing
6. Clean and maintain stable gear	6.1 Check all gear regularly for wear and damage 6.2 Clean and polish gear and apply oils or preservatives 6.3 Maintain or repair working gear according to stable procedures 6.4 Clean and store working gear and saddlery after use

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information in work program and stable routine
Writing	<ul style="list-style-type: none"> Enter data and information accurately into workplace records
Numeracy	<ul style="list-style-type: none"> Measure quantities required for feed Estimate, calculate and record routine workplace measures
Oral communication	<ul style="list-style-type: none"> Use active listening and questioning to clarify instructions and seek advice from supervisor
Navigate the world of work	<ul style="list-style-type: none"> Follow instructions and workplace guidelines for safe work and horse handling practices, in own role and work area
Interact with others	<ul style="list-style-type: none"> Use basic teamwork strategies to work collaboratively with others in providing daily care to horses
Get the work done	<ul style="list-style-type: none"> Plan and sequence tasks and assemble resources needed to provide daily care for horses

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMHBR203 Provide daily care for horses	AHCHBR203A Provide daily care for horses	<p>Updated to meet Standards for Training Packages</p> <p>Code changed to reflect appropriate industry sector usage</p> <p>Edits to clarify intent of unit and evidence requirements</p> <p>Addition of prerequisite unit</p>	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMHBR203 Provide daily care for horses

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has carried out daily care for at least two calm, consistent and obedient horses. Prior to carrying out tasks with horses there must be evidence that the individual has:

- checked and confirmed safety requirements, stable routines and instructions
- identified and reported safety concerns
- acquired required tools, equipment and personal protective equipment (PPE)

There must be evidence that the individual has carried out the following tasks for each horse:

- handling horses safely and ethically
- cleaning and caring for saddlery and equipment
- completing basic hoof care procedures
- grooming and rugging horses
- measuring quantities required for feed
- exercising horses according to instructions
- monitoring horse health and welfare
- reporting signs of illness or injury.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- key features of horse behaviour and psychology
- indicators of horse health
- common feed stuffs
- care and maintenance of hooves and the lower limbs

- organisational procedures for care of horses:
 - cleaning of stables, yards and gear
 - safe work practices, including safe handling of horses
 - types and purpose of personal protective equipment (PPE).

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment or materials:
 - a range of calm, consistent and obedient horses assessed as suitable for the experience and skill of the individual
 - appropriate tack for horses and activity
 - personal protective equipment (PPE) correctly fitted and applicable for task for handler
 - materials and equipment for providing daily care of horses
 - workplace recording or reporting forms
- specifications:
 - work instruction and stable routine or program.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

ACMHBR302 Carry out basic hoof care procedures

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to maintain horse hooves in premium condition.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts within horse breeding and other horse industry environments.

No occupational licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) generally have the same meaning in the workplace. In jurisdictions where the national model WHS legislation has not been implemented, RTOs must contextualise the unit of competency by referring to current OHS legislative requirements.

Pre-requisite Unit

Prerequisite unit of competency for this unit is:

- ACMEQU202 Handle horses safely.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to perform hoof care on horses	1.1 Interpret work instructions and confirm with management 1.2 Identify organisational requirements for the care and handling of horses according to animal health and welfare, and work health and safety (WHS) requirements 1.3 Hold discussions with other workers to ensure smooth operation of the process 1.4 Identify work health and safety (WHS) hazards while handling horses, assess risks and implement suitable controls 1.5 Select, check and maintain work tools and equipment
2. Provide hoof care to horse	2.1 Select basic farriery tools and personal protective equipment (PPE) appropriate for task 2.2 Lift horse feet, check health and condition, and pick and clean hooves according to set leg routines 2.3 Hold legs and present hoof 2.4 Provide basic hoof care, including administration of hoof treatment medications
3. Complete maintenance and administration	3.1 Clean equipment according to organisational procedures 3.2 Clean and store attachments and other equipment 3.3 Dispose of all containers, leftover fluids, waste and debris safely, according to environmental and organisational requirements 3.4 Record and document hoof care procedures for horses

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information in written work program and instructions
Writing	<ul style="list-style-type: none"> Record information relating to hoof care undertaken in the workplace accurately and legibly
Numeracy	<ul style="list-style-type: none"> Estimate, calculate and record routine measures relating to basic hoof care
Oral communication	<ul style="list-style-type: none"> Use active listening and questioning techniques to clarify and confirm instructions and requirements Use clear language, correct concepts and industry terminology to ensure clarity of meaning when reporting information and requesting assistance
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following workplace procedures, including safe work, safe horse handling practices, and animal welfare requirements, in own role and work area
Interact with others	<ul style="list-style-type: none"> Work cooperatively with a range of personnel in different roles, using clear communication techniques to carry out basic hoof procedures
Get the work done	<ul style="list-style-type: none"> Plan and sequence tasks and assemble equipment to achieve outcomes Make decisions about routine hoof care activities, taking responsibility for actions taken

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMHBR302 Carry out basic hoof care procedures	AHCHBR302A Carry out basic hoof care procedures	<p>Updated to meet Standards for Training Packages</p> <p>Edits to clarify intent of unit. Element 3 deleted</p> <p>Additional prerequisite requirements</p>	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMHBR302 Carry out basic hoof care procedures

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has carried out basic hoof procedures on at least two compliant and manageable horses, including:

- identifying hazards, assessing risks and implementing suitable controls related to hoof procedures
- checking horse body language and behaviour prior to handling each horse, as part of risk assessment
- handling and restraining each horse safely for hoof procedures working around them in a firm, calm and unhurried manner
- using and maintaining farriery tools and personal protective equipment (PPE) to perform basic hoof care
- providing basic hoof care for each horse, including administration of hoof treatment medications
- completing maintenance and administrative requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types and purpose of items of farriery equipment
- hoof care procedures
- hoof injuries
- hygiene practices and awareness
- structure of the hoof and associated problems
- common horse behaviour and reactions to hoof care
- safe work practices:

- safe horse handling techniques
- hazard and risk identification and minimisation
- key requirements of work health and safety legislation
- types and purpose of personal protective equipment (PPE).

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - various compliant and manageable horses requiring basic foot care, assessed as suitable for the experience and skill of the individual
 - appropriate tack for horse and activity
 - farrier equipment and materials
 - personal protective equipment (PPE) correctly fitted and applicable to tasks for individual
 - workplace recording and reporting forms or systems
- specifications:
 - work instructions or program for carrying out basic hoof procedures.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

ACMHBR310 Prevent and treat equine injury and disease

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to recognise ailments in horses and apply procedures for the prevention and treatment of equine injury and disease.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts within horse breeding or other horse industry environments.

No occupational licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) generally have the same meaning in the workplace. In jurisdictions where the national model WHS legislation has not been implemented, RTOs must contextualise the unit of competency by referring to current OHS legislative requirements.

Pre-requisite Unit

Nil

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to treat horses	<p>1.1 Confirm the work program with supervisor</p> <p>1.2 Communicate with other workers to ensure smooth operation of the process</p> <p>1.3 Select, check and maintain suitable tools and equipment, including personal protective equipment (PPE)</p> <p>1.4 Assess and minimise risks in treatment areas, reporting risks beyond control to supervisor</p>
2. Recognise and report common ailments	<p>2.1 Schedule and conduct regular checks to detect abnormal conditions</p> <p>2.2 Determine common ailments, interpreting signs of distress, elevated temperatures or skin or joint condition</p> <p>2.3 Report abnormal conditions, record in workplace documentation and perform actions under supervision</p> <p>2.4 Perform initial first aid procedures until professional help arrives</p>
3. Apply disease or ailment prevention procedures	<p>3.1 Perform stable and paddock quarantine procedures</p> <p>3.2 Maintain stable hygiene practices</p> <p>3.3 Conduct routine annual or outbreak stimulated vaccination of horses under supervision of the veterinary practitioner</p> <p>3.4 Conduct routine drenching and skin washing procedures</p> <p>3.5 Identify work hazards, assess risks and implement suitable controls while handling horses</p> <p>3.6 Maintain workplace records of veterinary medication and treatment</p>
4. Treat equine injury and disease	<p>4.1 Use twitches, yard crush and/or other restraining devices appropriate to individual horse temperament</p> <p>4.2 Administer prescribed veterinary medicines under supervision</p> <p>4.3 Apply dressings and poultices according to treatment practices</p> <p>4.4 Handle horses safely and ethically</p>
5. Complete hygiene and administration	<p>5.1 Clean and store equipment used in treating horses</p> <p>5.2 Dispose of containers, leftover fluids, waste and debris according to workplace procedures</p> <p>5.3 Complete records and documentation</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information in horse treatment programs and veterinary instructions
Writing	<ul style="list-style-type: none"> Keep accurate records of horse condition, treatments and medications
Numeracy	<ul style="list-style-type: none"> Measure and interpret results for temperature, pulse, respiration and capillary refill
Oral communication	<ul style="list-style-type: none"> Participate in verbal exchanges to convey and obtain information about horse injury and disease prevention, and treatment programs, with a range of personnel
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following workplace procedures, including safe work, safe horse handling practices and animal welfare principles, relating to own role and work area
Interact with others	<ul style="list-style-type: none"> Develop and maintain strong reporting relationships with supervisor Support and liaise with health practitioners in prevention and treatment programs for horses
Get the work done	<ul style="list-style-type: none"> Plan and sequence tasks and organise resources to complete work activities; monitoring outcomes and adjusting plans to address priorities and contingencies

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ACMHBR310 Prevent and treat equine injury and disease	AHCHBR306A Prevent and treat equine injury and disease	Updated to meet Standards for Training Minor changes to clarify intent of unit Code changed to reflect appropriate industry sector usage	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

Assessment Requirements for ACMHBR310 Prevent and treat equine injury and disease

Modification History

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has implemented disease or injury prevention measures including performing each of the following points at least once:

- performing stable hygiene practices procedures
- disease and ailment prevention procedures
- quarantine procedures.

There must also be evidence that the individual has treated equine injury or disease for at least two horses including:

- assessing and recording vital signs of horses, including temperature, pulse, respiration and capillary refill
- handling and restraining horses for observation and treatment
- detecting and reporting signs of common ailments, ill health and injury
- treating equine injury and disease according to instructions.

When performing all of the above points there must be evidence that the individual has:

- assessed and controlled risks handling horses and in work area
- handled horses safely and ethically in a firm but calm, gentle and unhurried manner
- completed horse health and medication records in accordance with requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types and signs of common horse injuries
- types and signs of common ailments that affect horses

- indicators that can be used to assess horse health
- signs and symptoms of:
 - abnormal or depressed appetite
 - life threatening conditions
- range of treatments that must be applied under veterinary supervision
- common horse behavioural problems
- safe and ethical horse handling techniques and restraints
- animal health and welfare principles and practices
- hygiene and environmental practices relevant to maintaining healthy horse environments
- work health and safety practices:
 - assessing and controlling risks
 - use of personal protective equipment
 - safe horse handling techniques
 - safe areas to carry out procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - various compliant and manageable horses assessed as suitable for the experience and skill of the individual
 - materials and equipment for treating horses
 - appropriate tack for individual, horse and activity
 - personal protective equipment (PPE) correctly fitted and applicable to activity for the individual
- specifications:
 - work instructions and treatment and prevention program for individual horses
 - workplace recording or reporting forms.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103>

AMPMGT806 Commercialise research and technology product or idea

Modification History

Release	TP Version	Comment
1	AMPv1.0	Initial release

Application

This unit describes the skills and knowledge required to undertake the fundamentals of product/idea commercialisation. It describes the process from conception to launch to full production.

Competency requires developing the skills and knowledge to successfully research, analyse, cost and develop a business opportunity for a product/idea. This unit also describes the skills required to manage commercialisation and evaluate product success.

This unit applies to leaders or managers responsible for developing a commercialisation strategy for an innovative product or technique, which has been developed through research.

Leaders undertaking product commercialisation must investigate and negotiate the legal and partnership implications of commercialisation, undertake market testing and develop commercialisation strategies.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Investigate commercialisation options	1.1 Describe product/innovation to be commercialised 1.2 Analyse innovation alignment against organisation's innovation objectives 1.3 Research, analyse and test market opportunities 1.4 Investigate optimum business structure and funding options
2. Develop commercialisation proposal	2.1 Determine resourcing requirements 2.2 Develop marketing plan 2.3 Determine supply chain strategy 2.4 Determine strategies for managing Intellectual Property (IP) 2.5 Determine environmental sustainability of proposed product/idea 2.6 Develop risk mitigation plan 2.7 Negotiate proposal modifications with key stakeholders
3. Prepare for implementation	3.1 Develop project implementation plan 3.2 Determine monitoring process 3.3 Establish and develop required business processes 3.4 Assemble project team

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

MTMBUS706A Commercialise research and technology product/idea	E
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Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e2e56b7-698f-4822-84bb-25adbb8443a7>

Assessment Requirements for AMPMGT806 Commercialise research and technology product or idea

Modification History

Release	TP Version	Comment
1	AMPv1.0	Initial release

Performance Evidence

Candidates must undertake the fundamentals of product/idea commercialisation from conception to launch to full production.

Candidates must demonstrate ability to:

- analyse market trends
- budget, including forecasting, capacity and asset analysis, setting targets and compliance mechanisms
- negotiate licensing IP (in and out), contractual supply chain arrangement and partnerships
- use communication skills to:
 - maintain appropriate relationships with colleagues and others
 - value and be open to the opinions of others
 - work as part of a team
 - model collaborative communication and learning
 - use active listening and negotiation skills
 - present and negotiate proposals
 - seek opinions and feedback from a range of stakeholders
 - develop plain English texts dealing with complex ideas and concepts
- generate and evaluate ideas by analysing information and concepts at an abstract level
- provide strategic leadership during change and negotiation processes
- use problem-solving, initiative and enterprise skills to:
 - direct, motivate, consult and delegate appropriately
 - collect, analyse and interpret data using a range of methods
 - shape strategic thinking and inspire others with a shared vision
 - work with teams with diverse emotional intelligence and cognitive ability
- provide leadership in workplace health and safety practice, ethical standards and legislative requirements

- review own personal and professional competence against personal development objectives
- support and use participative arrangements aimed at establishing trust
- to develop, negotiate and structure an agreed commercialisation strategy
- to apply leadership style and approach appropriate to individuals involved, outcomes being sought and contextual factors

Knowledge Evidence

Candidates must demonstrate specialised and integrated technical and theoretical knowledge of:

- relevant legislation
- business strategies and legal requirements underpinning trademarks, copyright and patents
- legal requirements underpinning partnership arrangements, contracts and taxation
- commercial environmental analysis techniques, including Strengths, Weaknesses, Opportunities, Threats (SWOT)/TOWS
- market testing strategies and techniques
- strategies for analysing and assessing the upstream and downstream implications of an innovation
- risk assessment strategies and techniques
- team selection, management and support strategies
- environmental sustainability principles

Assessment Conditions

Competency must be demonstrated through sustained performance over time, at an appropriate level of responsibility and under typical operating and production conditions for the enterprise.

Assessment must ensure:

- access to an actual workplace or simulated environment
- assessment over a sufficient timeframe to allow holistic assessment of the candidate's capacity to lead the development of a commercialisation strategy
- resources normally used in the workplace, including organisational policies and procedures, and relevant legislation
- access to stakeholders, potential partners and clients

Assessors must satisfy current standards for RTOs.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e2e56b7-698f-4822-84bb-25adbb8443a7>

AUMGTW001 Perform basic welding, thermal cutting, heating and gouging

Modification History

Release	Comment
Release 1	Unit updated to reflect the new standards for Training Packages Replaces AUMGTW3001 Conduct basic welding, thermal cutting, heating and gouging operations
Release 2	Updated for clarity and policy adherence

Application

This unit describes the performance outcomes required to perform basic welding, thermal cutting, heating and gouging operations.

It applies to those in the automotive manufacturing industry and involves the application of skills and knowledge at a production worker level.

Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Unit Sector

Technical - Welding, Grinding, Machining and Soldering

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for work	1.1 Identify job requirements and welding information from work instructions 1.2 Identify, select and inspect welding equipment and resources 1.3 Identify work health and safety (WHS) requirements according to workplace procedures 1.4 Obtain materials and components of the required size, type and quantity, and inspect for compliance 1.5 Plan work areas and welding according to workplace

Elements	Performance Criteria
	procedures
2. Perform basic welding	2.1 Set up weld equipment to suit job requirements and workplace procedures 2.2 Select welding methods to suit job requirements 2.3 Carry out welding according to workplace standards and without causing damage to property, vehicle or components
3. Perform basic thermal cutting, heating and gouging work	3.1 Set up basic thermal cutting, heating and gouging equipment to suit job requirements and workplace procedures 3.2 Select basic thermal cutting, heating and gouging equipment to suit job requirements 3.3 Carry out basic thermal cutting, heating and gouging according to workplace standards and without causing damage to property, vehicle or components
4. Complete work processes	4.1 Check completed work against job specifications 4.2 Collect and store materials that can be reused 4.3 Remove waste and scrap materials according to workplace procedures 4.4 Clean work area and maintain equipment 4.5 Identify, tag and report faulty equipment 4.6 Complete workplace documentation in line with requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skills	Description
Reading skills to:	<ul style="list-style-type: none"> interpret sketches and drawings interpret safety data sheets (SDS) identify WHS signs and symbols in the workplace interpret workplace procedures; job instructions; and welding, cutting and heating plan.
Writing skills to:	<ul style="list-style-type: none"> complete basic welding, heating and cutting job cards complete faulty equipment tags.
Numeracy skills to:	<ul style="list-style-type: none"> identify and set gas working pressures set machine settings measure materials to specifications.

Digital literacy skills to:	<ul style="list-style-type: none"> use basic electronic welding and thermal cutting equipment.
Planning and organising skills to:	<ul style="list-style-type: none"> plan and prepare equipment, work area and materials to job specifications.
Problem-solving skills to:	<ul style="list-style-type: none"> identify workplace hazards.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AUMGTW001 Perform basic welding, thermal cutting, heating and gouging (Release 2)	AUMGTW001 Perform basic welding, thermal cutting, heating and gouging (Release 1)	Minor updates to Assessment Requirements. Performance Criteria changed from passive to active voice.	Equivalent

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bd587669-08b3-4cd5-85f0-f9fa0c6304c1>

AUMGTW001 Perform basic welding, thermal cutting, heating and gouging

Modification History

Release	Comment
Release 1	Unit updated to reflect the new standards for Training Packages Replaces AUMGTW3001 Conduct basic welding, thermal cutting, heating and gouging operations
Release 2	Updated for clarity and policy adherence

Performance Evidence

Before competency can be determined, individuals must have competently demonstrated basic welding, thermal cutting, heating and gouging operations; each on a minimum of three occasions.

Individuals must demonstrate they can:

- apply workplace requirements, procedures and workplace health and safety (WHS) practices in relation to:
 - weld production
 - work quality
- perform gas metal arc welding (GMAW) and manual metal arc welding (MMAW) processes
- perform oxy-acetylene welding processes
- perform thermal cutting, heating and gouging processes
- use relevant tools and equipment for the process
- check completed work against job specifications
- collect and store materials that can be reused
- clean work area and maintain equipment complete workplace documentation relating to basic welding, thermal cutting, heating and gouging operations.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

- work health and safety (WHS) requirements in relation to basic welding, thermal cutting, heating and gouging work tasks, including personal protective equipment (PPE)
- types of welding rods and their application

- MMAW techniques
- GMAW techniques
- thermal cutting, heating and gouging techniques
- welding quality standards
- oxy-acetylene welding techniques

Assessment Conditions

Assessors must satisfy SNR/AQTF assessor requirements.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the vehicles or components on which they have performed basic welding, thermal cutting, heating and gouging, e.g. production work sheets.

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- automotive manufacturing workplace or simulated workplace
- vehicles or components that require basic welding, thermal cutting, heating and gouging operations
- WHS equipment, including PPE relating to basic welding, thermal cutting, heating and gouging
- workplace procedures, equipment and operating instructions relating to basic welding, thermal cutting, heating and gouging
- welding consumables and materials
- welding equipment and accompanying operating instructions, including:
 - gas metal arc welding (GMAW) equipment
 - manual metal arc welding (MMAW) equipment
 - oxy-acetylene plant and equipment
 - thermal cutting, heating and gouging equipment
- work sheets relating to basic welding, thermal cutting, heating and gouging operations.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bd587669-08b3-4cd5-85f0-f9fa0c6304c1>

BSBADM504 Plan and implement administrative systems

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to plan for or review the requirements of effective administrative systems and procedures for implementing, monitoring and reviewing the system.

It applies to individuals employed in a range of work environments in senior administrative roles.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Administration – General Administration

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Plan for the new or modified administrative system	<p>1.1 Identify requirements of, or modifications to, the administrative system through consultation with system users and other stakeholders in accordance with organisational and budgetary requirements</p> <p>1.2 Obtain quotations from suppliers/developers for the identified requirements or modifications to be made to the system in accordance with organisational policy and procedures</p> <p>1.3 Select supplier or developer in accordance with organisational</p>

ELEMENT	PERFORMANCE CRITERIA
	policy and procedures
2 Implement new or modified administrative system	<p>2.1 Identify and develop implementation strategies in consultation with staff</p> <p>2.2 Encourage staff to participate in all stages of the implementation process</p> <p>2.3 Implement system in accordance with organisational and legislative requirements</p> <p>2.4 Define and communicate procedures for using the system to staff</p> <p>2.5 Provide training and support for staff on the use of the new or modified system</p> <p>2.6 Deal with contingencies to ensure minimal impact on users</p>
3 Monitor administrative system	<p>3.1 Monitor system for usage, security and output in accordance with organisational requirements</p> <p>3.2 Modify system to meet changing needs in accordance with organisational requirements</p> <p>3.3 Clearly identify further modifications and notify users</p> <p>3.4 Monitor staff training needs and train new staff on administrative system</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Learning	2.5, 3.4	<ul style="list-style-type: none"> Actively reinforces own knowledge and skills by training or mentoring others
Reading	1.2, 1.3, 3.1	<ul style="list-style-type: none"> Extracts, analyses and evaluates information from complex texts, including organisational policies and procedures
Writing	1.1, 2.1, 2.4, 3.2, 3.3	<ul style="list-style-type: none"> Gathers and utilises information and ideas from a range of sources to create texts to meet organisational requirements Creates instructional texts using grammatical structures and vocabulary appropriate to audience and

		context
Oral Communication	1.1, 2.1, 2.2, 2.4, 2.5, 3.4	<ul style="list-style-type: none"> Participates in verbal exchanges using appropriate style, tone and vocabulary for audience, context and purpose Uses listening and questioning techniques to elicit key information and confirm understanding Presents complex information adjusting presentation style and vocabulary to suit the audience
Numeracy	1.1, 1.2	<ul style="list-style-type: none"> Recognises and interprets numerical information related to budgets
Navigate the world of work	1.1-1.3, 2.3, 2.4, 3.1	<ul style="list-style-type: none"> Develops systems to meet organisational and legislative requirements
Interact with others	1.1, 1.2, 2.1, 2.2, 2.4	<ul style="list-style-type: none"> Selects the appropriate form, channel and mode of communication for a specific purpose relevant to own role Collaborates with others to achieve joint outcomes, providing guidance to others , where necessary
Get the work done	1.1-1.3, 2.1, 2.3, 2.4, 2.6, 3.2, 3.3	<ul style="list-style-type: none"> Applies formal processes when planning complex tasks, producing plans with logically sequenced steps, reflecting an awareness of time constraints Monitors progress of plans and changes them to meet new demands or priorities Systematically gathers and analyses all relevant information and evaluates options to make informed decisions Anticipates potential problems and implements contingency plans as soon as warning signs are recognised Uses and investigates new digital technologies and applications to manage and manipulate data Demonstrates awareness of the importance of data security in a digital environment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBADM504 Plan and implement administrative	BSBADM504B Plan or review administrative	Updated to meet Standards for Training Packages	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
systems	systems	Minor title change Minor correction to wording in elements and performance criteria - 'administration' changed to 'administrative'	

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBADM504 Plan and implement administrative systems

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- work with relevant personnel and stakeholders to identify administrative system improvements
- document necessary requirements or modifications
- provide training and support for staff to use the new or modified system
- monitor the new system and identify future improvements and staff training needs.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

summarise relevant legislative and organisational policies and procedures for reviewing administrative systems

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the general administration field of work and include access to:

- organisational policy and procedure manuals
- reference materials
- appropriate equipment.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBCMM401 Make a presentation

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0

Application

This unit covers the skills and knowledge required to prepare, deliver and review a presentation to a target audience.

This unit applies to individuals who may be expected to make presentations for a range of purposes, such as marketing, training and promotions. They contribute well developed communication skills in presenting a range of concepts and ideas.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Communication – Interpersonal Communication

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Prepare a presentation	<p>1.1 Plan and document presentation approach and intended outcomes</p> <p>1.2 Choose presentation strategies, format and delivery methods that match the characteristics of the target audience, location, resources and personnel needed</p> <p>1.3 Select presentation aids, materials and techniques that suit the format and purpose of the presentation, and will enhance audience understanding of key concepts and central ideas</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>1.4 Brief others involved in the presentation on their roles/responsibilities within the presentation</p> <p>1.5 Select techniques to evaluate presentation effectiveness</p>
2 Deliver a presentation	<p>2.1 Explain and discuss desired outcomes of the presentation with the target audience</p> <p>2.2 Use presentation aids, materials and examples to support target audience understanding of key concepts and central ideas</p> <p>2.3 Monitor non-verbal and verbal communication of participants to promote attainment of presentation outcomes</p> <p>2.4 Use persuasive communication techniques to secure audience interest</p> <p>2.5 Provide opportunities for participants to seek clarification on central ideas and concepts, and adjust the presentation to meet participant needs and preferences</p> <p>2.6 Summarise key concepts and ideas at strategic points to facilitate participant understanding</p>
3 Review the presentation	<p>3.1 Implement techniques to review the effectiveness of the presentation</p> <p>3.2 Seek and discuss reactions to the presentation from participants or from key personnel involved in the presentation</p> <p>3.3 Utilise feedback from the audience or from key personnel involved in the presentation to make changes to central ideas presented</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 1.3, 2.2	<ul style="list-style-type: none"> Reviews and analyses documents to identify information relevant to a specific presentation
Writing	1.1, 3.3	<ul style="list-style-type: none"> Develops material to convey ideas and information to target audience in an engaging way
Oral	1.4, 2.1, 2.2, 2.3,	<ul style="list-style-type: none"> Presents information using words and non-verbal features appropriate to the audience and context

Communication	2.4, 2.5, 2.6, 3.2	<ul style="list-style-type: none"> • Uses listening and questioning techniques to gather information required to develop or modify presentations • Interprets audience reactions and changes words or non-verbal features accordingly
Interact with others	1.4, 2.1, 2.2, 2.4, 2.5, 2.6, 3.2	<ul style="list-style-type: none"> • Selects and uses appropriate conventions and protocols to encourage interaction or to present information • Demonstrates sophisticated control over oral, visual and written formats, drawing on a range of communication practices to achieve goals • Recognises the need to alter personal communication style in response to the needs or expectations of others
Get the work done	1.1-1.5, 2.2, 2.5, 3.1-3.3	<ul style="list-style-type: none"> • Takes responsibility for planning, sequencing and prioritising tasks and own workload to achieve outcomes • Uses feedback from others, analytical and lateral thinking to review current practices and develop new ideas • Uses the main features and functions of digital tools to complete work tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBCMM401 Make a presentation	BSBCMM401A Make a presentation	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBCMM401 Make a presentation

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- prepare and deliver presentations related to occupation or area of interest which demonstrate the use of:
 - effective presentation strategies and communication principles
 - aids and materials to support the presentation
- select and implement methods to review the effectiveness of own presentation and document any changes which would improve future presentations.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify information collection methods that will support review and feedback of presentations
- identify regulatory and organisational obligations and requirements relevant to presentations
- describe the principles of effective communication
- describe the range of presentation aids and materials available to support presentations.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced by individuals using interpersonal communication skills in the workplace and include access to:

- equipment, materials and business software packages for making a presentation
- business technology
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBCMM411 Make presentations

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit covers the skills and knowledge required to prepare, deliver and review presentations for target audiences.

This unit applies to individuals who may be expected to make presentations for a range of purposes, such as marketing, training and promotions. They contribute well developed communication skills in presenting a range of concepts and ideas.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Social Competence – Verbal Communication

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare presentation	1.1 Plan presentation approach and intended outcomes 1.2 Identify target audience, location and resources requirements 1.3 Select presentation strategies, format and delivery methods according to presentation requirements 1.4 Select techniques to evaluate presentation effectiveness
2. Deliver presentation	2.1 Summarise key concepts and ideas and present to target audience 2.2 Provide opportunity for audience to seek clarification on presentation information 2.3 Confirm target audience understand key concepts and ideas, and

ELEMENT	PERFORMANCE CRITERIA
	that identified presentation objectives have been achieved
3. Review presentation	3.1 Evaluate effectiveness of the presentation 3.2 Seek and discuss feedback and any reactions to the presentation from participants and relevant stakeholders 3.3 Make changes to presentation based on feedback received

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Reviews and analyses documents to identify information relevant to a specific presentation
Writing	<ul style="list-style-type: none"> Develops material to convey ideas and information to target audience in an engaging way
Oral Communication	<ul style="list-style-type: none"> Presents information using words and non-verbal features appropriate to the audience and context Uses listening and questioning techniques to gather information required to develop and modify presentations
Problem solving	<ul style="list-style-type: none"> Interprets audience reactions and changes words and non-verbal features accordingly
Planning and organising	<ul style="list-style-type: none"> Demonstrates sophisticated control over oral, visual and written formats, drawing on a range of communication practices to achieve goals
Initiative and enterprise	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols to encourage interaction and to present information Recognises the need to alter personal communication style in response to the needs and expectations of others
Self-management	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks and own workload to achieve outcomes
Technology	<ul style="list-style-type: none"> Uses the main features and functions of digital tools to complete work tasks

Unit Mapping Information

Supersedes and is equivalent to BSBCMM401 Make a presentation.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBCMM411 Make presentations

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- prepare and deliver at least two different presentations.

In the course of the above, the candidate must:

- use aids and materials to support the presentation
- select and implement methods to review the effectiveness of presentation and document suggested improvements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- information collection methods that support review and feedback of presentations
- organisational and legislative obligations and requirements relevant to presentations
- structure of presentations according to intended outcomes
- principles of effective communication including:
 - persuasive communication techniques
 - verbal and non-verbal communication
- presentation methods
- different aids, materials and techniques that can be used for presentations.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- equipment, materials and business software packages for making a presentation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBCMM511 Communicate with influence

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to present and negotiate persuasively, lead and participate in meetings and make presentations to customers, clients and other key stakeholders.

The unit applies to individuals who are managers and leaders required to identify, analyse, synthesise and act on information from a range of sources, and who deal with unpredictable problems as part of their job role. They use initiative and judgement to organise the work of self and others and plan, evaluate and co-ordinate the work of teams.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Social Competence – Verbal Communication

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify communication requirements	1.1 Confirm authority to present material on behalf of an organisation or work area, according to organisational policies and procedures 1.2 Identify information that may be subject to confidentiality and manage appropriately 1.3 Identify information needs of audience and prepare a position in line with purpose of communication
2. Negotiate to achieve agreed outcome	2.1 Identify objectives of negotiation, and needs and requirements of stakeholders

ELEMENT	PERFORMANCE CRITERIA
	2.2 Identify and document potential issues and problems 2.3 Prepare positions and supporting arguments according to objectives 2.4 Communicate with stakeholders, and establish areas of common ground and potential compromise 2.5 Confirm and document outcomes of negotiation
3. Participate in and lead meetings	3.1 Identify the need for meeting and schedule according to stakeholder availability 3.2 Prepare meeting materials and distribute to stakeholders 3.3 Conduct meeting and contribute to discussions 3.4 Seek consensus on meeting objectives 3.5 Summarise outcomes of meetings and distribute to stakeholders
4. Make presentations	4.1 Identify forums to present according to organisational objectives 4.2 Determine tone, structure, style of communication and presentation according to target audience 4.3 Prepare presentation according to desired outcomes 4.4 Provide an opportunity for audience to ask questions 4.5 Follow up with stakeholders following presentation 4.6 Evaluate presentation and identify areas for improvement

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Writing	<ul style="list-style-type: none"> • Prepares documentation that summarises key findings and outcomes • Prepares presentations appropriate to audience needs, context and purpose
Oral Communication	<ul style="list-style-type: none"> • Uses active listening and questioning to seek information and confirm understanding
Teamwork	<ul style="list-style-type: none"> • Selects and uses relevant conventions and protocols when communicating with team members
Self-management	<ul style="list-style-type: none"> • Demonstrates sophisticated control over oral, visual and/or written formats, drawing on a range of communication practices to achieve goals
Problem solving	<ul style="list-style-type: none"> • Uses analytical processes to evaluate options, and aid in problem-solving and decision-making

	<ul style="list-style-type: none"> Plays a lead role in situations requiring negotiation and collaboration, demonstrating high level conflict resolution skills and ability to engage and motivate others
Initiative and enterprise	<ul style="list-style-type: none"> Adapts personal communication style to build trust and positive working relationships and to show respect for the opinions and values of others Understands the implications of legal and ethical responsibilities to maintain confidentiality Selects relevant vocabulary adjusting language and presentation features to maintain effectiveness of interaction
Planning and organising	<ul style="list-style-type: none"> Plans, organises and implements tasks required to achieve required outcomes

Unit Mapping Information

Supersedes and is equivalent to BSBLDR513 Communicate with influence.

Supersedes but is not equivalent to:

- BSBCMM402 Implement effective communication strategies
- BSBGOV404 Communicate with community stakeholders.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBCMM511 Communicate with influence

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- participate in and lead at least two meetings
- prepare and make a presentation to two different groups.

In the course of the above, the candidate must:

- communicate with key stakeholders to position the business to best effect including:
 - listening actively
 - understanding information needs of others
 - adapting communication to suit the audience
 - identifying suitable platform for presentations
 - presenting reliable information
 - designing the presentation to meet the needs of the audience
 - answering questions clearly and concisely.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- industry, media and government organisations, events and communication channels that are relevant to the organisation
- cross-cultural communication
- techniques for negotiation, mediation, conflict resolution and incident de-escalation
- structured and inclusive meeting procedures
- organisational policies and procedures relevant to:
 - presenting and negotiating
 - leading and participating in meetings
 - making presentations

- communication tone, structure, style and impact on others
- relevant organisational policies and procedures on confidentiality of information.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace documentation and resources relevant to performance evidence
- organisation information, including organisational structure, goals, objectives and plans.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBCOM602 Develop and create compliance requirements

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to plan, develop and validate compliance requirements.

It applies to individuals who are responsible for the compliance requirements of an organisation. It also applies to individuals in regulatory authorities, licensing authorities, statutory standards authorities, professional associations and institutes, government departments or other organisations who are responsible for establishing compliance requirements to be fulfilled by other organisations and personnel.

Application of this unit must be consistent with the pertinent sections of relevant Australian and international standards and legislative requirements including: AS 3806:2006 Compliance programs, AS ISO 10002:2006 Customer satisfaction – Guidelines for complaints handling in organizations, AS/NZS 4360:2004 Risk management and AS ISO 15489:2004 Records management.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Regulation, Licensing and Risk – Compliance

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

ELEMENT	PERFORMANCE CRITERIA
1 Clarify the purpose and scope of the proposed compliance requirements	<p>1.1 Determine the authority for the compliance requirements in conjunction with relevant personnel</p> <p>1.2 Clarify the purpose of the compliance requirements with relevant authorised personnel</p> <p>1.3 Determine the scope of the proposed compliance requirements in consultation with relevant internal and/or external personnel</p> <p>1.4 Clarify the implications of non-compliance with the proposed compliance requirements and evaluate in consultation with relevant internal and/or external personnel</p> <p>1.5 Identify and interpret relevant Australian and international standards pertaining to the proposed compliance requirements and related compliance program/management system</p>
2 Prepare the development plan	<p>2.1 Establish a suitable project methodology to identify and consult with relevant stakeholders who have an interest in the proposed compliance requirements</p> <p>2.2 Prepare the plan for the proposed project to develop compliance requirements</p> <p>2.3 Obtain approval of plan from relevant internal and/or external personnel</p>
3 Consult with relevant stakeholders	<p>3.1 Identify relevant internal and/or external stakeholders in the compliance requirements</p> <p>3.2 Consult stakeholders on compliance requirements in accordance with the established methodology</p> <p>3.3 Interpret, analyse and organise outcomes of consultations with stakeholders</p> <p>3.4 Summarise findings and issues determined through the consultation process and draft appropriate recommendations on compliance requirements</p>
4 Prepare the initial draft report on the proposed compliance requirements	<p>4.1 Prepare the initial draft report on the proposed compliance requirements including information on the findings, issues and recommended requirements identified through the consultation processes</p> <p>4.2 Submit draft report to the development team for consideration and make any changes required in preparation for validation consultations</p>
5 Obtain feedback on draft compliance	<p>5.1 Determine an appropriate sample of stakeholders for the validation process in collaboration with the other members of the</p>

ELEMENT	PERFORMANCE CRITERIA
requirements	<p>development team in accordance with the established methodology</p> <p>5.2 Disseminate the draft compliance requirements to the identified sample of stakeholders using appropriate techniques and technology</p> <p>5.3 Collate, interpret and analyse feedback received on the draft compliance requirements</p> <p>5.4 Summarise and organise outcomes of the feedback process in preparation for editing of the draft compliance requirements</p>
6 Edit and document recommended compliance requirements	<p>6.1 Edit the draft compliance requirements appropriately based on the feedback obtained from stakeholders</p> <p>6.2 Format and proofread the edited compliance requirements in accordance with the agreed methodology</p> <p>6.3 Submit the recommended compliance requirements in the required format to authorised personnel for consideration and due process for approval and implementation</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.5, 3.3, 3.4, 4.1, 5.3, 5.4, 6.1, 6.2	<ul style="list-style-type: none"> Comprehends and analyses texts to identify key requirements Identifies, analyses, reviews and extracts relevant information from complex texts Proofreads draft texts to identify changes required
Writing	2.1-2.3, 3.3, 3.4, 4.1, 4.2, 5.3, 5.4, 6.1, 6.2	<ul style="list-style-type: none"> Collates, summarises and compiles information from a range of sources Develops materials for a specific audience using clear and detailed language to convey findings and recommendations Edits and incorporates amendments to ensure compliance with regulatory or organisational requirements
Oral Communication	1.1-1.4, 2.3, 3.2, 5.1	<ul style="list-style-type: none"> Conveys or seeks information, in a format and style appropriate to a specific audience

		<ul style="list-style-type: none"> Elicits the views and opinions of others by listening and questioning
Navigate the world of work	1.5	<ul style="list-style-type: none"> Identifies organisational implications of legislative requirements and considers these when planning and implementing work
Interact with others	1.1-1.4, 2.3, 3.2, 5.1	<ul style="list-style-type: none"> Collaborates with others using effective interpersonal skills to facilitate shared understanding Identifies and uses appropriate conventions and practices when communicating with internal and external personnel
Get the work done	1.4, 1.5, 2.1, 2.2, 2.3, 3.1-3.3, 4.1, 4.2, 5.1-5.4, 6.1-6.3	<ul style="list-style-type: none"> Sequences and schedules complex activities, monitors implementation and manages required communication with others Gathers and analyses data and feedback to improve outcomes Utilises features and functions of digital tools to complete complex tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBCOM602 Develop and create compliance requirements	BSBCOM602B Develop and create compliance requirements	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBCOM602 Develop and create compliance requirements

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- access and interpret information on relevant Australian and international standards
- collaborate with others to clarify the purpose and scope of the compliance requirements
- plan the compliance requirements using a suitable project methodology
- consult relevant stakeholders about compliance requirements according to the approved plan
- prepare draft recommendations on compliance requirements based on information collected during consultations
- collaborate with others to conduct a validation process on the draft compliance requirements
- document the final compliance requirements according to organisational requirements.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline relevant compliance requirements
- explain methods and techniques suitable for the development and creation of compliance requirements
- outline elements of compliance program/management systems including:
 - documentation of compliance requirements relevant to the organisation
 - specification of compliance management functions, accountabilities and responsibilities within the organisation
 - compliance related management information systems
 - record keeping systems required for compliance management

- liaison procedures with relevant internal and external personnel on compliance related matters
 - breach management policies and processes including the identification, classification, investigation, rectification and reporting of breaches in compliance requirements
 - compliance reporting procedures
 - corporate induction and training processes related to compliance management
 - processes for the internal and external sharing and promotion of information on compliance requirements and a compliance program management system
 - compliance complaints handling systems
 - continuous improvement processes for compliance including monitoring, evaluation and review
 - strategies for developing a positive compliance culture within the organisation
 - techniques and performance indicators for monitoring the operation of a compliance program/management system
 - reporting processes on compliance management including reports on breaches and rectification action.
- explain relevant organisational policies and procedures including compliance plans in various compliance area and organisational standards for operations and ethics.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the compliance field of work and include access to:

- organisational policies and procedures and documentation relevant to compliance requirements
- Australian and international standards relevant to compliance requirements
- interaction with others
- computer resources and business technology
- case studies and, where possible, real situations.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBCRT413 Collaborate in creative processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to engage in a creative process and reflect on own role in the process.

The unit applies to individuals who are working in creative industries, as well as those involved in broader business and community activities where creative team effort is highly valued.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Critical Thinking & Problem Solving – Critical Thinking

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Enter into a collaborative creative process	1.1 Identify individual and group responsibilities according to task requirements 1.2 Identify legislative and organisational frameworks applicable to task 1.3 Identify expectations of collaborative process and task outcome with team 1.4 Confirm channels to communicate with team
2. Engage in a collaborative creative process	2.1 Develop action plan for collaboration 2.2 Establish solutions according to task requirements in collaboration with team

ELEMENT	PERFORMANCE CRITERIA
	2.3 Provide constructive feedback on the ideas of others 2.4 Support team members to meet task requirements
3. Reflect on own role in the collaborative creative process	3.1 Reflect on personal level of participation, relationships with others and personal behaviour in the collaborative process 3.2 Seek feedback from others on personal contribution and participation 3.3 Identify methods and opportunities to improve collaborative skills

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Reflects on processes and outcomes and identifies some key principles that may be relevant in future situations
Oral communication	<ul style="list-style-type: none"> Presents ideas clearly using language and features suitable to diverse audiences Uses listening and questioning techniques to elicit the views and opinions of others and to confirm understanding Actively identifies the requirements of important communication exchanges, selecting appropriate channel, format, tone and content to suit purpose and audience
Writing	<ul style="list-style-type: none"> Notes comments, suggestions and ideas for own use
Teamwork	<ul style="list-style-type: none"> Looks for ways of establishing connections and building genuine understanding with a diverse range of people Responds to and uses diverse perspectives to enrich the creative process Contributes to creating a climate where people feel comfortable to suggest, explore, adapt and adopt new ideas as a regular part of work life
Problem-solving	<ul style="list-style-type: none"> Uses problem-solving skills to evaluate and challenge ideas and move towards solutions
Self-management	<ul style="list-style-type: none"> Reflects on personal values, behaviours and assumptions and considers how these might be perceived by others

Unit Mapping Information

Supersedes and is equivalent to BSBCRT402 Collaborate in a creative process.

Supersedes but is not equivalent to BSBCRT403 Explore the history and social impact of creativity.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBCRT413 Collaborate in creative processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- collaborate in a creative process on at least two occasions.

In the course of the above, the candidate must:

- contribute to a collaborative creative process in a way that generates, expands and develops ideas into a well-conceived solution
- develop an action plan with team according to task requirements
- evaluate and seek feedback on own role in the collaborative process
- identify and act on ways to enhance own ability to contribute effectively to a collaborative creative process.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legal framework that applies to the collaboration of creative process
- methodologies for creative idea generation and refinement
- features of trustworthy and ethical behaviour in the context of creative endeavours
- various roles individuals may play in a collaborative creative process and how these roles contribute to the overall effort
- strategies to develop teamwork in a collaborative creative process
- components of team action plan including:
 - task requirements
 - timelines
 - delegation of responsibilities
- techniques for maximising the potential for creativity in a team.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- a team of people in a collaborative creative process.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBCUS501 Manage quality customer service

Modification History

Release	Comments
Release 2	This version released with BSB Business Services Training Package Version 2.0. Version created to clarify assessment conditions
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to develop strategies to manage organisational systems that ensure products and services are delivered and maintained to standards agreed by the organisation.

It applies to individuals who supervise the provision of quality customer service within an organisation's procedures framework by others. At this level, individuals must exercise considerable discretion and judgement, using a range of problem solving and decision making strategies.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Stakeholder Relations – Customer Service

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Plan to meet internal and external customer	1.1 Investigate, identify, assess, and include the needs of customers in planning processes

ELEMENT	PERFORMANCE CRITERIA
requirements	1.2 Ensure plans achieve the quality, time and cost specifications agreed with customers
2 Ensure delivery of quality products and services	2.1 Deliver products and services to customer specifications within organisation's business plan 2.2 Monitor team performance to consistently meet the organisation's quality and delivery standards 2.3 Help colleagues overcome difficulties in meeting customer service standards
3 Monitor, adjust and review customer service	3.1 Develop and use strategies to monitor progress in achieving product and/or service targets and standards 3.2 Develop and use strategies to obtain customer feedback to improve the provision of products and services 3.3 Develop, procure and use resources effectively to provide quality products and services to customers 3.4 Make decisions to overcome problems and to adapt customer services, products and service delivery in consultation with appropriate individuals and groups 3.5 Manage records, reports and recommendations within the organisation's systems and processes

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 2.1, 3.1, 3.2, 3.3, 3.5	<ul style="list-style-type: none"> Interprets and analyses textual information from a variety of sources and applies the knowledge that has been gained to evaluate standards for organisation's products and services
Writing	1.2, 3.1, 3.2, 3.3, 3.5	<ul style="list-style-type: none"> Produces a range of text types to convey information, requirements or recommendations matching style of writing to purpose and audience
Oral Communication	1.1, 1.2, 2.1, 2.3, 3.2	<ul style="list-style-type: none"> Clearly articulates systems and standards in a team environment using language suitable to diverse audiences Uses listening and questioning techniques to obtain

		feedback and confirm understanding
Numeracy	1.2	<ul style="list-style-type: none"> Interprets and comprehends mathematical information in organisation's business and customer service plans.
Navigate the world of work	2.1, 2.2, 3.1, 3.5	<ul style="list-style-type: none"> Recognises and applies organisational protocols and meets expectations associated with own work
Interact with others	1.1, 2.3, 3.4	<ul style="list-style-type: none"> Identifies and uses appropriate conventions and protocols when communicating with colleagues and customers Collaborates with others, taking into account their strengths and experience, to achieve desired outcomes Provides support in field of expertise to team
Get the work done	1.1, 1.2, 2.1, 2.2, 3.1-3.5	<ul style="list-style-type: none"> Develops and implements plans using logical processes and monitors and evaluates progress against stated goals Accepts responsibility for addressing complex or non-routine difficulties, applying problem solving processes in determining a solution. Uses digital technology to access, organise and present information in a format that meets requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBCUS501 Manage quality customer service Release 2	BSBCUS501 Manage quality customer service Release 1	Updated to clarify assessment conditions	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBCUS501 Manage quality customer service

Modification History

Release	Comments
Release 2	This version released with BSB Business Services Training Package Version 2.0 Version created to clarify assessment conditions
Release 1	This version first released with Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- develop and manage organisational systems for quality customer service
- develop and review plans, policies and procedures for delivering and monitoring quality customer service
- implement policies and procedures to ensure quality customer service
- solve complex customer complaints and system problems that lead to poor customer service
- monitor and assist teams to meet customer service requirements
- develop, procure and use human and physical resources to support quality customer service delivery.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline the legislative and regulatory context of the organisation relevant to customer service
- describe organisational policy and procedures for customer service including handling customer complaints
- identify service standards and best practice models
- summarise public relations and product promotion
- outline techniques for dealing with customers including customers with specific needs

- explain techniques for solving complaints including the principles and techniques involved in the management and organisation of:
 - customer behaviour
 - customer needs research
 - customer relations
 - ongoing product and/or service quality
 - problem identification and resolution
 - quality customer service delivery
 - record keeping and management methods
 - strategies for monitoring, managing and introducing ways to improve customer service relationships
 - strategies to obtain customer feedback.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the customer service field of work and include access to:

- legislation, regulations and codes of practice related to customer service
- business technology
- workplace documentation and resources
- complex customer complaints
- case studies and, where possible, real situations
- interaction with others.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBDES403 Develop and extend design skills and practice

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to develop and extend skills as a practising designer.

It applies to individuals who work as a designer, in any industry context, either independently or employed by an organisation.

Designers must continually refine, develop and evaluate their own conceptual and technical skills. Research, experimentation and collaboration are key factors in this process.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Design – Design Process

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Acquire and develop technical skills	1.1 Plan strategies to ensure the development of appropriate technical skills in design practice 1.2 Plan and use opportunities to develop and assess technical skills 1.3 Identify and use practice, feedback, discussion and evaluation

ELEMENT	PERFORMANCE CRITERIA
	<p>opportunities to continuously improve technical skills</p> <p>1.4 Develop and extend technical skills through testing capabilities of materials, tools and equipment</p> <p>1.5 Identify and use relevant media to stimulate technical and professional development</p>
2 Develop conceptual skills and ideas	<p>2.1 Engage in ongoing experimentation and exploration of different ideas and techniques</p> <p>2.2 Discuss ideas with others and apply knowledge gained to inform own work</p> <p>2.3 Use work practice to gain experience in a range of genres and interpretations</p> <p>2.4 Study the work of others to stimulate conceptual and technical skills development</p> <p>2.5 Research and share ideas across a range of design disciplines</p> <p>2.6 Identify and use a range of opportunities to develop own skills and keep informed about current design practice</p>
3 Develop own voice	<p>3.1 Explore and experiment with new ideas in making and/or interpreting design work</p> <p>3.2 Explore and use technology, where appropriate, to develop own voice and expand practice</p> <p>3.3 Demonstrate own voice through design project realisation implementation</p>
4 Evaluate own work	<p>4.1 Seek and apply constructive criticism from others to improve own work</p> <p>4.2 Evaluate own work against planned strategy for own practice</p> <p>4.3 Evaluate own work in the context of work by others to extend own practice</p> <p>4.4 Adjust work processes and practice as necessary to improve technical, conceptual and commercial outcomes</p>
5 Research work opportunities	<p>5.1 Correctly identify sources of information relating to work opportunities for designers</p> <p>5.2 Identify networks and promotional opportunities for designers which may be helpful in developing career opportunities</p> <p>5.3 Incorporate research results and information into own work and career planning</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Learning	1.1-1.5, 2.2, 2.4, 2.6, 3.2, 4.1-4.3	<ul style="list-style-type: none"> • Uses practical strategies to identify and implement improvements in own creative skills and technical design skills and practice
Reading	1.5, 2.4, 2.5, 5.1-5.3	<ul style="list-style-type: none"> • Researches and evaluates a variety of textual information from a wide range of sources
Writing	2.5, 4.1, 5.3	<ul style="list-style-type: none"> • Uses clear and specific language to document ideas, feedback and research results
Oral Communication	1.3, 2.2, 2.5, 4.1	<ul style="list-style-type: none"> • Participates in a range of verbal exchanges and presentations using appropriate tone and vocabulary to suit the audience • Uses active listening and questioning techniques to clarify and confirm understanding
Navigate the world of work	1.2, 1.3, 2.3, 4.1, 5.2	<ul style="list-style-type: none"> • Recognises the importance of developing technical skills and of learning from feedback and self-reflection • Begins to broaden areas of interest and focus, seeking new challenges and recognising that expertise can be adapted and applied in diverse contexts
Interact with others	2.5, 4.1, 5.2	<ul style="list-style-type: none"> • Begins to cultivate relationships with people with the knowledge, skills and influence to provide collaborative support
Get the work done	1.1, 1.2, 1.4, 1.5, 2.1, 2.3, 2.6, 3.1-3.3, 4.2, 4.4, 5.1	<ul style="list-style-type: none"> • Takes responsibility for planning and implementing tasks required to achieve outcomes, including those times when interaction with others is • Systematically analyses and evaluates information to aid in decision making and problem solving • Applies some basic principles of lateral thinking to generate new or innovative ideas • Recognises the potential of new approaches to enhance work practices and outcomes • Evaluates effectiveness of decisions on how well they meet stated goals • Understands key principles and concepts underpinning the design and operation of digital systems and applies these when seeking to understand the potential of new technology

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBDES403 Develop and extend design skills and practice	BSBDES403A Develop and extend design skills and practice	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBDES403 Develop and extend design skills and practice

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- use strategies to develop or extend skills, ideas and a unique voice
- adjust work processes as a result of peer feedback and self-evaluation
- research work options, networking and promotional opportunities and incorporate information into own work and career development.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- list current and emerging designers in the relevant design discipline
- discuss current and emerging trends and technologies in the relevant design discipline, and the opportunities and challenges they represent
- identify professional development information and resources available to designers
- summarise sources of information relating to work opportunities and career planning.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the design process field of work and include access to materials, resources and equipment used in the development of technical and conceptual skills in the relevant design context.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBESB401 Research and develop business plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to research and develop business plans for achieving business goals and objectives.

The unit applies to those establishing or operating a business providing self-employment, as well as those establishing a new venture as part of a larger organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Entrepreneurship and Small Business

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to develop business plan	1.1 Identify purpose and required components of business plan 1.2 Identify and document business goals, objectives and budget 1.3 Research market needs and estimate market size
2. Draft business plan	2.1 Establish resource, legal and compliance requirements according to identified business goals and objectives 2.2 Assess product mix, volumes and pricing opportunities relevant to the identified target market and according to business goals and objectives 2.3 Plan marketing activities relevant to the product mix and according to marketing objectives and strategies and budgetary requirements 2.4 Develop draft plan according to identified business goals,

ELEMENT	PERFORMANCE CRITERIA
	<p>objectives and market needs</p> <p>2.5 Analyse draft plan and identify, assess and prioritise internal and external risks according to workplace procedures</p> <p>2.6 Research specialist services and sources of advice and cost according to available resources</p>
3. Create a business plan	<p>3.1 Identify costs associated with production and delivery of business products and/or services</p> <p>3.2 Calculate prices based on costs and profit targets, as a charge-out rate for labour or unit price for products and/or services</p> <p>3.3 Prepare cash flow projections to enable business operation according to business plan and legal requirements</p> <p>3.4 Select budget targets to enable ongoing monitoring of financial performance</p> <p>3.5 Identify sources of finance for required liquidity according to business goals and objectives and workplace procedures</p>
4. Finalise business planning and plan for risk	<p>4.1 Develop risk management strategies according to business goals and objectives, and legal and compliance requirements, and established business activities</p> <p>4.2 Assess likelihood of non-conformance with each component of business plan</p> <p>4.3 Develop a contingency plan to address possible areas of non-conformance according to workplace procedures</p> <p>4.4 Identify specific interests and objectives of key stakeholders and confirm their support of planning outcomes</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identifies, analyses and evaluates information during planning process
Writing	<ul style="list-style-type: none"> Prepares written documentation that communicates plan information clearly and effectively
Numeracy	<ul style="list-style-type: none"> Interprets numerical information to determine prospective markets, resource allocations and business profits/losses
Self-management	<ul style="list-style-type: none"> Identifies implications of legal and compliance requirements related to own work

Skill	Description
	<ul style="list-style-type: none">• Makes a range of critical and non-critical decisions, taking a range of constraints into account
Planning and organising	<ul style="list-style-type: none">• Uses a combination of formal, logical planning processes to identify relevant information and to evaluate alternative strategies or methods

Unit Mapping Information

Supersedes and is equivalent to BSBSMB404 Undertake small business planning.

Supersedes but is not equivalent to:

- BSBSMB415 Refine and strengthen a small business
- BSBSMB422 Plan small business growth.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBESB401 Research and develop business plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop at least one business plan that addresses the goals and objectives of a business or business venture.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legal and compliance requirements relating to business operation to be included in plan, including:
 - environmental
 - work health and safety (WHS), including WHS responsibilities and procedures for identifying hazards relating to business profile
 - equal opportunity
 - industrial relations
- types of business planning, including:
 - feasibility studies
 - strategic, operational, financial and marketing planning
- factors affecting structure of business plan, including:
 - purpose of plan
 - target audience
 - desired outcomes
- key components of business plan, including:
 - sources and costs of finance to provide required liquidity and profitability for business
 - marketing strategies and methods to promote market exposure of business
 - methods or means of production or operation required for business

- staffing requirements to effectively produce or deliver products and services
- contingency plan
- methodology for researching and preparing a business plan
- common business risks and risk management strategies
- workplace procedures for:
 - assessing and prioritising internal and external risks to business
 - establishing resource requirements aligned to business goals and objectives, including for calculating staffing requirements to produce or deliver products and/or services
 - developing a business contingency plan for unexpected events and situations
 - developing risk management strategies.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- legislation, regulations, standards and codes relating to business described in performance evidence
- workplace documentation and resources relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBESB402 Establish legal and risk management requirements of new business ventures

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to identify and comply with legal and risk management requirements of the business or new business venture, including negotiating, creating and planning for legal contracts used within the business, where required.

The unit applies to those establishing a business providing self-employment, as well as those establishing a new venture as part of a larger organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Entrepreneurship and Small Business

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify legal and risk management requirements relating to business	1.1 Identify legal structure of business using reliable sources 1.2 Identify legislative and regulatory requirements applicable to identified legal structure 1.3 Analyse identified requirements and their relationship to business and workplace practices and processes
2. Implement procedures and processes to comply with legislative and regulatory	2.1 Develop and implement procedures to ensure compliance with relevant legislative and regulatory requirements 2.2 Develop and implement processes and procedures for storing and maintaining legal documents and business records 2.3 Establish systems to identify areas of non-compliance and take

ELEMENT	PERFORMANCE CRITERIA
requirements	corrective action where necessary
3. Negotiate and arrange contracts	3.1 Assess products and/or services to determine procurement rights and ensure protection of business interests 3.2 Negotiate and secure contractual procurement rights for goods and/or services as required and according to business plan and workplace procedures 3.3 Complete any contractual arrangements according to workplace procedures and business plan 3.4 Seek legal advice if required to confirm contractual rights and obligations
4. Mitigate business risks	4.1 Analyse business activities and identify applicable risk management requirements 4.2 Assess probability and impact of identified internal and external risks to business 4.3 Develop a plan to prioritise and treat risks 4.4 Implement procedures to mitigate risks according to risk treatment plan

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Accesses information to maintain up-to-date information on legal and risk management requirements
Reading	<ul style="list-style-type: none"> Identifies, analyses and evaluates a range of complex text to determine legislative, regulatory and related business requirements
Writing	<ul style="list-style-type: none"> Prepares written plans and workplace documentation that communicate information clearly and effectively
Oral communication	<ul style="list-style-type: none"> Uses specific and relevant language to clearly articulate legal issues, and uses questioning and listening techniques to clarify solutions Participates in verbal negotiations using tone and language suitable to audience
Numeracy	<ul style="list-style-type: none"> Reviews, analyses and contrasts numerical data which may be embedded in documents
Self-management	<ul style="list-style-type: none"> Monitors adherence to workplace procedures and legislative requirements
Planning and	<ul style="list-style-type: none"> Implements actions as per plans and makes adjustments if necessary

Skill	Description
organising	and addressing unexpected issues

Unit Mapping Information

Supersedes and is equivalent to BSBSMB401 Establish legal and risk management requirements of small business.

Supersedes but is not equivalent to:

- BSBIPR405 Protect and use intangible assets in small business
- BSBSMB410 Review and implement energy efficiency in business operations.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBESB402 Establish legal and risk management requirements of new business ventures

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- establish legal and risk management requirements for at least one business or new business venture, and implement procedures for meeting them
- create at least one contract with a supplier of goods or services to business or new business venture
- identify, assess and treat at least three different risks specific to business or new business venture and prioritise risks with highest probability of occurrence and greatest negative impact.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislative and regulatory requirements relating to operation of new business ventures, including:
 - consumer legislation
 - environmental requirements and responsibilities
 - registration and licensing
 - industry codes of practice and standards
 - work health and safety (WHS) requirements and responsibilities
 - insurance products and requirements, including adequate coverage
- workplace procedures for:
 - negotiating, creating and terminating contractual arrangements, including seeking legal advice
 - investigating and securing procurement rights relating to products and/or services
 - identifying options for leasing or owning business premises
- legal rights and obligations of alternative ownership structures

- key features of workplace record-keeping processes and procedures that:
 - meet minimum legal and taxation requirements
 - maintain records in a secure and accessible manner
- key components of compliance procedures:
 - following taxation and industrial relations principles and requirements
 - updating and maintaining legal documents
 - investigating areas of non-compliance
 - monitoring provision of products and/or services
 - taking corrective action where necessary
- key steps in risk management process, including procedures for developing and implementing business risk treatment plan.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- business technology, including internet access
- legislation, regulations, codes of practice and standards relating to business described in performance evidence
- workplace documentation and resources relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBESB406 Establish operational strategies and procedures for new business ventures

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to develop and implement operational strategies and procedures for new businesses.

The unit applies to those establishing a business providing self-employment, as well as those establishing a new venture as part of a larger organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Entrepreneurship and Small Business

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review operational strategies and procedures for business or new business venture	1.1 Develop a detailed operational plan that sets out clear action points to fulfil on business goals and objectives 1.2 Identify work health and safety (WHS) and environmental issues and implement strategies to minimise risk factors 1.3 Review and evaluate, where appropriate, a quality assurance process for the business in line with industry standards, compliance requirements and cultural criteria 1.4 Develop operational key performance indicators (KPIs) that align to business plan 1.5 Align KPIs to business strategies, including utilisation of existing or new technologies, where practicable, to optimise

ELEMENT	PERFORMANCE CRITERIA
	business performance
2. Implement developed operational strategies and procedures	2.1 Implement systems to evaluate business performance and customer satisfaction, including by setting KPIs or targets 2.2 Implement systems to control stock, expenditure or cost, wastage or shrinkage and risks to health and safety according to business plan, incorporating new digital technologies where applicable 2.3 Identify and manage staffing requirements, considering a range of permanent and flexible arrangements, and adhering to budgetary constraints 2.4 Provide products and/or services according to established legal, ethical cultural and technical standards 2.5 Provide products and/or services according to time, cost and quality specifications, and customer requirements, incorporating new digital technologies where applicable 2.6 Apply quality procedures to address product and/or service and customer requirements
3. Evaluate business performance	3.1 Use digital technologies to regularly evaluate and review achievement of operational targets to ensure optimum business performance, according to business goals and objectives 3.2 Review and document systems and structures to support business performance 3.3 Investigate and analyse operating problems to establish causes and implement changes as required, as part of business quality system 3.4 Update operational policies and procedures to incorporate corrective action
4. Review business operations	4.1 Review and adjust business operations to increase business success, according to business goals and objectives 4.2 Research and implement new and emerging digital technologies into business operations according to business goals and objectives and workplace procedures 4.3 Research new business opportunities and adjust business goals and objectives as new opportunities arise

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Evaluates complex text to determine legislative, regulatory and workplace documentation
Writing	<ul style="list-style-type: none"> Prepares written reports and workplace documentation that communicate information clearly and effectively
Numeracy	<ul style="list-style-type: none"> Interprets numerical information to manage performance information and regulate cash flow
Self-management	<ul style="list-style-type: none"> Evaluates adherence to workplace policies and procedures and considers own role for its contribution to broader goals of work environment Identifies implications of legal and regulatory responsibilities for own work, with specific reference to safety Identifies concepts, principles and features of approaches in use in other contexts and applies them to own situation
Planning and organising	<ul style="list-style-type: none"> Develops plans to manage relatively complex, non-routine tasks that may contribute to longer-term operational and strategic goals

Unit Mapping Information

Supersedes and is equivalent to BSBSMB420 Evaluate and develop small business operations.

Supersedes but is not equivalent to:

- BSBFRA401 Manage compliance with franchisee obligations and legislative requirements
- BSBFRA402 Establish a franchise
- BSBFRA403 Manage relationship with franchisor
- BSBFRA404 Manage a multiple-site franchise
- BSBFRA501 Establish a franchise operation
- BSBFRA502 Manage a franchise operation
- BSBFRA503 Manage establishment of new sites or regions
- BSBFRA504 Manage relationships with franchisees
- BSBFRA505 Manage closure of a franchise
- BSBIPR501 Manage intellectual property to protect and grow business
- BSBSMB423 Create a digital technology plan for small business.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBESB406 Establish operational strategies and procedures for new business ventures

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop strategies and procedures to manage operations for at least one new business or new business venture, including:
 - an operational plan
 - risk management procedures
 - a quality assurance process
 - performance measures.

In the course of the above, the candidate must:

- use existing, new and emerging digital technologies to optimise business performance
- research and record business improvements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislation, regulations, industry codes of practice and standards specific to small business described in performance evidence
- key features of methods for implementing operation and revenue control systems, including for controlling stock and expenditure
- methods for evaluating performance and implementing improvements, including:
 - identifying and meeting staffing requirements
 - analysing and correcting business problems
 - reviewing and adjusting the business plan
- work health and safety (WHS) responsibilities and procedures for managing hazards and assessing risks associated with business described in performance evidence
- principles of risk management, including risk assessment

- quality assurance system principles and methods
- role of digital technologies and innovation in modern business
- key features of systems to manage staff, stock, expenditure, services and customer service
- key features of required technical or specialist skills relevant to business operations
- workplace procedures for implementing new and emerging digital technologies into business operations.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- business equipment and resources, including business technology
- legislation, regulations, codes of practice and standards relating to business described in performance evidence
- workplace documentation and resources relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBESB407 Manage finances for new business ventures

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to implement and review financial management strategies, including by using new and emerging digital technologies and interpreting financial reports and other numerical data.

The unit applies to those establishing a business providing self-employment, as well as those establishing a new venture as part of a larger organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Entrepreneurship and Small Business

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Implement financial strategy	1.1 Identify financial information requirements and obtain specialist services, as required 1.2 Produce financial budgets or projections for each forward period, and distribute to required people according to legal requirements and workplace procedures 1.3 Develop a plan to negotiate and manage business capital to best enable implementation of the business plan 1.4 Develop and maintain strategies and enable adequate financial provision for taxation according to legal requirements 1.5 Develop, monitor and maintain client credit policies to maximise cash flow

ELEMENT	PERFORMANCE CRITERIA
	<p>1.6 Select key performance indicators (KPIs) to enable ongoing monitoring of financial performance in line with business plan</p> <p>1.7 Record and communicate financial procedures to required personnel to facilitate implementation of business plan according to workplace procedures</p>
2. Monitor financial performance	<p>2.1 Use available systems to monitor and report on financial performance targets, and analyse data to establish extent to which financial goals have been met</p> <p>2.2 Monitor marketing and operational strategies for their effects on financial goals</p> <p>2.3 Calculate and evaluate financial ratios according to own business and/or industry benchmarks</p>
3. Review financial performance	<p>3.1 Assess financial strategy to determine whether variations or alternative plans are needed according to workplace procedures, and change as required</p> <p>3.2 Research and implement, with relevant personnel, new and emerging digital technologies to boost business profitability according to business plan</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Evaluates complex text to determine legislative, regulatory and workplace documentation
Writing	<ul style="list-style-type: none"> Prepares written reports and workplace documentation that communicate complex information clearly and effectively
Oral communication	<ul style="list-style-type: none"> Articulates clearly using specific and relevant language suitable to audience to convey requirements, and employs listening and questioning techniques to confirm understanding
Numeracy	<ul style="list-style-type: none"> Interprets numerical information to calculate required financial information
Self-management	<ul style="list-style-type: none"> Identifies implications of legal and regulatory responsibilities for own work Selects appropriate form, channel and mode of communication for a specific purpose relevant to own role
Initiative and	<ul style="list-style-type: none"> Uses formal and informal processes to monitor implementation of ideas and analyse outcomes

Skill	Description
enterprise	
Planning and organising	<ul style="list-style-type: none">• Develops plans to manage relatively complex, non-routine tasks that may contribute to longer-term operational and strategic goals

Unit Mapping Information

Supersedes and is equivalent to BSBSMB421 Manage small business finances.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBESB407 Manage finances for new business ventures

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- implement a financial strategy for at least one business or new business venture according to business plan and goals.

In the course of the above, the candidate must:

- adhere to legal requirements
- produce financial projections, including cash flow estimates
- develop a plan to negotiate and manage business assets and financial capital
- define strategies for debt collection and contingencies for debtors
- manage cash flow
- define key indicators for financial performance
- communicate with required people
- seek specialist services, where required
- monitor the financial performance of the business and make changes to strategy as required
- identify opportunities to implement new and emerging digital technologies to support the financial management of the business.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislative and regulatory financial requirements that apply to new business venture described in performance evidence
- key purposes of financial reports
- components of financial budgets or projections, including cash flow estimates
- workplace procedures for:
 - recording and communicating financial procedures to required personnel

- distributing financial budgets and projections
- using digital technologies to monitor and report on financial performance targets and analyse data
- assessing and changing financial plan
- forms, channels and modes of communication used in relation to managing business finances
- key features of business and industry benchmarking used to evaluate financial ratios
- key features of financial decision-making relevant to the business, including:
 - strategies that enable adequate financial provision for taxation
- components of client credit policies, including contingencies for debtors in default
- key features of significant financial indicators
- key features of balance sheet preparation and interpretation
- key features of debt collection procedures and strategies
- key features of profit and loss statement preparation and interpretation
- key features of stock records and stock control relevant to the business.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- business equipment and resources, including business technology
- legislation, regulations, codes of practice and standards relating to business described in performance evidence
- workplace documentation and resources relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBFIA302 Process payroll

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes skills and knowledge required to process payroll from provided data using manual and computerised payroll systems.

It applies to individuals employed in a range of work environments who are responsible for payroll functions within an organisation. They may work as individuals providing administrative support within an enterprise, or may be other members of staff who have been delegated payroll responsibilities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Finance – Financial Administration

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Record payroll data	1.1 Check payroll data and clarify discrepancies with designated persons 1.2 Enter employee pay period details and any deductions and allowances in payroll system in accordance with source documents 1.3 Calculate payment due to individual employees to reflect standard pay and variations in accordance with employee source

ELEMENT	PERFORMANCE CRITERIA
	data
2 Prepare payroll	<p>2.1 Prepare payroll within designated timelines and in accordance with organisational policy and procedures</p> <p>2.2 Reconcile total wages for pay period, check or correct irregularities or refer to designated persons for resolution</p> <p>2.3 Make arrangements for payment in accordance with organisational and individual requirements</p> <p>2.4 Obtain authorisation of payroll and individual pay advice in accordance with organisational requirements</p> <p>2.5 Produce, check and store payroll records in accordance with organisational policy and security procedures</p> <p>2.6 Follow security procedures for processing payroll and for maintaining payroll records</p>
3 Handle payroll enquiries	<p>3.1 Respond to payroll enquiries in accordance with organisational and legislative requirements</p> <p>3.2 Provide information in accordance with organisational and legislative requirements</p> <p>3.3 Ensure all enquiries outside area of responsibility and knowledge are referred to designated persons for resolution</p> <p>3.4 Complete additional information or follow-up action within designated timelines in accordance with organisational policy and procedures</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1-1.3, 2.1-2.6, 3.1-3.4	<ul style="list-style-type: none"> Interprets a range of textual information to determine activities required
Writing	1.1-1.3, 2.1-2.6, 3.1-3.4	<ul style="list-style-type: none"> Accurately records textual information and maintains personal and banking details using format, language and structure in context

Oral Communication	1.1, 3.1-3.4	<ul style="list-style-type: none"> Explains financial issues clearly using terminology and tone appropriate to audience Uses questioning and listening skills in verbal exchanges to clarify information
Numeracy	1.1-1.3, 2.1, 2.2, 2.5, 3.1-3.3	<ul style="list-style-type: none"> Uses a limited range of mathematical calculations to calculate and reconcile amounts and arrange/compare numerical information
Navigate the world of work	1.2, 1.3, 2.1, 2.3-2.6, 3.1, 3.2, 3.4	<ul style="list-style-type: none"> Adheres to legislative requirements and organisational policies and procedures relevant for own work
Interact with others	1.1, 2.2, 3.1-3.3	<ul style="list-style-type: none"> Selects the appropriate mode of communication for a specific purpose Collaborates with others to achieve predetermined goals
Get the work done	1.1-1.3, 2.1-2.6, 3.2, 3.4	<ul style="list-style-type: none"> Takes responsibility for own workload and monitors adherence to specified goals and timelines Recognises and takes responsibility for resolving problems relevant to own role Takes responsibility for routine low-impact decisions within familiar situations Uses digital technologies to access, record, store, organise and compile data as required

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBFIA302 Process payroll	BSBFIA302A Process payroll	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBFIA302 Process payroll

Modification History

Release	Comments
Release 1	This version first released with Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- plan and perform payroll calculations in accordance with all legislative and organisational requirements, and predetermined timelines
- refer enquiries outside area of responsibility to an appropriate authority.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify the key provisions of relevant legislation, standards and codes of practice that may affect payroll operations
- outline relevant organisational policies and procedures
- list the different types of payroll systems.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the financial administration field of work and include access to:

- office equipment and resources
- computer with relevant software
- payroll data (samples or actual)
- case studies and, where possible, real situations.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBFIA412 Report on financial activity

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Application

This unit describes the skills and knowledge required to prepare financial reports in line with statutory reporting requirements. It encompasses compiling and analysing data.

This unit applies to individuals that are required to apply specialised knowledge and analytical skills to prepare financial reports as part of their job role.

Work functions in the occupational areas where this unit may be used are subject to regulatory requirements. Refer to the BSB Business Services Training Package Companion Volume Implementation Guide or the relevant regulator for specific guidance on regulatory requirements.

Unit Sector

Finance – Financial Administration

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Compile and analyse financial data	1.1 Collect, evaluate and code current financial data to ensure consistency, quality and accuracy in accordance with organisational requirements 1.2 Use conversion and consolidation procedures to compile data in accordance with organisational requirements 1.3 Make, record and disclose asset and liability valuations in compliance with accounting standards

ELEMENT	PERFORMANCE CRITERIA
	1.4 Ensure that discrepancies, unusual features or queries are identified, resolved or referred to the appropriate authority 1.5 Identify and record effects of taxation
2. Prepare reports	2.1 Correctly record income and expenditure to ensure compliance with statutory requirements 2.2 Correctly identify relevant receipts, revenue documentation and payments 2.3 Prepare reports according to statutory and ethical requirements, and organisational procedures relating to conflict of interest, confidentiality, and disclosure statements 2.4 Present charts, diagrams, tables and supporting data in required format 2.5 Review statements and data for errors and compliance with statutory requirements and organisational procedures, and amend as required 2.6 Submit statutory requirement reports to appropriate authorities within stated deadlines
3. Provide financial business recommendations	3.1 Review recommendations and ensure they are logically derived and supported by evidence 3.2 Provide recommendations to enhance the effectiveness of functions and services 3.3 Ensure recommendations are concise and relevant to the direction and control of organisational operations 3.4 Identify and prioritise significant issues in statements including comparative financial performances for review and decision making 3.5 Ensure structure and format of reports are clear and conform to organisational and statutory requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Compares and analyses information from a range of sources varying in complexity to determine and complete financial requirements

Writing	<ul style="list-style-type: none"> Records numerical and textual information incorporating required financial language organising data in a manner that supports the format and purpose of the document
Oral Communication	<ul style="list-style-type: none"> Presents financial issues and requirements clearly, succinctly and based on own findings using language appropriate to audience and environment Exchanges and obtains information from others by listening and questioning
Numeracy	<ul style="list-style-type: none"> Establishes criteria and categories for financial management purposes and monitors activities on a regular basis Uses a wide range of mathematical calculations to interpret and arrange/compare numerical information in order to comply with requirements
Navigate the world of work	<ul style="list-style-type: none"> Recognises, understands and applies applicable legislation, industry standards and organisational policies and procedures in the conduct of own work
Interact with others	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with external stakeholders to supply required information
Get the work done	<ul style="list-style-type: none"> Uses formal and logical processes to plan and complete tasks, achieving timelines and organisational requirements Uses analytical skills to identify discrepancies, attempts to resolve the issues within the context of own responsibilities and, where appropriate, consults with more experienced colleagues for assistance Uses a range of digital technologies to access, record, store, organise, compile, analyse and present complex data from multiple sources of information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBFIA412 Report on financial activity Release 1	BSBFIA402 Report on financial activity Release 1	Updates to elements, performance criteria and assessment requirements.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBFIA412 Report on financial activity

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Performance Evidence

Evidence of the ability to:

- organise and present financial data to highlight relevant features and meet workplace requirements including:
 - budget variances
 - budgets and forecasts
 - cash flow/profit reports
 - balance sheets
 - financial year reports
 - operating statements
 - expenditure and receipts
 - profit and loss statements
- use conversion and consolidation procedures such as moving averages, standardised variables, trend analysis and unit costs
- identify, resolve or refer discrepancies such as:
 - absence of auditable trail
 - expenditure report mismatches
 - incorrect payments and unreconciled cash flows
- record income and expenditure to meet statutory requirements
- calculate liabilities for tax including completing Business Activity Statements, where applicable
- provide financial business recommendations
- apply knowledge of relevant legislation and regulations
- perform double entry bookkeeping and accrual accounting.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

The candidate must be able to demonstrate the following knowledge to effectively complete the tasks outlined in the elements and performance criteria of this unit, and to manage tasks and reasonably foreseeable contingencies in the context of the work role:

- key provisions of legislation, regulation and codes of practice relevant to financial operations
- key techniques used for forecasting and analysis
- key features of the options, methods and practices for deductions, benefits and depreciations
- current business taxation requirements for preparing corporate accounting reports
- current financial legislation and statutory requirements relating to taxable transactions and reporting requirements
- ethical requirements associated with preparing financial reports for corporate entities, including conflict of interest, confidentiality, and disclosure requirements
- industry-standard methods and formats used to present financial data.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the financial administration field of work and include access to:

- office equipment and resources
- computer with relevant software
- examples of financial data, reports and documents
- workplace financial policies and procedures
- case studies and, where possible, real situations in the workplace.

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBFIM501 Manage budgets and financial plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to undertake financial management within a work team in an organisation. It includes planning and implementing financial management approaches, supporting team members whose role involves aspects of financial operations, monitoring and controlling finances and reviewing and evaluating effectiveness of financial management processes.

It applies to managers in a wide range of organisations and sectors who have responsibility for ensuring that work team financial resources are used effectively and are managed in line with financial objectives of the team and organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Finance - Financial Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Plan financial management approaches	1.1 Access budget/financial plans for the work team 1.2 Clarify budget/financial plans with relevant personnel within the organisation to ensure that documented outcomes are achievable, accurate and comprehensible 1.3 Negotiate any changes required to be made to budget/financial

ELEMENT	PERFORMANCE CRITERIA
	plans with relevant personnel within the organisation 1.4 Prepare contingency plans in the event that initial plans need to be varied
2 Implement financial management approaches	2.1 Disseminate relevant details of the agreed budget/financial plans to team members 2.2 Provide support to ensure that team members can competently perform required roles associated with the management of finances 2.3 Determine and access resources and systems to manage financial management processes within the work team
3 Monitor and control finances	3.1 Implement processes to monitor actual expenditure and to control costs across the work team 3.2 Monitor expenditure and costs on an agreed cyclical basis to identify cost variations and expenditure overruns 3.3 Implement, monitor and modify contingency plans as required to maintain financial objectives 3.4 Report on budget and expenditure in accordance with organisational protocols
4 Review and evaluate financial management processes	4.1 Collect and collate for analysis, data and information on the effectiveness of financial management processes within the work team 4.2 Analyse data and information on the effectiveness of financial management processes within the work team and identify, document and recommend any improvements to existing processes 4.3 Implement and monitor agreed improvements in line with financial objectives of the work team and the organisation

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 2.1, 2.3, 3.1-3.4, 4.2, 4.3	<ul style="list-style-type: none"> Interprets and analyses information to determine activities required

Writing	1.1, 1.4, 4.1-4.3	<ul style="list-style-type: none"> Records information in correct forms and prepares materials which convey detailed and factual content in accordance with internal procedures
Oral Communication	1.2, 1.3, 2.1-2.3	<ul style="list-style-type: none"> Presents information about financial issues and requirements to a range of audiences using structure and language to suit the audience Uses active listening and questioning to clarify information and to confirm understanding
Numeracy	1.1-1.3, 2.1-2.3, 3.1-3.4, 4.1-4.3	<ul style="list-style-type: none"> Uses a wide range of mathematical calculations to analyse numeric information in budgets or financial plans
Navigate the world of work	2.2, 3.3, 3.4, 4.3	<ul style="list-style-type: none"> Recognises, understands and adheres to organisational requirements in undertaking own work
Interact with others	1.2, 1.3, 2.1, 2.2, 3.1, 2.3, 4.2, 4.3	<ul style="list-style-type: none"> Uses a range of strategies to connect, collaborate and cooperate with other work colleagues in activities requiring collective effort and diverse skills and knowledge
Get the work done	1.1, 1.4, 2.3, 3.1-3.4, 4.1-4.3	<ul style="list-style-type: none"> Uses logical processes in planning, implementing and evaluating complex tasks and developing alternative strategies in achieving goals and timelines Uses a range of digital technologies to access, filter, compile, integrate and logically present complex information from multiple sources

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBFIM501 Manage budgets and financial plans	BSBFIM501A Manage budgets and financial plans	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBFIM501 Manage budgets and financial plans

Modification History

Release	Comments
Release 1	This version first released with Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- use financial skills to work with and interpret budgets, ageing summaries, cash flow, petty cash, Goods and Services Tax (GST), and profit and loss statements
- communicate with relevant people to clarify budget/financial plans, negotiate changes and disseminate information
- prepare, implement and modify financial contingency plans
- monitor expenditure and control costs
- support and monitor team members
- report on budget and expenditure
- review and make recommendations for improvements to financial processes
- meet record keeping requirements for the Australian Taxation Office (ATO) and for auditing purposes.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- describe basic accounting principles
- identify and explain the relevant legislation and current requirements of the Australian Taxation Office, including the Goods and Services Tax (GST)
- explain the key requirements for financial record keeping and auditing
- describe the principles and techniques involved in managing:
 - budgeting
 - cash flows
 - electronic spreadsheets

- GST
- ledgers and financial statements
- profit and loss statements.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the financial management field of work and include access to:

- resources and documentation used in the workplace
- workplace policies and procedures
- workplace budgets and financial plans
- business technology
- case studies and, where available, real situations.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBFIN302 Maintain financial records

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to maintain daily financial records such as reconciling systems for debtors and creditors, preparing and maintaining a general ledger and trial balance. It also includes activities associated with monitoring cash control for accounting purposes.

The unit applies to individuals employed in a range of work environments with responsibility for simple accounting functions within an organisation. They may work as individuals providing administrative support within an enterprise or may be other members of staff with delegated responsibilities relating to maintenance of general financial records.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Financial Literacy

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare journals required for posting to general ledger	1.1 Identify transactions required to be included in journal entries 1.2 Identify general ledger accounts affected according to organisational policies, procedures and accounting standards 1.3 Prepare and document the journal entries according to organisational policies, procedures and accounting standards 1.4 Assess follow-up steps for journal entries
2. Post journal entries and reconcile	2.1 Post journal entries into general ledger system according to organisational policies, procedures and accounting standards

ELEMENT	PERFORMANCE CRITERIA
discrepancies	2.2 Reconcile accounts payable and accounts receivable subsidiary ledger systems with general ledger 2.3 Rectify any discrepancies and escalate, where required if outside scope of individual authority 2.4 Prepare adjusted journal entries and closing entries for general ledger
3. Maintain general ledger	3.1 Prepare closing and post-closing trial balance from general ledger system of the organisation 3.2 Prepare trial balance 3.3 Check general ledger for accuracy of information and despatch to relevant stakeholders, where required 3.4 Check trial balance meets accounting equation requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> • Uses a limited range of mathematical calculations to reconcile amounts using whole numbers and decimals • Integrates data from different sources and records numerical information in a format appropriate to context and purpose of material • Arranges and compares numerical information
Reading	<ul style="list-style-type: none"> • Recognises and interprets numerical and textual information to determine job requirements and complete required activities
Writing	<ul style="list-style-type: none"> • Uses factual and suitable financial language to refer issues and inconsistencies in data
Teamwork	<ul style="list-style-type: none"> • Recognises strengths and expertise of others and seeks their assistance as required
Planning and organising	<ul style="list-style-type: none"> • Identifies and monitors adherence to applicable industry standards, legislative and organisational requirements in undertaking own work
Self-management	<ul style="list-style-type: none"> • Selects appropriate practices and protocols when handling confidential information • Recognises and addresses problems in the context of own work and seeks advice from others, as necessary
Technology	<ul style="list-style-type: none"> • Uses digital technologies to access, record, store, organise and

Skill	Description
	compile data as required

Unit Mapping Information

No equivalent unit. Supersedes but is not equivalent to:

- BSBFIA301 Maintain financial records
- BSBFIA304 Maintain a general ledger
- BSBINT306 Apply knowledge of international finance and insurance to complete work requirements.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBFIN302 Maintain financial records

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- record and process daily transactions for five different days, and identify and respond to discrepancies and errors, according to accounting principles.

In the course of the above, the candidate must:

- enter, transfer and record financial data.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key provisions of relevant legislation, codes of practice and national standards that may affect both:
 - financial record keeping
 - aspects of financial operations
- key components of organisational accounting systems and procedures
- procedures for checking for errors or discrepancies
- organisational policies and procedures relating to maintaining financial records
- types of financial entries including credits and debits
- tax records required to be kept by businesses
- principles of double entry bookkeeping and accrual accounting
- methods of presenting financial data
- processes for rectifying or referring discrepancies or errors in documentation or transactions to designated persons according to organisational and legislative requirements
- accounting software used in the maintenance of financial records.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- accounting software
- examples of source documents relating to financial record keeping including source journals and daily transactions.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBFIN401 Report on financial activity

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes skills and knowledge required to prepare financial reports in line with statutory reporting requirements. This includes compiling and analysing financial data.

The unit applies to individuals employed in a range of work environments who are responsible for preparing financial reports. They may be individuals providing administrative support within an organisation, or they might have responsibility for these tasks in relation to their own workgroup or role.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Financial Literacy

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Compile and analyse financial data	1.1 Prepare a register of assets from fixed asset transactions according to accounting, legislative and organisational requirements 1.2 Calculate depreciation according to legislative and organisational requirements 1.3 Make, record and disclose asset and liability valuations in compliance with accounting standards 1.4 Refer discrepancies, unusual features or queries to appropriate authority where they cannot be resolved 1.5 Identify and record effects of taxation

ELEMENT	PERFORMANCE CRITERIA
2. Report general journal entries for balance day adjustments	2.1 Record all general ledger accounts and prepare a trial balance 2.2 Adjust expense accounts and revenue accounts for prepayments and accruals 2.3 Make adjustments in general ledger system to close any discrepancies for balance day adjustments according to organisational policies, procedures and accounting requirements 2.4 Review data for errors and compliance with statutory requirements and organisational procedures, and amend as required
3. Prepare end of period financial reports	3.1 Prepare revenue statement for reporting periods according to organisational requirements 3.2 Prepare a balance sheet to reflect financial position of business at end of reporting period 3.3 Prepare and post revenue and expense account to final general ledger accounts to reflect gross and net profits for reporting period 3.4 Correct or refer errors for resolution according to statutory and ethical requirements and organisational procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Establishes criteria and categories for financial management purposes and monitors activities on a regular basis Uses a wide range of mathematical calculations to interpret and arrange numerical information in order to comply with requirements
Reading	<ul style="list-style-type: none"> Compares and analyses information from a range of sources varying in complexity to determine and complete financial requirements Checks documents for errors or discrepancies
Writing	<ul style="list-style-type: none"> Records data using relevant format, structure and vocabulary
Planning and organising	<ul style="list-style-type: none"> Applies legislation, industry standards and organisational policies and procedures in the conduct of own work Uses formal and logical processes to plan and complete tasks, achieving timelines and organisational requirements

Skill	Description
Problem solving	<ul style="list-style-type: none">• Addresses problems in the context of own work and seeks advice from others, as necessary• Uses analytical skills to identify discrepancies
Technology	<ul style="list-style-type: none">• Uses digital technology to access, filter, compile, integrate and logically present complex information from multiple sources

Unit Mapping Information

No equivalent unit. Supersedes but is not equivalent to:

- BSBFIA401 Prepare financial reports
- BSBFIA412 Report on financial activity
- BSBFIA501 Report on finances related to international business
- BSBINT408 Prepare business advice on the taxes and duties for international trade transactions.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBFIN401 Report on financial activity

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- prepare a financial report on at least two occasions.

In the course of the above, the candidate must:

- produce a detailed asset register and depreciation schedule
- record entries for balance day adjustments
- use conversion and consolidation procedures including moving averages, standardised variables, trend analysis and unit costs
- apply double-entry principles and accrual accounting.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- double-entry and accrual principles
- provisions of relevant legislation, regulations, standards and codes of practice relevant to financial operations, taxable transactions and reporting requirements
- components of organisational accounting systems
- organisational policies, procedures and accounting standards relating to preparation of financial reports
- organisational financial data, including:
 - budget variances
 - budgets and forecasts
 - cash flow and profit reports
 - balance sheets
 - financial year reports
 - operating statements

- expenditure and receipts
- profit and loss statements
- types of assets including property, plant and equipment
- comparative financial performance
- financial discrepancies including:
 - absence of auditable trail
 - expenditure report mismatches
 - incorrect payments and unreconciled cash flows
- techniques used for financial forecasting and analysis
- options, methods and practices for deductions, benefits and depreciations
- ethical requirements associated with preparing financial reports for corporate entities, including conflict of interest, confidentiality, and disclosure requirements
- industry-standard methods and formats used to present financial data.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- accounting software
- financial reporting legislation, regulations, standards and codes of practice
- samples of financial data, reports and documents
- workplace reference materials including procedural manuals and company policies.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBFIN501 Manage budgets and financial plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to undertake financial management in an organisation or work area. It includes planning and implementing financial management approaches and supporting and evaluating effectiveness of financial management processes.

The unit applies to managers in a wide range of organisations and sectors who have responsibility for the effective use of financial resources within work teams. They are responsible for ensuring that financial resources are managed in line with the financial objectives of the team and organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Financial Literacy

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan financial management approaches	1.1 Access budget and financial plans for work team 1.2 Evaluate budget and financial plan outcomes with required organisational personnel 1.3 Negotiate any changes required to be made to budget and financial plans with required organisational personnel 1.4 Prepare contingency plans in the event that initial plans need to be varied
2. Implement and monitor financial	2.1 Communicate details of agreed budget and financial plans to relevant team members

ELEMENT	PERFORMANCE CRITERIA
management plans	<p>2.2 Support team members to access resources and systems to perform required roles</p> <p>2.3 Implement processes to monitor actual expenditure, control costs and modify contingency plans as required according to financial objectives</p> <p>2.4 Report on budget and expenditure according to organisational protocols</p>
3. Review and evaluate financial management plans	<p>3.1 Collect information on effectiveness of financial management processes within work team</p> <p>3.2 Analyse variance between actual and budgeted finances</p> <p>3.3 Identify and recommend improvements to existing financial management processes</p> <p>3.4 Implement agreed improvements according to financial objectives of work team and organisation</p> <p>3.5 Evaluate agreed improvements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	<ul style="list-style-type: none"> • Uses a wide range of mathematical calculations to analyse numeric information in budgets or financial plans
Oral communication	<ul style="list-style-type: none"> • Presents information about financial issues and requirements to a range of audiences using structure and language to suit audience • Uses active listening and questioning to clarify information and to confirm understanding
Reading	<ul style="list-style-type: none"> • Interprets and analyses information to determine activities required
Writing	<ul style="list-style-type: none"> • Records information in correct forms and prepares materials which convey detailed and factual content according to internal procedures
Teamwork	<ul style="list-style-type: none"> • Uses a range of strategies to connect, collaborate and cooperate with other work colleagues in activities requiring collective effort and diverse skills and knowledge
Initiative and enterprise	<ul style="list-style-type: none"> • Applies organisational requirements in undertaking own work
Planning and organising	<ul style="list-style-type: none"> • Uses logical processes in planning, implementing and evaluating complex tasks and developing alternative strategies to achieve goals

SKILL	DESCRIPTION
	and timelines
Technology	<ul style="list-style-type: none">• Uses a range of digital technologies to access, filter, compile, integrate and logically present complex information from multiple sources

Unit Mapping Information

Supersedes and is equivalent to BSBFIM501 Manage budgets and financial plans.

Supersedes but is not equivalent to BSBGOV403 Analyse financial reports and budgets.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBFIN501 Manage budgets and financial plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- manage the budget and financial plan of an organisation for one reporting period.

In the course of the above, the candidate must:

- communicate with relevant people to clarify budget and financial plans, negotiate changes and disseminate information
- prepare, implement and modify financial contingency plans
- monitor expenditure and control costs
- support and monitor team members
- report on budget and expenditure
- review and make recommendations for improvements to financial processes
- meet record-keeping requirements for Australian Taxation Office (ATO) and for auditing purposes.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- basic accounting principles
- types of budgets and financial plans
- legislation and current ATO requirements, including the Goods and Services Tax (GST)
- key requirements for financial record keeping and auditing
- principles for managing work teams
- principles and techniques involved in managing:
 - budgeting
 - cash flows
 - electronic spreadsheets

- Goods and Services Tax
- ledgers and financial statements
- profit and loss statements
- evaluation of budget and financial plans.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace policies and procedures
- workplace budgets and financial plans.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBGOV502 Recruit and coordinate committee members

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to recruit, develop and support committee members in an organisation. This includes planning for committee recruitment, communicating with members and prospective committee members, and coordinating processes.

It applies to individuals responsible for activities as members of committees or boards of governance.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Regulation, Licensing and Risk – Governance

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify the need and roles for committee members	1.1 Identify the potential roles of committee members 1.2 Discuss and agree on roles of committee members with board members or management 1.3 Develop and document role descriptions
2. Recruit committee members	2.1 Seek volunteer committee members by advertising in relevant media or community stakeholder networks

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2 Arrange and conduct interviews with potential committee members</p> <p>2.3 Make selections and advise relevant parties</p> <p>2.4 Follow policies and procedures on confidentiality of information</p>
3. Introduce new committee members to organisational requirements	<p>3.1 Inform new committee members about the organisation's purpose</p> <p>3.2 Provide new committee members with an induction to the organisation's committee activity</p> <p>3.3 Arrange for training in specific committee roles in a manner that is appropriate to the organisation's needs and resources</p>
4. Provide ongoing support to committee members	<p>4.1 Regularly review committee member roles and performance</p> <p>4.2 Provide individual support and debriefing in accordance with organisational protocols</p> <p>4.3 Identify organisational processes that can be used to support committee members in their roles</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 2.4	<ul style="list-style-type: none"> Gathers, interprets and analyses information relating to core functions of committee members and the organisation, such as organisational goals, standards and values
Writing	1.3, 2.1	<ul style="list-style-type: none"> Develops material for a specific audience using clear and detailed language to convey explicit information, requirements and recommendations
Oral Communication	1.2, 3.1, 4.2	<ul style="list-style-type: none"> Conducts information sessions and clearly articulates requirements using language, tone and syntax appropriate to audience and environment Uses active listening and questioning skills to confirm understanding
Navigate the	1.1, 2.1-2.3, 3.2,	<ul style="list-style-type: none"> Appreciates implications of legal and regulatory

world of work	4.1-4.3	<p>responsibilities related to committee activity</p> <ul style="list-style-type: none"> Recognises and follows explicit and implicit protocols and meets expectations associated with the recruitment and coordination of committee members
Interacts with others	1.2, 2.1, 2.2, 3.1-3.3, 4.2	<ul style="list-style-type: none"> Collaborates with others for the selection of committee members Follows accepted communication practices and protocols, adjusting personal communication style in response to the values, beliefs and cultural expectations of others
Get the work done	1.1-1.3, 2.1-2.3, 3.2, 3.3, 4.2	<ul style="list-style-type: none"> Takes responsibility for recruitment and coordination of activity Understands when to take responsibility for solving problems and when to consult with others

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBGOV502 Recruit and coordinate committee members	Not applicable	New unit	No equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBGOV502 Recruit and coordinate committee members

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 2.0.

Performance Evidence

Evidence of the ability to:

- communicate effectively with a diverse range of people on issues relevant to committee membership and roles
- recruit, select and induct people for committee roles according to policies, procedures and legislative requirements
- coordinate people, processes and information for committee recruitment and induction purposes
- contribute to analysis and decision making on issues relevant to committee member recruitment.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- list relevant legislation and organisational policies relating to the employment of committee members, who may be unpaid workers
- outline a range of decision making techniques
- explain committee and management roles and responsibilities
- describe the organisational history, structure, core functions, code of conduct, constitution, policies and procedures, and reporting processes.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical committee recruitment and coordination activities and include access to:

- actual or simulated committee recruitment and coordination
- examples of committee role descriptions.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBGOV507 Manage board or committee and organisational conflict

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to manage conflict, both within the board or committee and with operational personnel in the organisation.

It applies to individuals who are on committees or boards of governance.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Regulation, Licensing and Risk – Governance

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify existing and potential conflict	1.1 Determine if conflict exists and its possible causes 1.2 Identify potential situations of future conflict 1.3 Develop strategies to prevent conflict
2. Consider the conflict situation	2.1 Consider if the conflict relates to operational or strategic activity 2.2 Acknowledge the issue(s) and the roles of the parties involved, noting that board and committee members' roles are strategic and employees' roles are operational

ELEMENT	PERFORMANCE CRITERIA
	2.3 Ascertain how the roles of the parties involved have impacted upon the conflict 2.4 Develop resolution strategies in accordance with legislation, the organisation's constitution and in consultation with conflicting parties 2.5 Seek professional advice where needed, maintaining discretion and confidentiality 2.6 Ensure the wellbeing of individuals and the organisation is considered when developing resolution strategies
3. Use strategies to resolve conflict	3.1 Promptly, appropriately and impartially implement resolution strategies that are in line with legislation and the roles of the parties involved 3.2 Diffuse emotional situations by focussing on the issue(s) rather than the individual(s) concerned 3.3 Follow organisational grievance policy if conflict has escalated to grievance level 3.4 Allow sufficient time for the conflict to be resolved 3.5 Monitor and evaluate the process used to resolve the conflict

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 3.1	<ul style="list-style-type: none"> Interprets various texts to guide activities and decisions
Writing	1.3, 2.4	<ul style="list-style-type: none"> Collates and compiles material using clear and detailed language to convey specific information, requirements and recommendations
Oral Communication	2.2-2.4, 3.2	<ul style="list-style-type: none"> Participates in a variety of spoken exchanges using suitable tone, language and strategies to confirm, clarify or repair understanding Make constructive suggestions when required Elicits views and opinions of others by active listening and questioning

Navigate the world of work	1.1-1.3, 2.1, 2.2, 2.4, 3.1, 3.2, 3.4	<ul style="list-style-type: none"> • Takes personal responsibility for adherence to legal/regulatory responsibilities relevant to own work context, and draws attention to any issues that may affect the organisation as a whole • Recognises and follows explicit and implicit protocols and meets expectations associated with own role
Interact with others	2.2-2.4, 2.6, 3.2, 3.3,	<ul style="list-style-type: none"> • Follows accepted communication practices and protocols, adjusting personal communication style in response to values, beliefs and cultural expectations of others
Get the work done	1.3, 2.1, 2.4, 2.5, 3.1, 3.3, 3.4	<ul style="list-style-type: none"> • Develops plans to manage relatively complex tasks with an awareness of how they may contribute to longer term operational strategic goals • Makes a range of critical and non-critical decisions in relatively complex situations, taking a range of constraints into account • Recognises and addresses some unfamiliar problems of increasing complexity within own scope, recognising when to seek expertise of others

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBGOV507 Manage board or committee and organisational conflict	Not applicable	New unit	No equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBGOV507 Manage board or committee and organisational conflict

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 2.0.

Performance Evidence

Evidence of the ability to:

- communicate, negotiate and work cooperatively regarding conflict with:
 - other board or committee members
 - management and staff of the organisation
 - key stakeholders
- develop strategies to prevent conflict both within the board or committee and between the board or committee and operational personnel
- develop resolution strategies with conflicting parties
- diffuse emotional conflict situations by focusing on the issues at hand
- monitor and evaluate conflict resolution processes.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- discuss potential situations of future conflict
- explain the roles of the parties involved (in terms of board or committee member roles as opposed to operational personnel roles)
- discuss options for conflict resolution and situations that would warrant the use of the following methods:
 - formal discussions with third party presence
 - informal discussions
 - following organisational policies
 - professional advice
 - grievance procedures

- describe conflict monitoring and evaluation processes
- describe legislative and organisational constitutional requirements in relation to conflict.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical committee or board of governance activities and include access to:

- examples of conflict resolution.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBHRM405 Support the recruitment, selection and induction of staff

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to execute tasks associated with the recruitment cycle and apply in-depth knowledge of the work of the organisation, and how recruitment and selection practices fit with other human resources functions.

This unit applies to individuals who support recruitment, selection and induction functions under the direction of a human resource manager.

No licensing, legislative, or certification requirements apply to this unit at the time of publication.

Unit Sector

Workforce Development – Human Resource Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Plan for recruitment	<p>1.1 Obtain approval to fill position, clarify time lines and requirement for appointment</p> <p>1.2 Assist in preparing job descriptions that accurately reflect the role requirements, according to organisational policies and procedures, legislation, codes, national standards and work health and safety (WHS) considerations</p> <p>1.3 Consult with relevant personnel about job descriptions and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>workforce strategy</p> <p>1.4 Assist in ensuring that job descriptions comply with legislative requirements and reflect the organisation's requirements for a diverse workforce</p> <p>1.5 Obtain approvals to advertise position</p>
2 Plan for selection	<p>2.1 Choose appropriate channels and technology to advertise vacancies and/or identify potential talent pool</p> <p>2.2 Advertise vacancies for staffing requirements according to organisational policies and procedures</p> <p>2.3 Consult with relevant personnel to convene selection panel and develop interview questions</p> <p>2.4 Assist in ensuring that interview questions comply with legislative requirements</p> <p>2.5 Assist in short-listing applicants</p> <p>2.6 Schedule interviews and advise relevant people of times, dates and venues</p>
3 Support selection process	<p>3.1 Participate in interview process and assess candidates against agreed selection criteria</p> <p>3.2 Discuss assessment with other selection panel members</p> <p>3.3 Correct biases and deviations from agreed procedures and negotiate for preferred candidate</p> <p>3.4 Contact referees for referee reports</p> <p>3.5 Prepare selection report and make recommendations to senior personnel for appointment</p> <p>3.6 Advise unsuccessful candidates of outcomes and respond to any queries</p> <p>3.7 Secure preferred candidate's agreement</p> <p>3.8 Complete necessary documentation according to organisational procedures, observing confidentiality and privacy requirements</p>
4 Induct successful candidate	<p>4.1 Provide successful candidate with employment contract and other documentation</p> <p>4.2 Advise manager and work team of new appointment</p> <p>4.3 Advise managers and staff of candidate's starting date and make necessary administrative arrangements for pay and employee record keeping</p> <p>4.4 Arrange successful candidate's induction according to</p>

ELEMENT	PERFORMANCE CRITERIA
	organisational policy

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.2, 1.4, 2.4, 2.5	<ul style="list-style-type: none"> Synthesises ideas, concepts and specific information from workplace and regulatory texts to inform development of workplace documents Evaluates information to make judgements
Writing	1.1, 1.2, 1.5, 2.2, 3.5, 3.6, 3.8, 4.2, 4.3	<ul style="list-style-type: none"> Produces a range of text types using specific information, workplace conventions and templates
Oral communication	1.1, 1.3, 1.5, 2.3, 2.5, 3.1-3.5, 3.7	<ul style="list-style-type: none"> Asks questions and listens carefully to gather, interpret or evaluate information Uses appropriate vocabulary to present ideas or persuasive arguments
Navigate the world of work	1.2, 1.4, 2.4, 3.3, 3.8, 4.1, 4.4	<ul style="list-style-type: none"> Applies workplace protocols, legislation or regulations relevant to own responsibilities
Interact with others	1.3, 2.3, 3.2, 3.3	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with personnel, candidates or referees Participates in conversations relevant to role responding, explaining, negotiating and persuading as required
Get the work done	2.1, 2.3, 2.6, 4.1, 4.3, 4.4	<ul style="list-style-type: none"> Selects and uses digital technology to access, enter, store and retrieve information in accordance with security requirements Takes responsibility for planning and implementing tasks for efficient and effective outcomes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBHRM405 Support the recruitment, selection and induction of staff	BSBHRM405A Support the recruitment, selection and induction of staff	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBHRM405 Support the recruitment, selection and induction of staff

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- prepare job descriptions
- use job descriptions to support sourcing, selecting and appointing suitable staff
- use different advertising channels to promote vacancies and/or establish a potential talent pool
- consult with managers to gain approvals
- develop selection criteria and interview questions in consultation with relevant personnel
- schedule interviews and advise relevant people of times, dates and venues
- participate in interviews and other selection techniques including assessing candidates against selection criteria to short list them
- obtain referees' reports
- prepare and distribute a selection report including feedback to give unsuccessful candidates
- advise unsuccessful candidates of the results
- secure preferred candidate's agreement and provide an employment contract
- advise other staff of the successful candidate and arrange induction.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify documentation required for recruitment, selection and induction
- explain human resources life cycle and the place of recruitment and selection
- identify legislation relevant to recruitment, selection and induction of staff
- describe channels and technology to advertise vacancies

- explain a range of interviewing techniques and other selection processes and their application.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the workforce development – human resource development field of work and include access to:

- workplace policies and procedures
- business technology
- position descriptions
- legislation, regulations, Codes and Standards relevant to staff recruitment, selection and induction
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBHRM415 Coordinate recruitment and onboarding

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to develop and implement strategies to source candidates and to assess their suitability for available positions.

The unit applies to individuals working in a human resources job role, as well as those for whom recruitment and onboarding are part of their broader duties.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Human Resources

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan for recruitment	1.1 Establish recruitment requirements and authority to fill position 1.2 Consult with relevant stakeholders about job descriptions, selection criteria and workforce strategy 1.3 Contribute to development of job descriptions that accurately reflect the role requirements according to relevant policies, procedures and legislative requirements 1.4 Implement strategies to assist in sourcing candidates according to organisational policies and procedures
2. Screen and interview potential candidates	2.1 Conduct preliminary screening with candidates according to legislative requirements 2.2 Organise and conduct interviews and selection activities according to organisational policies and procedures

ELEMENT	PERFORMANCE CRITERIA
	2.3 Carry out skills assessment relevant to the position 2.4 Obtain relevant additional information from candidates
3. Assess and select candidates	3.1 Consult with relevant stakeholders to conduct assessment and selection process according to organisational policy and legislative requirements 3.2 Assess candidates against specified selection criteria and referee reports 3.3 Prepare recommendations for relevant stakeholders and document according to organisational procedures
4. Manage candidate outcomes	4.1 Inform all candidates of selection decisions 4.2 Provide feedback to candidates according to organisational policies and procedures 4.3 Secure preferred candidate's agreement 4.4 Coordinate necessary documentation according to organisational procedures, observing confidentiality and privacy requirements
5. Onboard successful candidate	5.1 Advise relevant stakeholders of new appointment, including start date 5.2 Make necessary administrative arrangements for pay and employee record keeping 5.3 Coordinate successful candidate's onboarding according to organisational policies and procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Interprets a range of textual information from a variety of sources and analyses and reviews for compliance and suitability
Writing	<ul style="list-style-type: none"> Prepares concise notes to help synthesise information sourced during research Produces reports and other business communication for a range of contexts and audiences using relevant language and structure
Oral Communication	<ul style="list-style-type: none"> Asks questions and listens carefully to gather, interpret or evaluate information Participates in verbal exchanges using clear language and appropriate tone to provide relevant information and feedback

Self-management	<ul style="list-style-type: none"> • Applies workplace protocols, legislation or regulations relevant to own responsibilities • Selects and uses appropriate conventions and protocols when communicating with candidates or clients • Takes responsibility for planning and implementing tasks for efficient and effective outcomes
Teamwork	<ul style="list-style-type: none"> • Participates in conversations relevant to role responding, explaining, negotiating and persuading, as required
Problem solving	<ul style="list-style-type: none"> • Uses systematic, analytical processes to evaluate information and make decisions

Unit Mapping Information

Supersedes and is equivalent to BSBHRM405 Support the recruitment, selection and induction of staff.

Supersedes but is not equivalent to:

- BSBEMS401 Develop and implement business development strategies to expand client base
- BSBEMS402 Develop and implement strategies to source and assess candidates
- BSBEMS403 Develop and provide employment management services to candidates
- BSBEMS404 Manage the recruitment process for client organisations
- BSBSMB417 Recruit staff.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBHRM415 Coordinate recruitment and onboarding

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- coordinate the recruitment and onboarding of two candidates.

In the course of the above, the candidate must:

- demonstrate the process for screening and interviewing a candidate
- communicate effectively with clients and successful and unsuccessful candidates
- review job descriptions and use them to support sourcing, selecting and appointing suitable staff
- consult with relevant stakeholders to gain approvals
- develop selection criteria and interview questions in consultation with relevant stakeholders
- obtain referees' reports
- provide a written report or demonstration of an assessment of a candidate's skills and selection recommendation
- secure preferred candidate's agreement and provide an employment contract.
-

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key provisions of relevant legislation, regulations, standards and codes of practice that affect employment agencies and organisation's recruiting processes
- common interview techniques and recruitment sourcing methods
- common methods of attracting candidates
- methods to assess and report on candidates according to organisational procedures
- strategies to provide feedback to candidates according to organisational procedures.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace policies and procedures relevant to performance evidence
- position descriptions
- legislation, regulations, Codes and Standards relevant to staff recruitment, selection and onboarding.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBHRM416 Process payroll

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes skills and knowledge required to process payroll from provided data using manual and computerised payroll systems.

The unit applies to individuals employed in a range of work environments who are responsible for payroll functions within an organisation. They may work as individuals providing administrative support within an enterprise or may be other members of staff who have been delegated payroll responsibilities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Human Resources

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Record payroll data	1.1 Check payroll data and clarify discrepancies with relevant stakeholder 1.2 Enter employee pay period details in payroll system according to organisational requirements 1.3 Calculate individual employee's payment according to employee source data
2. Prepare payroll	2.1 Prepare payroll according to organisational policy and procedures and designated timelines 2.2 Reconcile total wages for pay period, check and correct irregularities or refer to relevant stakeholder for resolution

ELEMENT	PERFORMANCE CRITERIA
	2.3 Make arrangements for payment according to organisational and individual requirements 2.4 Obtain authorisation of payroll and individual pay advice according to organisational requirements 2.5 Produce, check and store payroll records according to organisational policy and security procedures 2.6 Follow security procedures for processing payroll and for maintaining payroll records
3. Handle payroll enquiries	3.1 Respond to payroll enquiries according to organisational and legislative requirements 3.2 Provide payroll information according to organisational and legislative requirements 3.3 Ensure all enquiries outside area of responsibility and knowledge are referred to designated persons for resolution 3.4 Complete additional information or follow-up action within designated timelines according to organisational policy and procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Interprets a range of textual information to determine activities required
Writing	<ul style="list-style-type: none"> Accurately records textual information and maintains personal and banking details using format, language and structure in context
Oral Communication	<ul style="list-style-type: none"> Explains payment clearly using terminology and tone appropriate to audience Uses questioning and listening skills in verbal exchanges to clarify information
Numeracy	<ul style="list-style-type: none"> Uses a limited range of mathematical calculations to calculate and reconcile amounts and arrange and compare numerical information
Self-management	<ul style="list-style-type: none"> Takes responsibility for own workload and monitors adherence to specified goals and timelines
Teamwork	<ul style="list-style-type: none"> Selects the appropriate mode of communication for a specific purpose Collaborates with others to achieve predetermined goals

Problem solving	<ul style="list-style-type: none">• Recognises and takes responsibility for resolving problems relevant to own role• Takes responsibility for routine low-impact decisions within familiar situations
Technology	<ul style="list-style-type: none">• Uses digital technologies to access, record, store, organise and compile data, as required

Unit Mapping Information

Supersedes and is equivalent to BSBFIA302 Process payroll.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBHRM416 Process payroll

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- process payroll for an organisation or work area on at least three occasions.

In the course of the above, the candidate must:

- respond to routine payroll enquiries
- refer enquiries outside area of responsibility to an appropriate authority.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key provisions of relevant legislation, standards and codes of practice that may affect payroll operations
- relevant organisational policies and procedures
- key features of different types of payroll systems
- processes associated with Single Touch Payroll (STP).

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace equipment and resources relevant to performance evidence
- payroll data (samples or actual).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBHRM506 Manage recruitment selection and induction processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to manage all aspects of recruitment selection and induction processes in accordance with organisational policies and procedures.

It applies to individuals or human resource personnel who take responsibility for managing aspects of selecting new staff and orientating those staff in their new positions. It is not assumed that the individual will be directly involved in the selection processes themselves, although this may well be the case.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Workforce Development – Human Resource Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Develop recruitment, selection and induction policies and procedures	1.1 Analyse strategic and operational plans and policies to identify relevant policies and objectives 1.2 Develop recruitment, selection and induction policies and procedures and supporting documents 1.3 Review options for technology to improve efficiency and effectiveness of recruitment and selection process

ELEMENT	PERFORMANCE CRITERIA
	<p>1.4 Obtain support for policies and procedures from senior managers</p> <p>1.5 Trial forms and documents supporting policies and procedures and make necessary adjustments</p> <p>1.6 Communicate policies and procedures to relevant staff and provide training if required</p>
2 Recruit and select staff	<p>2.1 Determine future human resource needs in collaboration with relevant managers and sections</p> <p>2.2 Ensure current position descriptors and person specifications for vacancies are used by managers and others involved in recruitment, selection and induction processes</p> <p>2.3 Provide access to training and other forms of support to all persons involved in recruitment and selection process</p> <p>2.4 Ensure advertising of vacant positions complies with organisational policy and legal requirements</p> <p>2.5 Utilise specialists where necessary</p> <p>2.6 Ensure selection procedures are in accordance with organisational policy and legal requirements</p> <p>2.7 Ensure processes for advising applicants of selection outcome are followed</p> <p>2.8 Ensure job offers and contracts of employment are executed promptly, and new appointments are provided with advice about salary, terms and conditions</p>
3 Manage staff induction	<p>3.1 Provide access to training and ongoing support for all persons engaged in staff induction</p> <p>3.2 Check induction processes are followed across the organisation</p> <p>3.3 Oversee management of probationary employees and provide them with feedback until their employment is confirmed or terminated</p> <p>3.4 Obtain feedback from participants and relevant managers on extent induction process is meeting its objectives</p> <p>3.5 Make refinements to induction policies and procedures</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 2.2, 2.4, 2.6, 2.7	<ul style="list-style-type: none"> Critically evaluates and applies content from a range of complex texts to determine legislative and business requirements
Writing	1.2-1.6, 2.1, 3.3-3.5	<ul style="list-style-type: none"> Demonstrates clear writing skills by selecting appropriate conventions and to express precise meaning relevant to context and audience
Oral Communication	1.4, 1.6, 2.1, 2.3, 3.3, 3.4	<ul style="list-style-type: none"> Draws on a repertoire of open questioning and active listening when seeking feedback from others Uses appropriate terminology and non-verbal features to present information and clarify understanding
Numeracy	2.8	<ul style="list-style-type: none"> Analyses numerical information to determine employees' remuneration packages Makes basic calculations to ensure work output is delivered in a timely manner
Navigate the world of work	1.1, 1.2, 1.5, 1.6, 2.4, 2.6	<ul style="list-style-type: none"> Understands and adheres to relevant organisational policies and procedures Develops or updates organisational policies to meet organisational objectives Considers own role in terms of its contribution to broader goals of work environment
Interact with others	1.4, 1.6, 2.1-2.3, 2.5, 2.7, 2.8, 3.1, 3.3, 3.4	<ul style="list-style-type: none"> Seeks expert advice and skills training where required Selects appropriate mode of communication for a specific purpose relevant to own role Uses effective communication skills to liaise with a range of people across the organisation
Get the work done	1.1-1.3, 1.5, 1.6, 2.1, 2.3, 2.7, 2.8, 3.1, 3.2, 3.3	<ul style="list-style-type: none"> Plans and implements tasks required to deliver timely outcomes, negotiating some key aspects with others Monitors implementation of plans and adjusts as necessary Considers whether and how often others should be involved, using consultative or collaborative processes as an integral part of the decision-making process Analyses outcomes of decisions to identify improvement opportunities Actively identifies systems, devices and applications with potential to meet current and future needs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBHRM506 Manage recruitment selection and induction processes	BSBHRM506A Manage recruitment selection and induction processes	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBHRM506 Manage recruitment selection and induction processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- develop or critically analyse a policy and procedures framework for recruitment, selection and induction
- identify the need for recruitment
- prepare and oversee appropriate documentation required for recruitment
- select and advise job applicants appropriately
- manage the induction process
- comply with relevant legislation and organisational requirements.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- describe recruitment and selection methods, including assessment centres
- explain the concept of outsourcing
- describe the purpose of employee contracts and industrial relations
- summarise relevant legislation, regulations, standards and codes of practice that may affect recruitment, selection and induction
- explain why terms and conditions of employment are an important aspect of recruitment
- explain the relevance of psychometric and skills testing programs to recruitment.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the workforce development – human resource development field of work and include access to:

- an appropriate range of documentation and resources normally used in the workplace
- relevant organisational policies and procedures
- relevant legislation, regulations and codes of practice
- business technology.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBHRM525 Manage recruitment and onboarding

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to manage all aspects of recruitment and onboarding processes according to organisational policies and procedures.

The unit applies to individuals who take responsibility for managing aspects of recruiting, selecting new staff and orientating those staff in their new positions. The individual may be directly involved in the recruitment processes themselves or coordinating the process.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Human Resources

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop recruitment and onboarding policies and procedures	1.1 Identify existing recruitment and onboarding policies and procedures 1.2 Assess options for technology to improve efficiency and effectiveness of recruitment process 1.3 Update existing policies and procedures according to organisational requirements 1.4 Obtain support for policies and procedures from relevant stakeholders 1.5 Create forms and documents supporting policies and procedures and make adjustments, where required 1.6 Communicate policies and procedures to relevant staff and

ELEMENT	PERFORMANCE CRITERIA
	provide training, where required
2. Manage recruitment process	2.1 Determine future human resource requirements in collaboration with relevant stakeholders 2.2 Ensure current position descriptors for vacancies are used by relevant stakeholders involved in recruitment and onboarding processes 2.3 Ensure advertising of vacant positions complies with legislation and organisational policies and procedures 2.4 Consult and use specialists, where required 2.5 Ensure selection procedures are according to legislation and organisational policies and procedures 2.6 Ensure processes for advising applicants of selection outcome are followed 2.7 Ensure job offers and contracts of employment are prepared and provided promptly, and new appointments are provided with relevant advice
3. Manage staff onboarding	3.1 Provide access to training and support to relevant stakeholders 3.2 Ensure onboarding processes are followed across the organisation 3.3 Oversee management of probationary employees and provide feedback until employment is confirmed or terminated 3.4 Collect feedback from participants and relevant stakeholders on onboarding process according to its objectives 3.5 Update onboarding policies and procedures according to feedback

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Critically evaluates and applies content from a range of complex texts to determine legislative and business requirements
Writing	<ul style="list-style-type: none"> Demonstrates clear writing skills by selecting appropriate conventions and by expressing precise meaning relevant to context and audience
Oral Communication	<ul style="list-style-type: none"> Draws on a repertoire of open questioning and active listening when seeking feedback from others Uses appropriate terminology and non-verbal features to present

	information and clarify understanding
Numeracy	<ul style="list-style-type: none"> Analyses numerical information to determine employees' remuneration packages Makes basic calculations to ensure work output is delivered in a timely manner
Initiative and enterprise	<ul style="list-style-type: none"> Develops or updates organisational policies to meet organisational objectives Considers own role in terms of its contribution to broader goals of work environment Analyses outcomes of decisions to identify improvement opportunities Seeks expert advice and skills training, where required
Teamwork	<ul style="list-style-type: none"> Considers whether and how often others should be involved, using consultative or collaborative processes as an integral part of the decision-making process
Planning and organising	<ul style="list-style-type: none"> Plans and implements tasks required to deliver timely outcomes, negotiating some key aspects with others Monitors implementation of plans and adjusts as necessary

Unit Mapping Information

Supersedes and is equivalent to BSBHRM506 Manage recruitment selection and induction processes.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBHRM525 Manage recruitment and onboarding

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- manage the recruitment and onboarding process for two different individuals.

In the course of the above, the candidate must:

- update organisational policies and procedures for recruitment and onboarding
- identify the need for recruitment
- prepare and oversee appropriate documentation required for recruitment
- select and advise job applicants appropriately
- manage the onboarding process
- comply with relevant legislation and organisational requirements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key features of recruitment, selection and onboarding policies and procedures
- common recruitment and selection methods
- relevant legislation, regulations, standards and codes of practice that may affect recruitment and onboarding
- key features of psychometric and skills testing programs for recruitment
- key components of contracts of employment.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace documentation and resources relevant to performance evidence
- relevant organisational policies and procedures
- relevant legislation, regulations and codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBINM201 Process and maintain workplace information

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to collect, process and store, and maintain workplace information and systems. It also includes the maintenance of filing and records systems.

It applies to individuals who perform a range of routine tasks in the workplace, using a limited range of practical skills and fundamental knowledge of information and information systems in a defined context, under direct supervision or with limited individual responsibility.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Knowledge Management – Information Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Collect information	1.1 Collect information in a timely manner and ensure it is relevant to organisational needs 1.2 Use business equipment/technology available in the work area to effectively obtain information 1.3 Apply organisational requirements relating to security and confidentiality in handling information

ELEMENT	PERFORMANCE CRITERIA
2 Process workplace information	<p>2.1 Use business equipment/technology to process information in accordance with organisational requirements</p> <p>2.2 Process information in accordance with defined timeframes, guidelines and procedures</p> <p>2.3 Update, modify and file information in accordance with organisational requirements</p> <p>2.4 Collate and despatch information in accordance with specified timeframes and organisational requirements</p>
3 Maintain information systems	<p>3.1 Maintain information and filing systems in accordance with organisational requirements</p> <p>3.2 Identify, remove and/or relocate inactive or dead files in accordance with organisational requirements</p> <p>3.3 Establish and assemble new files in accordance with organisational requirements</p> <p>3.4 Update reference and index systems in accordance with organisational requirements</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1-1.3, 2.1-2.4, 3.1-3.4	<ul style="list-style-type: none"> Recognises and interprets textual information to complete tasks according to organisational requirements
Writing	1.3, 2.1-2.4, 3.4	<ul style="list-style-type: none"> Records simple and routine content using an established format to organise information
Oral Communication	1.1, 1.2	<ul style="list-style-type: none"> Uses listening and questioning skills to clarify and adhere to requirements
Numeracy	2.2, 2.4, 3.4	<ul style="list-style-type: none"> Comprehends basic mathematical measurements relating to times and number sequences
Navigate the world of work	1.3, 2.1, 2.3, 2.4, 3.1-3.4	<ul style="list-style-type: none"> Recognises organisational procedures and understands relevance of legislative requirements
Get the work	1.1-1.3, 2.1, 2.2, 2.4,	<ul style="list-style-type: none"> Follows clearly defined instructions and monitors own

done	3.1-3.3	<p>progress to achieve timelines</p> <ul style="list-style-type: none"> • Solves problems directly related to tasks, and makes low-impact decisions • Uses digital technologies following instructions regarding data entry and retrieval
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBINM201 Process and maintain workplace information	BSBINM201A Process and maintain workplace information	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBINM201 Process and maintain workplace information

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- collect and process workplace information according to organisational policies and procedures and related regulatory requirements
- record and document information accurately within expected timeframes
- store, classify and maintain documents and records correctly.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify key provisions of relevant legislation, regulations, standards and codes of practice that may affect information management
- outline organisational policies and procedures relating to collecting and processing workplace information
- identify and describe organisational recordkeeping/filing systems and security procedures
- describe a range of filing systems including paper-based and software-based.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the knowledge management – information management field of work and include access to:

- office equipment and resources
- examples of workplace information systems.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBINM401 Implement workplace information system

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to implement and review the workplace information system. It involves the identification, acquisition, initial analysis and use of appropriate information which plays a significant part in the organisation's effectiveness.

It applies to individuals whose work will normally be carried out within routine and non-routine methods and procedures which require planning and evaluation, leadership and guidance of others, and some discretion and judgement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Knowledge Management – Information Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Identify and source information needs	1.1 Determine and locate information required by teams 1.2 Acquire and review information held by the organisation to determine suitability, accessibility, currency and reliability according to organisational policies
2 Collect, analyse and report information	2.1 Collect information, which is adequate and relevant to the needs of teams, in a timely manner

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2 Ensure information is in a format suitable for analysis, interpretation and dissemination</p> <p>2.3 Analyse information to identify and report relevant trends and developments in terms of the needs for which it was acquired</p>
3 Implement information systems	<p>3.1 Implement management information systems effectively to store, retrieve and regularly review data for decision making purposes</p> <p>3.2 Use technology available in the work area to manage information effectively</p> <p>3.3 Submit recommendations for improving the information system to designated persons and/or groups</p>
4 Prepare for information system changes	<p>4.1 Collect information about information system future needs in consultation with colleagues, including those who have a specialist role in resource management</p> <p>4.2 Ensure estimates of information system future needs reflect the organisation's business plans, and customer and supplier requirements</p> <p>4.3 Support proposals to secure resources by clearly presenting submissions that describe realistic options, benefits, costs and outcomes</p> <p>4.4 Prepare team members to work with new technology and information system changes</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 4.1, 4.2, 4.3, 4.4	<ul style="list-style-type: none"> Critically analyses complex documentation from a variety of sources and consolidates information relating to specific criteria to determine requirements
Writing	1.2, 2.1, 2.3, 3.1, 3.3, 4.1, 4.2, 4.3, 4.4	<ul style="list-style-type: none"> Develops material for a specific audience using clear and detailed language in order to convey explicit information, requirements and recommendations
Oral	1.1, 3.3, 4.1, 4.3, 4.4	<ul style="list-style-type: none"> Uses active listening and questioning and reading of verbal and non-verbal signals to convey and clarify

Communication		information and to confirm understanding
Numeracy	4.1-4.3	<ul style="list-style-type: none"> Selects from and uses a variety of developing mathematical and problem solving strategies to ensure estimates of information reflect the business plan and staff requirements
Navigate the world of work	1.2	<ul style="list-style-type: none"> Takes responsibility for following policies, procedures and legislative requirements and identifies organisational implications of new legislation or regulation
Interact with others	1.1, 3.3, 4.1, 4.3, 4.4	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with clients and co-workers in a range of work contexts Cooperates with others and contributes to work practices where joint outcomes are expected and deadlines are to be met
Get the work done	1.1, 1.2, 2.1, 2.3, 3.1, 3.2, 4.1, 4.2	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks and own workload for efficiency and effective outcomes Contributes to continuous improvement of current work practices by applying basic principles of analytical thinking Uses familiar digital technologies and systems to access, enter, present and communicate data and information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBINM401 Implement workplace information system	BSBINM401A Implement workplace information system	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBINM401 Implement workplace information system

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- identify, source and analyse information to determine
 - information system needs
 - whether it is fit for purpose
 - trends and developments
- implement and review the workplace information system
- review a workplace information system and prepare and present a submission recommending improvements.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify the information systems that are, or should be, available in the workplace
- explain the information management systems and technology typically associated with the workplace including:
 - budgets and financial management systems
 - customer information software or records
 - databases
 - personal digital assistant (PDA)
 - product and service information
 - project management software
 - record management systems
 - spreadsheets.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the knowledge management – information management field of work and include access to:

- business technology
- a workplace information system
- workplace policies and procedures.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBINN501 Establish systems that support innovation

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to conceptualise and establish new systems that support and encourage innovation in the workplace.

It applies to individuals including managers, senior operational personnel and/or internal/external specialists who are responsible for the development of new systems in small and large organisations in any community or industry context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Creativity and Innovation – Innovation

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Research context for new system development	1.1 Explore and analyse the impact of systems in the overall context of innovation 1.2 Explore and gain clarity around system objectives, particularly in relation to innovation 1.3 Analyse current organisational systems to identify gaps or barriers to innovation 1.4 Research and analyse current and emerging information about

ELEMENT	PERFORMANCE CRITERIA
	<p>systems in other organisations and contexts</p> <p>1.5 Evaluate the resources and other commitment required to foster innovation</p> <p>1.6 Identify key stakeholders who can play a role in conceptualising or supporting new system ideas</p>
2 Generate system concepts and options	<p>2.1 Create system concepts that will foster innovation using individual and group techniques</p> <p>2.2 Evaluate and discuss a range of ideas with relevant stakeholders</p> <p>2.3 Clearly articulate the ways in which innovation is better supported by system ideas and options</p> <p>2.4 Clearly articulate how the system itself is innovative</p> <p>2.5 Expose ideas and options to ongoing testing, exploration and challenge</p> <p>2.6 Select and refine system ideas that meet the workplace requirements and which are both feasible and innovative</p>
3 Develop a plan for the system	<p>3.1 Determine the need for specialised assistance and integrate into system planning</p> <p>3.2 Analyse the potential impact of the new system on people, resources and other organisational practices</p> <p>3.3 Consult with all stakeholders who will be involved with, or affected by, the new system</p> <p>3.4 Develop an operational plan for the system, with budget, timelines and responsibilities</p> <p>3.5 Develop a communication strategy to support the introduction of the new system</p> <p>3.6 Evaluate the coaching and training needs of those who will use the system and plan a learning and development strategy</p>
4 Trial the system	<p>4.1 Present and consult on system proposals with relevant stakeholders</p> <p>4.2 Analyse and integrate feedback into the system development process</p> <p>4.3 Determine appropriate context and parameters for the trial process</p> <p>4.4 Initiate the trial, taking account of all required consultative, coaching and technical issues</p> <p>4.5 Monitor and review the trial in relation to its goals for fostering</p>

ELEMENT	PERFORMANCE CRITERIA
	innovation 4.6 Open the improvement process to ongoing collaborative input and challenge 4.7 Adjust system to reflect evaluation feedback

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 1.3, 1.4	<ul style="list-style-type: none"> Researches, analyses and evaluates textual information, from a wide range of sources, to identify information relevant to systems that support innovation
Writing	2.3, 2.4, 2.5, 3.3, 3.4, 3.5, 3.6, 4.1, 4.2	<ul style="list-style-type: none"> Develops complex plans and strategies using language and format appropriate to the audience and purpose
Oral Communication	2.1, 2.2, 2.3, 2.4, 3.3, 4.1, 4.6	<ul style="list-style-type: none"> Presents ideas and concepts to a range of audiences varying vocabulary and non-verbal features to suit the audience Uses active listening and questioning to discuss and clarify information and to confirm understanding
Numeracy	3.4	<ul style="list-style-type: none"> Interprets, analyses and presents numeric or financial information in complex documents
Navigate the world of work	1.1-1.4	<ul style="list-style-type: none"> Takes responsibility for researching and evaluating systems to achieve organisational outcomes in innovation according to role requirements
Interact with others	2.1, 2.2, 2.5, 4.1, 4.4, 4.6	<ul style="list-style-type: none"> Identifies and uses appropriate conventions and protocols when communicating with stakeholders from diverse backgrounds Uses inclusive and collaborative techniques to negotiate, influence and elicit the views and opinions of a wide range of stakeholders
Get the work done	1.1-1.6, 2.1, 2.6, 3.1, 3.2, 3.4-3.6, 4.2-4.7	<ul style="list-style-type: none"> Accepts responsibility for planning and implementing systems and strategies to achieve organisational goals, negotiating key aspects with others Develops new and innovative ideas through exploration, analysis and critical thinking

		<ul style="list-style-type: none"> • Uses digital tools or systems to access, organise, integrate and share information
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBINN501 Establish systems that support innovation	BSBINN501A Establish systems that support innovation	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBINN501 Establish systems that support innovation

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of ability to:

- design a new system for the organisation that clearly supports innovation, is innovative and is based on:
 - analysis of the organisation’s objectives, current systems, resources and barriers in relation to innovation
 - individual and group techniques with stakeholders to generate, test and evaluate several concepts and options for the new system
- consult with and analyse and integrate feedback from relevant stakeholders to develop a plan for the new system that addresses:
 - the need for external assistance
 - the impact of the new system on people, resources and other organisational practices
 - budget, timelines, responsibilities
 - a communication strategy
 - a learning and development strategy
- trial the new system including taking account of all consultative, coaching and technical issues and review it in relation to its goals for fostering innovation
- open the improvement process to ongoing collaborative input and challenge
- adjust system to reflect evaluation feedback.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- explain how the new system supports innovation in the organisation

- explain the concepts and theories of change management including ways of introducing change in different organisational contexts and change management communication strategies
- explain the concepts and theories of innovation and how these link to innovation in practice
- explain techniques for generating, testing and evaluating concepts and options for new systems
- analyse the technical context in which the system is being developed
- outline the typical ways in which systems may present barriers to innovation.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the creativity and innovation and include access to:

- workplace documents and
- case studies and, where possible, real situations
- office equipment and resources
- interaction with others
- current industry technology used in the development of systems.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBINS201 Process and maintain workplace information

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to receive, process, and store workplace information and maintain information systems. It also includes the maintenance of records management systems.

The unit applies to individuals who perform a variety of routine tasks in the workplace, using a limited range of practical skills and fundamental knowledge of information and information systems in a defined context, under direct supervision or with limited individual responsibility.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Information Services

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect information	1.1 Confirm task requirements 1.2 Collect physical and digital information items 1.3 Allocate time and date of receipt to relevant information items 1.4 Apply organisational policies and procedures relating to security and confidentiality in handling information
2. Process workplace information	2.1 Enter metadata applying to information items into relevant system according to organisational policies and procedures 2.2 Collate and distribute information according to task requirements

ELEMENT	PERFORMANCE CRITERIA
3. Manage information systems	3.1 Maintain information and relevant classification system according to organisational policies and procedures 3.2 Identify and dispose of inactive unpublished information items or deaccession published information items according to organisational policies and procedures 3.3 Create new files of unpublished information materials according to organisational policies and procedures 3.4 Update registration, accessioning, classification and index systems according to organisational policies and procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Recognises and interprets textual information to complete tasks according to organisational policies and procedures
Writing	<ul style="list-style-type: none"> Records simple and routine content using an established format to organise information
Oral Communication	<ul style="list-style-type: none"> Uses listening and questioning skills to clarify and adhere to requirements
Numeracy	<ul style="list-style-type: none"> Comprehends basic mathematical measurements relating to times and number sequences
Self-management	<ul style="list-style-type: none"> Follows clearly defined instructions and monitors own progress to achieve timelines
Technology	<ul style="list-style-type: none"> Uses digital technologies regarding data entry and retrieval

Unit Mapping Information

Supersedes and is equivalent to BSBINM201 Process and maintain workplace information.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBINS201 Process and maintain workplace information

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- receive and process three pieces of workplace information according to organisational policies and procedures.

In the course of the above, the candidate must:

- record and document information accurately
- store, classify and maintain information materials.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- organisational policies and procedures relating to collecting and processing workplace information
- key aspects of organisational information items management systems and security and confidentiality procedures.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- examples of workplace information systems.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBINS309 Maintain business records

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to maintain the records of a business on an operational basis.

The unit applies to individuals who follow established guidelines and processes to carry out their work. They work under supervision or in consultation with senior staff or system users to support effective information management and governance practices across the organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Information Services

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collate business records	1.1 Identify relevant information and records according to organisational policies and procedures 1.2 Organise records in accordance with organisational policies and procedures 1.3 Follow relevant security and access requirements in accordance with organisational policies and procedures
2. Update business or records system	2.1 Record and update information and record description of new records in business or records system according to organisational policies and procedures 2.2 Identify and dispose of relevant records of redundant business

ELEMENT	PERFORMANCE CRITERIA
	activities from current system according to organisational policies and procedures
3. Prepare and distribute reports from the business or records system	3.1 Interpret requests for reports 3.2 Prepare reports from business or records system according to request and organisational security and access procedures 3.3 Distribute reports to relevant stakeholders according to organisational policies and procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Gathers and interprets textual information from different sources to determine how information and records may be applied
Writing	<ul style="list-style-type: none"> Uses clear and industry related terminology to document, complete and update workplace information and records
Numeracy	<ul style="list-style-type: none"> Recognises and uses numerical systems associated with business or record systems
Self-management	<ul style="list-style-type: none"> Takes responsibility for planning and organising own workload to ensure work deadlines are met Takes responsibility for the outcomes of routine decisions related directly to own role
Technology	<ul style="list-style-type: none"> Uses main features and functions of digital tools to maintain business records

Unit Mapping Information

Supersedes and is equivalent to BSBRKG304 Maintain business records.

Supersedes but is not equivalent to BSBRKG305 Review recordkeeping functions.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBINS309 Maintain business records

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- identify, organise, update, and distribute four business records in compliance with organisational policies and procedures on at least three separate occasions.

In the course of the above, the candidate must:

- record and update information in an information management system
- describe records.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- organisational policies and procedures regarding the maintenance and security of business records
- organisational requirements of business or records system reports
- key aspects and processes of records management and records management systems.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace documentation and resources relevant to business records.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBINS401 Analyse and present research information

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to collect, organise, analyse and present information using available systems and sources. This includes identifying research requirements and sources of information, evaluating the quality and reliability of the information, and preparing and producing reports.

The unit applies to those who are required to analyse and apply their knowledge of the organisation to research tasks, evaluate information from a variety of sources and apply solutions to a range of predictable and unpredictable problems.

No licensing, legislation or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Information Services

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify and confirm research strategy	1.1 Identify research objectives according to organisational requirements 1.2 Identify potential sources for research information relevant to organisation requirements 1.3 Assess reliability of potential sources 1.4 Identify and confirm information research strategy is relevant to the research objectives
2. Collect and store research information	2.1 Access and extract relevant information in a format suitable for analysis and distribution according to research strategy

ELEMENT	PERFORMANCE CRITERIA
	2.2 Store research information according to security requirements and organisational policies and procedures
3. Analyse and synthesise research information	3.1 Analyse stored information according to research strategy 3.2 Identify themes and draw conclusions according to research strategy 3.3 Demonstrate that assumptions and conclusions used in analysis are clear, justified, supported by evidence and consistent with research strategy
4. Present research information	4.1 Identify methods of reporting that align with the intended audience and relevant organisational requirements 4.2 Draft research report on findings 4.3 Facilitate review of draft report according to organisational policies and procedures 4.4 Distribute research report according to organisational policies and procedures 4.5 Obtain feedback and comments on suitability and sufficiency of findings in accordance with organisational requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Analyses and evaluates textual information to develop information research strategies, integrate facts and ideas and meet organisational requirements
Writing	<ul style="list-style-type: none"> Gathers, evaluates and integrates information from a range of sources Presents findings, recommendations and issues in required format using language, structure and style appropriate to audience
Oral Communication	<ul style="list-style-type: none"> Presents recommendations and issues using language appropriate to audience and according to organisational requirements
Self-management	<ul style="list-style-type: none"> Plans, organises and implements tasks to meet organisational requirements Takes responsibility for the outcomes of routine decisions related directly to own role
Problem solving	<ul style="list-style-type: none"> Identifies and solves foreseeable problems in familiar work contexts
Technology	<ul style="list-style-type: none"> Uses the main features and functions of digital technologies and tools to

Skill	Description
	research and analyse information

Unit Mapping Information

Supersedes and is equivalent to BSBRES411 Analyse and present research information.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBINS401 Analyse and present research information

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- research, analyse and present research findings according to organisational requirements on at least two occasions.

In the course of the above, the candidate must:

- identify research requirements and objectives
- collect, organise and present research information
- maintain information securely
- prepare report on research findings, including:
 - justified assumptions and conclusions
 - efficient and reliable research methods.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- organisational policies and procedures relating to:
 - accessing information
 - storing information
 - security requirements
 - form and content of research report
- key aspects of the reliability and validity of research and analysis
- common research strategies
- key aspects of relevant information sources, including:
 - reliability
 - accuracy
 - authority

- audience
- relevance
- likelihood of bias.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace information systems, equipment and resources relevant to performance evidence
- workplace policies and procedures relevant to performance evidence.

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBINS402 Coordinate workplace information systems

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to implement and review workplace information systems. It involves identification, collection, initial analysis and use of information.

The applies to individuals whose work will normally be carried out within methods and procedures which require planning and evaluation, leadership and guidance of others, and some discretion and judgement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Information Services

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify and review information needs	1.1 Identify information required by relevant stakeholders 1.2 Review information requirements to determine suitability, accessibility, currency and reliability of information according to organisational policies and procedures
2. Collect, analyse and report information	2.1 Collect information which is adequate and relevant to the requirements of relevant stakeholders 2.2 Confirm information is in a format suitable for analysis, interpretation and distribution 2.3 Analyse information, identify and report relevant trends according to the requirements for which it was collected

ELEMENT	PERFORMANCE CRITERIA
3. Implement information systems	3.1 Implement information systems effectively to store, retrieve and regularly review information for decision making purposes 3.2 Use technology available in the work area to manage information effectively 3.3 Recommend improvements to information system to relevant stakeholders
4. Support information system continuous improvement	4.1 Collect data about information system future needs in consultation with relevant stakeholders 4.2 Confirm identified information system future needs reflect the organisation's business plans 4.3 Assist development of proposals for continuous improvement of information system 4.4 Distribute information to relevant stakeholders on information system changes, where required

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyses documentation from a variety of sources and consolidates information
Writing	<ul style="list-style-type: none"> Develops information for a specific audience using clear and detailed language
Oral Communication	<ul style="list-style-type: none"> Uses active listening and questioning to convey and clarify information and to confirm understanding
Numeracy	<ul style="list-style-type: none"> Selects from and uses mathematical strategies to perform initial analysis on information
Planning and organising	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and prioritising tasks and own workload for efficiency and effective outcomes
Teamwork	<ul style="list-style-type: none"> Cooperates with others and contributes to work practices where joint outcomes are expected and deadlines are to be met
Problem solving	<ul style="list-style-type: none"> Contributes to continuous improvement of current work practices by applying basic principles of analytical thinking
Technology	<ul style="list-style-type: none"> Uses digital technologies and systems to access, enter, present and distribute information

Unit Mapping Information

Supersedes and is equivalent to BSBINM401 Implement workplace information system.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBINS402 Coordinate workplace information systems

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- distribute information to relevant stakeholders in response to three different workplace information needs
- implement and review a workplace information system on at least one occasion.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key aspects of workplace information systems including:
 - budgets and financial management systems
 - customer information software or records
 - databases
 - product and service information
 - project management software
 - record management systems
 - spreadsheets.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- a workplace information system
- organisational policies and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBINS410 Implement records systems for small business

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to research, develop and implement business or records systems for a small business.

The unit applies to individuals who use a range of organisational, analytical and communication techniques to carry out the responsibilities of their role and report directly to a supervisor or manager within the business or section of a larger organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Information Services

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine information management requirements	1.1 Consult with relevant stakeholders and identify and document core business functions, supporting activities, resources, and business and social contexts 1.2 Research and identify organisational functions and activities for which records must be kept 1.3 Analyse the organisation's functions and activities and identify required detail and format of records 1.4 Identify security and access requirements for records system content from analysis of organisation's activities 1.5 Analyse business documentation to determine organisational reporting and accountability requirements

ELEMENT	PERFORMANCE CRITERIA
2. Select required records system	<p>2.1 Identify metadata needed to describe, store, locate and retrieve records in a records system</p> <p>2.2 Specify technological, internal controls, maintenance, disposal and updating requirements of prospective records systems according to scale and nature of business operations</p> <p>2.3 Select records systems that meets required requirements according to scale, nature, and organisational cash flow requirements</p>
3. Develop procedures and implement records system	<p>3.1 Develop rules for incorporating individual records and metadata into records system</p> <p>3.2 Develop and document procedures for the use of the system</p> <p>3.3 Distribute information and instructions to relevant stakeholders in the use of the records system</p> <p>3.4 Monitor and assist with implementation of the records system</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Evaluates and interprets information from a range of relevant sources and identifies relevant and key information
Writing	<ul style="list-style-type: none"> Creates documents to convey information and instructions using language and format appropriate to text and audience
Oral Communication	<ul style="list-style-type: none"> Uses active listening and questioning techniques to confirm and clarify information Communicates using words and non-verbal features appropriate to the audience and context
Numeracy	<ul style="list-style-type: none"> Interprets, compares and contrasts numerical data to determine needs Uses numerical systems associated with record storage systems
Planning and organising	<ul style="list-style-type: none"> Uses understanding of organisational requirements in planning an appropriate information management system Sequences and schedules tasks required to achieve outcomes and manages relevant communication
Technology	<ul style="list-style-type: none"> Uses digital systems and tools to complete tasks

Unit Mapping Information

Supersedes and is equivalent to BSBRKG403 Set up a business or records system for a small business.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBINS410 Implement records systems for small business

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- identify, select, develop and implement a records system for a small business.

In the process of the above, the candidate must:

- document the steps used to determine the criteria for a records system appropriate to the organisation's business functions and reporting requirements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key principles and processes of records management and records management systems
- internal controls required of the business or records system
- key characteristics of the organisational functions, structure and culture relevant to implementation of records system
- organisational policies and procedures relevant to implementing a records system in a small business.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace documentation and resources relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBINT303 Organise the importing and exporting of goods

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to provide general assistance to senior staff organising importing and exporting of goods. Work may be for an external client or for the organisation in which the individual is employed.

It applies to individuals who work under the supervision of a more experienced colleague in various international work contexts. They may exercise discretion and judgement using appropriate knowledge of requirements for importing and exporting goods.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Development – International Business

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Follow organisational systems and processes for organising importation and exportation of goods	1.1 Detail goods to be imported or exported according to characteristics 1.2 Identify and access regulations and permits relating to international movement of specific goods with assistance of manager, supervisor or more senior personnel 1.3 Research and document required processes and trade routes to import or export specific goods as assigned by and under direction

ELEMENT	PERFORMANCE CRITERIA
	<p>of manager, supervisor or more senior personnel</p> <p>1.4 Seek assistance as required to research import or export requirements</p>
2 Contribute to cost calculations	<p>2.1 Discuss and record components of costs of importing or exporting specific goods with supervisor or manager</p> <p>2.2 Make a determination of components of costs</p> <p>2.3 Seek assistance as required in assigned tasks related to calculating costs for international movement of goods</p> <p>2.4 Document costs for international movement of goods in accordance with workplace procedures</p> <p>2.5 Check cost calculation for accuracy and completeness prior to forwarding to supervisor or manager</p> <p>2.6 Finalise and recheck any revisions to calculations by self and supervisor or manager</p>
3 Assist in completing required documentation	<p>3.1 Complete and collate required documentation for international movement of goods</p> <p>3.2 Seek assistance as required in completing and checking documentation</p> <p>3.3 Check required documents and forward for further checking by supervisor or manager</p> <p>3.4 Finalise documents and submit or lodge with relevant parties</p> <p>3.5 Identify and file copies of required documents in accordance with workplace procedures</p>
4 Communicate with carriers	<p>4.1 Identify customs licensed places and transportation services to be used in the international movement of goods with assistance of supervisor, manager or more senior personnel</p> <p>4.2 Ensure communication facilitates arrangements to move goods within required timelines</p> <p>4.3 Identify problems and take actions as required to facilitate resolution</p> <p>4.4 Follow through arrangements for transportation of goods including arrangements with overseas representatives of carriers to finalisation, including arrival of goods at intended destination and settlement effected to complete the contract</p> <p>4.5 Seek assistance as required in communicating with carriers</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.2, 1.3, 2.4-2.6, 3.1, 3.3, 3.5, 4.1	<ul style="list-style-type: none"> Comprehends and applies relevant information in organisational and legislative documents
Writing	1.1-1.4, 2.1-2.4, 2.6, 3.1, 3.2, 3.4, 4.2, 4.5	<ul style="list-style-type: none"> Uses clear simple vocabulary, everyday grammatical structures and workplace conventions to complete and update documentation
Oral Communication	1.2-1.4, 2.1, 2.3, 3.2, 4.1, 4.2, 4.5	<ul style="list-style-type: none"> Uses appropriate vocabulary, including technical language, in discussions directly relevant to own role Elicits the views and opinions of others by listening and questioning
Numeracy	2.1-2.6, 4.2	<ul style="list-style-type: none"> Interprets relevant mathematical data that may be embedded in tables of fees and charges Performs calculations required to determine costs and timeframes
Navigate the world of work	1.2, 2.4, 3.5	<ul style="list-style-type: none"> Applies knowledge of regulatory compliance frameworks and organisational procedures to achieve expectations
Interact with others	1.2-1.4, 2.1-2.3, 2.5, 2.6, 3.2-3.4, 4.1, 4.2, 4.4, 4.5	<ul style="list-style-type: none"> Selects the appropriate form and mode of communication when gathering, confirming and providing information, taking into account purpose and audience Recognises limitations of own knowledge and skills and collaborates with more experienced work colleagues to supplement knowledge and achieve outcomes
Get the work done	1.1-1.3, 2.2, 2.3, 3.1, 4.2, 4.3, 4.4	<ul style="list-style-type: none"> Plans, organises and implements tasks required to achieve required outcomes, including making arrangements with external persons Recognises and responds to predictable routine problems related to role in immediate work context

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBINT303 Organise the importing and exporting of goods	BSBINT303B Organise the importing and exporting of goods	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBINT303 Organise the importing and exporting of goods

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- follow legislative and organisational guidelines for importing and exporting goods
- communicate effectively with managerial and carrier personnel
- accurately calculate the cost of importing or exporting specific goods
- produce accurate documentation.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline legislation, codes of practice and national standards relevant to business operations in an international trade context
- list international and Australian regulatory bodies and their roles and responsibilities
- identify organisational policies and procedures relating to business operations in an international trade context
- briefly outline the process used in the organisation for the importing or exporting of goods
- outline significant trade routes and modes of transport used by the organisation
- explain the penalties for incorrect customs declarations.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the business development – international business field of work and include access to:

- office equipment and resources
- examples of importing and exporting documents

- case studies and, where possible, real situations.

Assessors must satisfy NVR/AQTF assessor requirements

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBITU304 Produce spreadsheets

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to develop spreadsheets through the use of spreadsheet software.

It applies to individuals employed in a range of environments who tend to be personally responsible for designing and working with spreadsheets under minimal supervision.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Information and Communications Technology – IT Use

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select and prepare resources	1.1 Adhere to ergonomic, work organisation and occupational health and safety requirements 1.2 Use energy and resource conservation techniques to minimise wastage 1.3 Identify spreadsheet task requirements in relation to data entry, storage, output and presentation
2. Plan spreadsheet design	2.1 Ensure spreadsheet design suits purpose, audience and information requirements of task

ELEMENT	PERFORMANCE CRITERIA
	<p>2.2 Ensure spreadsheet design enhances readability and appearance, and meets organisational and task requirements for style and layout</p> <p>2.3 Use style sheets and automatic functions to ensure consistency of design and layout</p>
3. Create spreadsheet	<p>3.1 Ensure data is entered, checked and amended to maintain consistency of design and layout, in accordance with organisational and task requirements</p> <p>3.2 Format spreadsheet using software functions to adjust page and cell layout to meet information requirements, in accordance with organisational style and presentation requirements</p> <p>3.3 Ensure formulae are tested and used to confirm output meets task requirements, in consultation with appropriate personnel as required</p> <p>3.4 Use manuals, user documentation and online help to overcome problems with spreadsheet design and production</p>
4. Produce simple charts	<p>4.1 Select chart type and design that enables valid representation of numerical data, and meets organisational and task requirements</p> <p>4.2 Create charts using appropriate data range in spreadsheet</p> <p>4.3 Modify chart type and layout using formatting features</p>
5. Finalise spreadsheets	<p>5.1 Preview, adjust and print spreadsheet and any accompanying charts, in accordance with task requirements</p> <p>5.2 Ensure data input meets designated timelines and organisational requirements for speed and accuracy</p> <p>5.3 Name and store spreadsheet in accordance with organisational requirements and exit application without data loss/damage</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	2.2, 3.1-3.4, 5.1	<ul style="list-style-type: none"> Recognises and interprets numerical and textual information to determine organisational and task

		requirements
Writing	2.1, 3.1-3.3, 4.2, 4.3, 5.1-5.3	<ul style="list-style-type: none"> Inputs numerical and key reporting information when creating and finalising spreadsheets and uses format, layout, style guides and standard naming conventions to organise data according to purpose and audience
Oral Communication	3.3	<ul style="list-style-type: none"> Participates in exchange of information to determine whether formulae utilised produce result required
Numeracy	4.1, 4.2	<ul style="list-style-type: none"> Uses mathematical equations to create simple formulae and validate numerical data
Navigate the world of work	1.1-1.3, 2.1-2.3, 3.1-3.3, 4.1, 5.1-5.3	<ul style="list-style-type: none"> Recognises and follows explicit and implicit protocols and meets expectations associated with own role
Interact with others	3.3	<ul style="list-style-type: none"> Collaborates with others to achieve joint outcomes
Get the work done	2.1-2.3, 3.1-3.4, 4.1-4.3, 5.1-5.3	<ul style="list-style-type: none"> Uses advanced features within applications to address routine and complex work tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBITU304 Produce spreadsheets	BSBITU304A Produce spreadsheets	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBITU304 Produce spreadsheets

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- design spreadsheets that address a range of data and organisational requirements
- use software functions, graphics and support materials to create spreadsheets
- apply knowledge of formatting requirements for workplace documents.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- describe formatting requirements of workplace documents
- identify organisational guidelines on spreadsheet design and use
- explain organisational requirements for ergonomic standards, work periods and breaks, and conservation techniques.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the information and communications technology – IT use field of work and include access to:

- industry software packages
- computer user information
- relevant legislation and codes of practice
- organisational policies and procedures
- relevant workplace documentation and resources.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBITU306 Design and produce business documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to design and produce various business documents and publications. It includes selecting and using a range of functions on a variety of computer applications.

It applies to individuals who possess fundamental skills in computer operations and keyboarding. They may exercise discretion and judgement using appropriate theoretical knowledge of document design and production to provide technical advice and support to a team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Information and Communications Technology – IT Use

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select and prepare resources	1.1 Select and use appropriate technology and software applications to produce required business documents 1.2 Select layout and style of publication according to information and organisational requirements 1.3 Ensure document design is consistent with company and/or client requirements, using basic design principles

ELEMENT	PERFORMANCE CRITERIA
	1.4 Discuss and clarify format and style with person requesting document/publication
2. Design document	2.1 Identify, open and generate files and records according to task and organisational requirements 2.2 Design document to ensure efficient entry of information and to maximise presentation and appearance of information 2.3 Use a range of functions to ensure consistency of design and layout 2.4 Operate input devices within designated requirements
3. Produce document	3.1 Complete document production within designated timelines according to organisational requirements 3.2 Check document produced to ensure it meets task requirements for style and layout 3.3 Store document appropriately and save document to avoid loss of data 3.4 Use manuals, training booklets and/or help-desks to overcome basic difficulties with document design and production
4. Finalise document	4.1 Proofread document for readability, accuracy and consistency of language, style and layout prior to final output 4.2 Make any modifications to document to meet requirements 4.3 Name and store document in accordance with organisational requirements and exit application without data loss/damage 4.4 Print and present document according to requirements

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	2.1, 2.2, 3.2, 3.4, 4.1	<ul style="list-style-type: none"> Recognises and interprets textual information from a range of sources to determine and adhere to requirements Applies strategies to self-correct and verify clarity and conformity of information

Writing	2.2, 2.3, 3.1, 4.2, 4.3	<ul style="list-style-type: none"> Develops documents using required format, accurate spelling and grammar and terminology specific to requirements Organises content to support purposes and audience of material, using clear and logical language
Oral Communication	1.4	<ul style="list-style-type: none"> Confirms requirements with relevant personnel using specific terminology and listening and questioning techniques
Navigate the world of work	1.2, 1.3, 2.1, 2.4, 3.1, 3.2, 4.2-4.4	<ul style="list-style-type: none"> Recognises and follows explicit and implicit protocols and meets expectations associated with own role
Interact with others	1.4	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating in a range of familiar work contexts
Get the work done	1.1-1.3, 2.1-2.4, 3.1-3.4, 4.1-4.4	<ul style="list-style-type: none"> Uses basic features and functions within applications to access, store, organise data and perform routine work tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBITU306 Design and produce business documents	BSBITU306A Design and produce business documents	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBITU306 Design and produce business documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- select appropriate technology and software for design and production of business documents
- adhere to organisational requirements when:
 - selecting layout and style
 - opening and generating files
 - producing documents within designated timelines
 - naming and storing documents
 - printing and presenting documents
- adhere to task requirements when producing documents including:
 - applying basic design principles
 - applying consistent formatting
 - using appropriate styles
 - using correct layouts
 - proofreading as required
- use appropriate data storage options
- apply knowledge of functions and features of contemporary computer applications
- print and present completed documents.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify appropriate technology for production requirements

- describe functions and features of contemporary computer applications
- outline organisational policies, plans and procedures
- list organisational requirements for document design e.g. style guide.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the information and communications technology – IT use field of work and include access to:

- office equipment and resources
- relevant software applications
- examples of style guides
- organisational procedures.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBITU404 Produce complex desktop published documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to design and produce complex desktop published documents.

This unit applies to individuals employed in a range of work environments who require well-developed skills in desktop publishing. They may be individuals providing administrative support within an enterprise, or others responsible for production of their own documents.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Information and Communications Technology – IT Use

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to produce desktop published documents	1.1 Use safe work practices including addressing ergonomic requirements and using work organisation strategies 1.2 Use energy and resource conservation techniques 1.3 Identify document purpose, audience, presentation and final output requirements, and clarify with relevant personnel as required 1.4 Identify organisational and task requirements for desktop

ELEMENT	PERFORMANCE CRITERIA
	published documents to ensure consistency of style and image
2. Design desktop published documents	<p>2.1 Design document to enhance readability and appearance, according to organisational and task requirements</p> <p>2.2 Determine document type and assess production and design requirements</p> <p>2.3 Set up and use master pages, templates and styles to ensure consistency of design and layout</p> <p>2.4 Set up colour palettes according to organisational and task requirements</p>
3. Create desktop published documents	<p>3.1 Prepare, format and enter required text</p> <p>3.2 Import text from other applications and resolve any formatting issues</p> <p>3.3 Scan or import graphics from other applications and resolve any formatting issues</p> <p>3.4 Use complex software functions to arrange text and graphics on page, according to organisational and task requirements</p>
4. Finalise desktop published documents	<p>4.1 Ensure pages and combined graphics and text are composed correctly, to suit organisational and task requirements</p> <p>4.2 Check numerical sequencing and layout of document is correct, to meet binding and finishing requirements</p> <p>4.3 Incorporate bleed allowance in margins and borders</p>
5. Produce desktop published documents	<p>5.1 Review text for possible errors and omissions, and resolve any issues</p> <p>5.2 Produce completed document in line with required final output</p> <p>5.3 Name and store text documents, in accordance with organisational requirements and exit application without information loss/damage</p> <p>5.4 Prepare text documents within designated timelines and organisational requirements for speed and accuracy</p> <p>5.5 Use manuals, user documentation and online help to overcome problems with document design and production</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.3, 1.4, 2.1, 2.2, 3.1-3.4, 4.1, 4.2, 4.5, 5.1, 5.2	<ul style="list-style-type: none"> Evaluates and integrates information and ideas to construct meaning, to design, set up and create a published document, and review final document for possible errors and other issues
Writing	2.1, 2.2, 3.1-3.4, 5.1-5.5	<ul style="list-style-type: none"> Communicates relationships between ideas and information in a style appropriate to audience and purpose in accordance with organisational and task requirements
Oral Communication	1.3, 1.4	<ul style="list-style-type: none"> Uses everyday language and listens to short specific instructions to clarify document purpose, audience and presentation requirements with appropriate personnel
Numeracy	4.2, 4.3	<ul style="list-style-type: none"> Uses basic numeracy calculations to deal with margin bleeding and arranges sequential numerical information during process of finalising document.
Navigate the world of work	1.1, 1.3, 1.4, 2.1-2.4, 3.4, 4.1, 4.2, 5.2-5.4	<ul style="list-style-type: none"> Recognises and follows explicit and implicit protocols and meets expectations associated with own role
Interact with others	1.3	<ul style="list-style-type: none"> Collaborates with others to achieve joint outcomes
Get the work done	2.1, 2.3, 2.4, 3.1-3.4, 4.1-4.3, 5.1-5.5	<ul style="list-style-type: none"> Recognises and responds to routine problems in context of own work Uses advanced features within applications to access, store, organise data and perform routine and complex work tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBITU404 Produce complex desktop published documents	BSBITU404A Produce complex desktop published documents	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBITU404 Produce complex desktop published documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- follow organisational and safe work practices including:
 - ergonomic requirements
 - energy and resource conservation techniques
- adhere to organisational requirements for:
 - ensuring consistency of style and image
 - logically sequencing data
 - producing documents within designated timelines
 - naming and storing documents
- adhere to task requirements when producing documents including:
 - applying consistent formatting
 - using appropriate templates and master pages
 - using appropriate colour palettes
 - using correct layouts
 - providing bleed allowance
 - meeting binding and finishing requirements
- resolve any issues including:
 - formatting issues
 - errors and omissions
 - problems with design and production.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline various formatting styles and their effect on formatting, readability and appearance of documents
- explain organisational requirements for ergonomics, work periods and breaks, and energy and resource conservation techniques
- identify purposes, uses and functions of desktop publishing software
- describe purpose and contents of an organisational style guide.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the information and communications technology – IT use field of work and include access to:

- organisational policies and procedures
- relevant workplace documentation and resources
- industry software packages and user instructions.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBLDR403 Lead team effectiveness

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit defines skills, knowledge and outcomes required to plan and supervise the performance of the team and develop team cohesion.

It applies team leaders, supervisors and new emerging managers who have an important leadership role in the development of efficient and effective work teams.

Leaders at this level also provide leadership for the team and bridge the gap between the management of the organisation and the team members. As such they must 'manage up' as well as manage their team/s.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership - Leadership

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan to achieve team outcomes	1.1 Lead the team to identify, establish and document team purpose, roles, responsibilities, goals, plans and objectives in consultation with team members 1.2 Engage team members to incorporate innovation and

ELEMENT	PERFORMANCE CRITERIA
	productivity measures in work plans 1.3 Lead and support team members in meeting expected outcomes
2. Lead team to develop cohesion	2.1 Provide opportunities for input of team members into planning, decision making and operational aspects of work team 2.2 Encourage and support team members to take responsibility for own work and to assist each other in undertaking required roles and responsibilities 2.3 Provide feedback to team members to encourage, value and reward individual and team efforts and contributions 2.4 Recognise and address issues, concerns and problems identified by team members or refer to relevant persons as required 2.5 Model expected behaviours and approaches
3. Participate in and facilitate work team	3.1 Actively encourage team members to participate in and take responsibility for team activities and communication processes 3.2 Give the team support to identify and resolve problems which impede its performance 3.3 Ensure own contribution to work team serves as a role model for others and enhances the organisation's image within the work team, the organisation and with clients/customers
4. Liaise with management	4.1 Maintain open communication with line manager/management at all times 4.2 Communicate information from line manager/management to the team 4.3 Communicate unresolved issues, concerns and problems raised by the team/team members to line manager/management and ensure follow-up action is taken 4.4 Communicate unresolved issues, concerns and problems related to the team/team members raised by line managers/management to the team and ensure follow-up to action is taken

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance	Description
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	Criteria	
Writing	1.1, 4.2	<ul style="list-style-type: none"> Prepares workplace plans that communicate intent and elicits feedback clearly and effectively
Oral communication	1.1, 1.3, 2.2, 2.3, 3.1, 3.2, 4.2-4.4	<ul style="list-style-type: none"> Engages in discussions or provides information using structure and language appropriate to the audience and situation
Interact with others	1.1-1.3, 2.1-2.5, 3.1, 3.3, 4.1	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with team members Adapts personal communication style to model required behaviours, build trust and positive working relationships and to show respect for the opinions and values of others Plays a lead role in situations requiring effective collaboration, demonstrating conflict resolution skills and ability to engage and motivate others
Get the work done	1.1-1.3, 3.2	<ul style="list-style-type: none"> Develops, implements and monitors plans and processes to ensure team engagement and effectiveness Uses formal analytical thinking techniques to identify issues and generate possible solutions, seeking input from others as required

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBLDR403 Lead team effectiveness	BSBWOR402A Promote team effectiveness	Updated to meet Standards for Training Packages Title change Minor edits to clarify intent of performance criteria	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBLDR403 Lead team effectiveness

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- apply knowledge of organisational goals, objectives and plans
- develop a team work plan including documentation of how it was generated and how it will be monitored
- identify and incorporate innovation and productivity measures into a team work plan
- communicate with team members and management to identify and establish the team purpose, roles, responsibilities, goals plans and objectives and resolve problems
- use techniques to consult, encourage, support and provide feedback to team members
- model team leadership behaviours and approaches
- liaise with management to develop the teamwork plan, resolve issues and ensure follow-up action is taken.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must explain principles and techniques associated with:

- delegation and work allocation
- goal setting
- group dynamics and processes
- individual behaviour and difference
- leadership styles
- motivation
- negotiation
- problem solving
- planning

- workplace innovation
- workplace productivity.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the management and leadership field of work and include access to:

- information about the organisation, including organisational structure, goals, objectives and plans
- case studies, and where possible, real situations
- workplace equipment and resources
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBLDR412 Communicate effectively as a workplace leader

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to communicate effectively as a workplace leader, including understanding the context, choosing methods of communication to suit the audience, and following up.

The unit applies to managers, supervisors and team leaders required to communicate with other persons within the workplace. Communication skills cover a range of methods and contexts within principally structured environments.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Social Competence – Leadership

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for communication	1.1 Identify purpose and audience for communication 1.2 Identify the desired outcome of the communication 1.3 Evaluate available methods of communication according to task requirements and organisational business policies and procedures 1.4 Identify potential barriers to effective communication and develop solutions to minimise impact
2. Engage in communication	2.1 Communicate using media and format relevant to the context 2.2 Use respectful and positive approaches to communications 2.3 Employ two-way processes to ensure receipt and

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	acknowledgement of message 2.4 Provide opportunities to clarify and confirm understanding
3. Review communication	3.1 Maintain record of the communication process and outcomes according to organisational policies and procedures 3.2 Identify follow up actions and communicate to relevant persons 3.3 Seek feedback on communication processes from all parties 3.4 Identify and incorporate opportunities to improve leadership communication processes

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Analyses and evaluates textual information from a range of sources to inform communication processes
Writing	<ul style="list-style-type: none"> Plans and prepares workplace documentation for relevant stakeholders according to organisational formats
Oral Communication	<ul style="list-style-type: none"> Participates in a variety of spoken exchanges with a range of audiences using structure and language to suit the audience
Initiative and enterprise	<ul style="list-style-type: none"> Adheres to organisational policies and procedures relevant to own role
Teamwork	<ul style="list-style-type: none"> Cooperates, collaborates and consults with others to clarify and confirm understanding and seek feedback Selects and uses appropriate communication conventions and practices to build rapport, seek or present information
Planning and organising	<ul style="list-style-type: none"> Plans and implements activities and processes to identify and establish communication and record keeping requirements Uses analytical processes to identify potential problems and generate solutions Systematically gathers and analyses all relevant information and evaluates options in order to make decisions about communication processes

Unit Mapping Information

Supersedes and is equivalent to BSBLDR401 Communicate effectively as a workplace leader.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBLDR412 Communicate effectively as a workplace leader

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- prepare, engage and review communication on at least four occasions with different individuals or groups.

In the course of the above, the candidate must:

- identify the context for communication and select approach and responses accordingly
- create and present messages by choosing method and mode appropriate to the audience and context
- undertake effective two-way communication from the perspective of a supervisor or team leader
- identify and record actions required as a result of communication and follow-up in a timely manner.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislation requirement and organisational policies on workplace communication
- characteristics of effective leadership communication
- electronic and non-electronic communication methods, including situations where they would or would not be used
- effective listening techniques
- common feedback process and methods
- leadership communication responsibilities applicable to own role
- common barriers to effective communication in a workplace context
- characteristics of verbal and non-verbal communication.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace documentation and resources for communication and leadership.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBLDR413 Lead effective workplace relationships

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills, knowledge and outcomes required to use leadership to promote team cohesion. It includes motivating, mentoring, coaching and developing the team and forming the bridge between the management of the organisation and team members.

The unit applies to team leaders, supervisors and new or emerging managers where leadership plays a role in developing and maintaining effective workplace relationships. It applies in any industry or community context. At this level work will normally be carried out within routine and non-routine methods and procedures, which require planning, evaluation, leadership and guidance of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Social Competence – Leadership

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to lead workplace relationships	1.1 Identify work team objectives according to organisational strategy 1.2 Collect and analyse information for the achievement of work task 1.3 Share ideas and information with relevant internal and external stakeholders according to work task 1.4 Develop strategy for completion of work task in collaboration with work team

ELEMENT	PERFORMANCE CRITERIA
2. Lead workplace relationships	<p>2.1 Identify and implement methods to facilitate collaboration to complete work task</p> <p>2.2 Support colleagues experiencing difficulties fulfilling work requirements</p> <p>2.3 Manage conflict constructively within the organisation's processes and parameters of own role</p> <p>2.4 Communicate work progress to relevant internal and external stakeholders</p>
3. Review leadership	<p>3.1 Seek feedback on relationship management for work task from relevant stakeholders</p> <p>3.2 Analyse feedback on relationship management</p> <p>3.3 Evaluate personal performance in leading workplace relationships</p> <p>3.4 Identify areas of improvement for leading workplace relationships future work tasks</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Collects, analyses and evaluates textual information from a range of resources to inform improvement strategies
Oral Communication	<ul style="list-style-type: none"> Selects or adjusts communication style to maintain effectiveness of interaction and build and maintain engagement consistent with organisational requirements
Initiative and enterprise	<ul style="list-style-type: none"> Identifies and follows legislative and organisational requirements relevant to own role
Teamwork	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with diverse stakeholders Adapts personal communication style to build trust and positive working relationships and to show respect for the opinions, values and particular needs of others Plays a lead role in situations requiring effective collaboration, demonstrating conflict resolution skills and ability to engage and motivate others
Planning and	<ul style="list-style-type: none"> Plans and implements activities and processes to manage and review work performance

organising	<ul style="list-style-type: none">• Systematically gathers and analyses all relevant information to formulate and evaluate possible solutions to difficulties
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Unit Mapping Information

Supersedes and is equivalent to BSBLDR402 Lead effective workplace relationships.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBLDR413 Lead effective workplace relationships

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- lead effective workplace relationships on at least four occasions with different individuals or groups.

In the course of the above, the candidate must:

- access and analyse information required to achieve planned outcomes
- collaborate with work team to develop and implement a work task strategy
- apply techniques for resolving problems and conflicts, and dealing with poor performance according to organisational and legislative requirements
- monitor and communicate work progress to relevant internal and external stakeholders
- seek and review feedback to improve workplace leadership.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- considerations for communicating information including audience cultural and social diversity
- consultation processes including internal and external sources of consultees
- impacts of relationships, cultural and social environment, in supporting or hindering the achievement of planned outcomes
- techniques for developing positive work relationships and building trust and confidence in a team, including:
 - interpersonal styles
 - communications
 - consultation
 - cultural and social sensitivity
 - networking

- impact of legislation and organisational policies on workplace relationships
- techniques for communicating information and ideas to a range of stakeholders
- common methods to resolve workplace conflict
- common methods to manage poor work performance
- common methods to monitor, analyse and improve work relationships.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- legislation, regulations, standards and codes relevant to performance evidence
- workplace documentation and resources
- interaction with others.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBLDR414 Lead team effectiveness

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills, knowledge and outcomes required to lead the performance of a team and to develop team cohesion.

The unit applies team leaders, supervisors and new emerging managers who have an important leadership role in the development of efficient and effective work teams. Leaders at this level also provide leadership for the team and bridge the gap between the management of the organisation and the team members. As such they must 'manage up' as well as manage their team/s.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Social Competence – Leadership

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan team outcomes	1.1 Lead team to identify and establish team objectives and work processes 1.2 Support team to document identified objectives and work processes according to organisational processes 1.3 Encourage team members to incorporate innovation and productivity measures in work plans 1.4 Lead and support team members to meet expected outcomes
2. Promote team cohesion	2.1 Provide opportunities for input of team members into planning, decision making and operational aspects of work team

ELEMENT	PERFORMANCE CRITERIA
	2.2 Support team members to take responsibility for own work and to assist each other in undertaking required roles and responsibilities 2.3 Provide feedback to team members on their efforts and contributions 2.4 Address or refer issues, concerns and problems identified by team members 2.5 Model expected behaviours and approaches
3. Supervise team performance	3.1 Encourage team members to participate in and take responsibility for team activities and communication processes 3.2 Support team to identify and resolve problems which impede performance 3.3 Ensure own contribution to work team serves as a role model for others
4. Liaise with management	4.1 Establish open communication with line management 4.2 Communicate information from line management to the team 4.3 Communicate unresolved issues, concerns and problems raised by the team to line management to action 4.4 Communicate issues raised by management to the team to action

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Writing	<ul style="list-style-type: none"> Prepares workplace plans that communicate intent and elicits feedback clearly and effectively
Oral communication	<ul style="list-style-type: none"> Engages in discussions or provides information using structure and language appropriate to the audience and situation
Teamwork	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with team members Adapts personal communication style to model required behaviours, build trust and positive working relationships and to show respect for the opinions and values of others Plays a lead role in situations requiring effective collaboration, demonstrating conflict resolution skills and ability to engage and motivate others

Planning and organising	<ul style="list-style-type: none">• Develops, implements and monitors plans and processes to ensure team engagement and effectiveness• Uses formal analytical thinking techniques to identify issues and generate possible solutions, seeking input from others, as required
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Unit Mapping Information

Supersedes and is equivalent to BSBLDR403 Lead team effectiveness.

Supersedes but is not equivalent to BSBSMB407 Manage a small team.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBLDR414 Lead team effectiveness

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop a team development plan, that addresses:
 - innovation and productivity measures
 - team cohesion
 - issues management and actions.

In the course of the above, the candidate must:

- apply knowledge of organisational goals, objectives and plans to work tasks
- communicate with team members and management to identify and establish team purpose, roles, responsibilities, goals plans and objectives and resolve problems
- consult, encourage, support and provide feedback to team members
- model team leadership behaviours and approaches.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- work processes, including team purpose, roles, responsibilities, goals and plans
- organisational escalation policies and procedures
- behaviours which enhance organisational image for work team, clients and customers
- processes for setting goals that contribute to team effectiveness
- effects of individual behaviour on team effectiveness
- innovation and productivity measures in work plans
- key features of common leadership styles.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- information about the organisation, including organisational structure, goals, objectives and plans.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBLIB502 Manage the development of collections

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to determine collection needs to accession and de-accession collection material for galleries and collection bodies.

It applies to individuals who possess specialised knowledge, have a degree of autonomy and are responsible for managing all aspects of collections development.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Library – Collection Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Determine collection needs	1.1 Review collection material against organisational objectives and collection requirements 1.2 Determine priorities in consultation with key stakeholders
2 Assess collection material to be accessioned	2.1 Use options to identify material that could be accessioned to meet collection needs 2.2 Assess key internal and external factors that impact options 2.3 Obtain expert advice on material and its relevance to collections

ELEMENT	PERFORMANCE CRITERIA
	<p>2.4 Assess potential material for significance and relevance to collections according to organisational collection management policies</p> <p>2.5 Examine records to establish provenance and confirm significance</p> <p>2.6 Identify resources required for accessioning collection material</p> <p>2.7 Develop recommendations for accessioning collection material according to collection needs</p>
3 Coordinate accessioning of collection material	<p>3.1 Seek approval for accessioning collection material</p> <p>3.2 Establish clear conditions for accessioning collection material according to organisational procedures and guidelines</p> <p>3.3 Organise appropriate resources to accession collection material according to approval and conditions</p> <p>3.4 Comply with legal, ethical and financial requirements and cultural protocols in the accession process</p> <p>3.5 Negotiate terms and organise transfer of rights according to organisational procedures</p> <p>3.6 Document agreements and terms according to organisational procedures and guidelines</p>
4 Coordinate de-accessioning of collection material	<p>4.1 Identify material to be de-accessioned from collections</p> <p>4.2 Consult with experts on the material to determine impact of de-accessioning on the collection</p> <p>4.3 Select options to de-accession material</p> <p>4.4 Develop and implement recommendations for de-accessioning collection material according to organisational policies and strategies</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 2.1, 2.2, 2.4-2.6,	<ul style="list-style-type: none"> Analyses and compares collection material and documents to determine requirements

	3.2, 3.4, 3.6, 4.1	<ul style="list-style-type: none"> Checks prepared documentation for compliance with terms, conditions and procedures for collection management
Writing	1.2, 2.3, 3.1-3.3, 3.5, 4.2	<ul style="list-style-type: none"> Prepares specific information conveying an understanding of outcomes and alternatives, and uses terminology appropriate to present to relevant personnel Ensures produced material reflects cultural protocols and legal, ethical and financial requirements Uses specific and appropriate language to develop accessioning and de-accessioning agreements and recommendations
Oral Communication	1.2, 2.3, 2.7. 3.1, 3.5. 3.6, 4.2	<ul style="list-style-type: none"> Initiates and participates in verbal exchanges of ideas and elicits views and opinions of others by listening and questioning Uses a range of persuasive responses appropriate to audience and environment, and makes comparisons which show an understanding of requirements
Numeracy	3.4	<ul style="list-style-type: none"> Interprets numerical information for compliance with financial requirements
Navigate the world of work	1.1, 2.4, 3.2-3.6, 4.4	<ul style="list-style-type: none"> Takes full responsibility for following policies, procedures and legislative requirements Takes responsibility for managing organisational policies, procedures, and protocols relevant to own role
Interact with others	1.2, 2.3, 2.7. 3.1, 3.5. 3.6, 4.2	<ul style="list-style-type: none"> Uses collaborative techniques to engage stakeholders and colleagues in consultations and negotiations
Get the work done	1.1, 1.2, 2.1-2.7, 3.1-3.3, 4.1-4.4	<ul style="list-style-type: none"> Accepts responsibility for planning and sequencing complex tasks and workload, negotiating key aspects with others taking into account capabilities, efficiencies and effectiveness Systematically gathers and analyses all relevant information and evaluates options to make decisions about accessioning and de-accessioning collection material Uses problem-solving techniques to identify and analyse issues Uses main features and functions of digital tools to complete work tasks and access information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBLIB502 Manage the development of collections	CULCNM503A Manage the development of collections	Updated to meet Standards for Training Packages Unit moved from Library, Information and Cultural Services Training Package to Business Services Training Package.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBLIB502 Manage the development of collections

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 2.0.

Performance Evidence

Evidence of the ability to:

- make and justify decisions regarding accessioning and de-accessioning collection material to meet collection needs
- apply organisational procedures and guidelines to manage development of collections
- negotiate and document processes and agreements in relation to collection material.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify and interpret organisational procedures and guidelines regarding managing specific items and whole collections
- identify and explain the purpose of subject matter expertise, including curatorial and conservation
- locate and interpret sources for accessioning and de-accessioning options
- interpret and explain information regarding comparable collections and their importance
- describe legal, ethical and financial requirements for accessioning and de-accessioning
- locate and interpret cultural protocols for collections development and management that impact accessioning and de-accessioning of cultural material, including those for Aboriginal or Torres Strait Islander material
- explain security issues associated with collection material.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the Library – Collection Management field of work and include access to:

- an established or proposed collection as basis of decision-making
- organisational objectives, procedures and guidelines
- relevant personnel to reflect necessary communication and negotiation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBLIB602 Develop and monitor procedures for the movement and storage of collection material

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to develop and monitor procedures for the movement and storage of collection material.

It applies to individuals who work autonomously within established guidelines, and often as a team leader.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Library – Collection Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Establish procedures for handling, moving and storing collection material	1.1 Assess key information about collection material 1.2 Assess internal and external factors that impact moving and storing collection material 1.3 Integrate current industry best practice in procedure development 1.4 Locate and consult with stakeholders on complex matters of movement and storage

ELEMENT	PERFORMANCE CRITERIA
	<p>1.5 Identify and address legal, insurance and other administrative requirements impacting handling, moving and storing collection material</p> <p>1.6 Identify and assess work health and safety issues and legislative requirements</p> <p>1.7 Document procedures for moving and storing collection material</p>
2 Manage operations	<p>2.1 Organise and monitor movement and storage arrangements according to agreed procedures and work requirements</p> <p>2.2 Check movement and storage of collection material against schedules and allocated budgets, and take action to address problems</p> <p>2.3 Evaluate information records to ensure completeness, currency, accuracy and compliance with legal, ethical and cultural constraints</p> <p>2.4 Make adjustments and enhancements to record-keeping formats and systems based on ongoing review of records and feedback from users</p>
3 Maintain procedures for moving and storing collection material	<p>3.1 Consult with colleagues to obtain feedback on movement and storage procedures</p> <p>3.2 Update procedures based on feedback and industry practice</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1-1.3, 1.5, 1.6, 2.2-2.4	<ul style="list-style-type: none"> Analyses and interprets a wide range of information for incorporation into organisational practices and procedures
Writing	1.3, 1.5, 1.7, 2.4, 3.2	<ul style="list-style-type: none"> Develops and updates detailed procedures which clearly and concisely define organisational systems and practices Develops documents using language understood by target audience

Oral Communication	1.4, 1.5, 2.4, 3.1	<ul style="list-style-type: none"> Elicits views and opinions of others and obtains information by listening and questioning Participates in a verbal exchange of ideas/solutions and uses inclusive and collaborative techniques to clarify and present information according to requirements and audience
Numeracy	2.2-2.4	<ul style="list-style-type: none"> Interprets and uses budgets to meet required outcomes Works effectively with numerical recordkeeping systems to manage and monitor storage collection materials and operations
Navigate the world of work	1.3, 1.5-1.7, 2.1-2.3, 3.1, 3.2	<ul style="list-style-type: none"> Works autonomously making high level decisions to achieve and improve organisational goals Develops and implements strategies to ensure organisational policies, procedures, timelines and regulatory requirements are met Monitors and reviews organisation's policies, procedures and adherence to legislative requirements to implement and manage change
Interact with others	1.4, 1.5, 2.4, 3.1	<ul style="list-style-type: none"> Uses a variety of strategies to build and maintain effective working relationships
Get the work done	1.1-1.7, 2.1-2.4, 3.1, 3.2	<ul style="list-style-type: none"> Sequences and schedules complex activities, monitors implementation and manages relevant communication Plans, organises, implements and reviews systems and processes to manage compliance within relevant regulations and legislation Accepts responsibility for planning, prioritising and sequencing complex tasks and workload Gathers and analyses data and seeks feedback to improve plans and processes Evaluates effectiveness of systems and processes to inform decisions on how to implement improvements Uses problem-solving techniques to identify and analyse issues Uses main features and functions of digital tools to complete work tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
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Code and title current version	Code and title previous version	Comments	Equivalence status
BSBLIB602 Develop and monitor procedures for the movement and storage of collection material	CULCNM602A Develop and monitor procedures for the movement and storage of collection material	Updated to meet Standards for Training Packages Unit moved from Library, Information and Cultural Services Training Package to Business Services Training Package.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBLIB602 Develop and monitor procedures for the movement and storage of collection material

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 2.0.

Performance Evidence

Evidence of the ability to:

- develop procedures for moving and storing collection material
- implement and monitor procedures for moving and storing collection material
- integrate into procedures, internal, external and technical issues that impact movement and storage of collection material.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- assess copyright, moral rights and intellectual property legislation and issues that impact moving and storing collection material
- identify and interpret cultural protocols that affect movement and storage of material, including Aboriginal or Torres Strait Islander material
- outline legal and administrative requirements for moving and storing collection material
- interpret procedures and practices for protection, transportation, storage and security of collection material
- explain safety legislation and requirements that impact moving and storing collection material
- describe technical and conservation issues associated with moving and storing collection material.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the Library – Collection Management field of work and include access to:

- relevant policies and procedures manuals
- a collection, for which procedures can be planned.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBMGT605 Provide leadership across the organisation

Modification History

Release	Comments
Version 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to demonstrate senior leadership behaviour and personal and professional competence. Business ethics are also addressed in this unit.

It applies to individuals who have a role in inspiring and motivating others to achieve organisational goals and to model professionalism in their organisation and industry. Leadership is seen in the context of the organisational mission.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Communicate organisational mission and goals	1.1 Clarify objectives, values and standards in accordance with organisation's strategic direction 1.2 Establish linkages between organisational objectives, values and standards and the responsibilities of relevant groups and individuals 1.3 Ensure media and language used is appropriate to individuals and group circumstances

ELEMENT	PERFORMANCE CRITERIA
	<p>1.4 State clear expectations of internal groups and individuals and explain in a manner which builds commitment to the organisation</p> <p>1.5 Address expectations of the organisation</p> <p>1.6 Investigate incidents promptly and communicate results clearly to relevant groups and individuals</p>
2. Influence groups and individuals	<p>2.1 Build trust, confidence and respect of diverse groups and individuals through positive role modelling and effective communication and consultation</p> <p>2.2 Embrace, resource and effectively implement improvements to organisational and workplace culture</p> <p>2.3 Demonstrate understanding of the global environment and new technology in work activities</p> <p>2.4 Ensure actions convey flexibility and adaptability to change and accessibility</p> <p>2.5 Ensure consultation and participation in decision making occurs with relevant groups and individuals where appropriate</p> <p>2.6 Ensure decision making takes into account needs and expectations of both internal and external groups</p> <p>2.7 Ensure decision making occurs in accordance with risk management plans for all options, and within appropriate timeframes</p> <p>2.8 Ensure that the organisation is represented positively in the media and community</p>
3. Build and support teams	<p>3.1 Assign accountabilities and responsibilities to teams consistent with their competencies and operational plans</p> <p>3.2 Ensure teams are resourced to allow them to achieve their objectives</p> <p>3.3 Empower teams and individuals through effective delegation and support for their initiatives</p> <p>3.4 Create and maintain a positive work environment</p> <p>3.5 Encourage teams and individuals to develop innovative approaches to the performance of work</p>
4. Demonstrate personal and professional competence	<p>4.1 Model ethical conduct in all areas of work and encourage others to adopt business ethics</p> <p>4.2 Adapt appropriate interpersonal and leadership styles to meet particular circumstances and situations</p> <p>4.3 Set and achieve personal objectives and work program</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>outcomes</p> <p>4.4 Ensure self-performance and professional competence is continuously improved through engagement in a range of professional development activities</p> <p>4.5 Participate regularly in industry/professional networks and groups</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Learning	4.3, 4.4, 4.5	<ul style="list-style-type: none"> Actively looks for and accepts ways to maintain and improve own skills and knowledge
Reading	1.2, 1.3, 1.6, 2.7, 4.4, 4.5	<ul style="list-style-type: none"> Evaluates and integrates facts and ideas to construct meaning from a range of text types
Writing	1.1, 1.2, 1.3, 1.4, 1.6, 3.1, 4.3	<ul style="list-style-type: none"> Records and reports key information related to the outcomes of the job to interact effectively and appropriately with the team Researches, plans and prepares documentation using format and language appropriate to the audience
Oral Communication	1.1, 1.2, 1.4, 1.5, 1.6, 2.1, 2.5, 3.1, 3.3, 3.4, 3.5, 4.1, 4.2	<ul style="list-style-type: none"> Participates in a variety of spoken exchanges with clients, co-workers and stakeholders using structure and language appropriate to context and audience
Navigate the world of work	1.1, 1.2, 1.5, 1.6, 2.8, 3.1, 4.1	<ul style="list-style-type: none"> Works autonomously making high level decisions related to the achievement of organisational goals Reflects on designation of roles and responsibilities and how everyone's role contributes to broader organisational goals Appreciates the implications of ethical and other organisational responsibilities in carrying out own role
Interact with others	1.3, 1.4, 1.6, 2.1, 2.4, 3.1, 3.3, 3.4, 3.5, 4.1, 4.2	<ul style="list-style-type: none"> Demonstrates sophisticated control over oral, visual and/or written formats, drawing on a range of communication practices to achieve goals Identifies strengths and limitations of own interpersonal skills and addresses areas that would benefit from further development

		<ul style="list-style-type: none"> Recognises the importance of building rapport in order to establish effective working relationships and inspire trust and confidence Collaborates and cooperates with others, playing an active role in leading and facilitating effective group interaction and influencing direction Facilitates a climate in which others feel comfortable to identify, explore and build on a variety of perspectives in order to achieve shared outcomes
Get the work done	1.1, 1.2, 1.6, 2.2-2.7, 3.1, 3.2, 3.5	<ul style="list-style-type: none"> Accepts responsibility for planning and sequencing complex tasks and workload of self and others, negotiating key aspects with others taking into account capabilities, efficiencies and effectiveness Applies problem solving processes to identify risks, evaluate options and determine solutions Facilitates a climate in which creativity and innovation are accepted as an integral part of achieving outcomes Actively identifies systems, devices and applications with potential to meet current and/or future needs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBMGT605 Provide leadership across the organisation	BSBMGT605B Provide leadership across the organisation	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBMGT605 Provide leadership across the organisation

Modification History

Release	Comments
Version 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to use interpersonal and risk management skills to:

- clearly communicate the organisation's objectives, values and standards to a range of stakeholders using appropriate media and language
- influence, support and provide resources for individuals and groups to:
 - participate in consultations and decision making processes
 - contribute to innovation and improvements
 - achieve their responsibilities and objectives
- facilitate consultative decision making processes with relevant internal and external stakeholders
- demonstrate ethical conduct and professional competence and continuing professional development
- encourage others to adopt business ethics and build their commitment to the organisation.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- explain business ethics and their application to leadership
- outline leadership styles and their application in supporting the organisation's mission, objectives and values
- explain the impact of legislation in providing leadership in the organisation
- explain the organisation's mission, purpose and values
- describe organisation objectives, plans and strategies
- explain organisational change processes.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the management and leadership field of work and include access to:

- relevant legislation, regulation, standards and codes
- relevant workplace documentation and resources
- case studies and, where possible, real situations
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBMGT616 Develop and implement strategic plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to establish the strategic direction of the organisation, sustain competitive advantage and enhance competitiveness. It covers analysis and interpretation of relevant markets, capability assessment of the organisation and analysis of the organisation's existing and potential competitors and allies. It also covers implementation of the strategic plan and developing specific actions and initiatives that will be undertaken by people working in various roles.

It applies to individuals working in senior roles in the organisation who have responsibility for ensuring that the organisation is positioned to ensure its long-term viability and success.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm organisational vision and mission	1.1 Check with stakeholders that organisational vision and mission are still held to be current and are supported 1.2 Make any changes or refinements to vision or mission statement as required 1.3 Review or develop organisational values to support the vision

ELEMENT	PERFORMANCE CRITERIA
	<p>and mission statement</p> <p>1.4 Gain support for strategic planning process from all relevant stakeholders</p>
2. Analyse the internal and external environment	<p>2.1 Determine information requirements and undertake or commission research to deliver relevant information</p> <p>2.2 Analyse political, economic, social, and technological developments in a global context</p> <p>2.3 Seek advice from appropriate experts wherever necessary</p> <p>2.4 Identify and consider strengths and weaknesses of existing and potential competitors and allies</p> <p>2.5 Analyse organisation's strengths, weaknesses, opportunities and threats</p> <p>2.6 Consider cooperative ventures that are supported by risk and cost benefit analyses, are consistent with the organisational vision, mission and values and provide for due diligence</p> <p>2.7 Check that analysis of internal and external environment is consistent with the perspectives of other informed people</p>
3. Write strategic plan	<p>3.1 Document relevant research and background for inclusion in the strategic plan</p> <p>3.2 Formulate strategic objectives and strategies needed for the future</p> <p>3.3 Detail each strategy with an assigned priority, a timeframe, responsible parties and measurable performance indicators</p> <p>3.4 Circulate strategic plan for comment, support and endorsement</p>
4. Implement strategic plan	<p>4.1 Communicate strategic plan to all relevant parties</p> <p>4.2 Brief people with a specific role in relation to strategies</p> <p>4.3 Use performance indicators to monitor progress in implementing plan</p> <p>4.4 Make necessary refinements to plan</p> <p>4.5 Evaluate achievement of objectives at agreed milestones</p> <p>4.6 Review effectiveness of plan and consider methods for improving strategic planning processes</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1-1.3, 2.1, 2.2, 2.4-2.6, 3.1, 3.3, 4.4-4.6	<ul style="list-style-type: none"> Identifies and analyses complex organisational texts to determine business requirements Reviews, evaluates, interprets and applies content from a range of sources to aid in development of strategies
Writing	1.2, 1.3, 2.1, 2.2, 2.4-2.6, 3.1-3.3, 4.3-4.6	<ul style="list-style-type: none"> Prepares strategic plans for relevant stakeholders incorporating appropriate vocabulary, grammatical structure and conventions Incorporates amendments to documents according to organisational requirements Collates and compiles data to convey specific information, requirements and recommendations
Oral Communication	1.1, 1.4, 2.3, 4.1, 4.2	<ul style="list-style-type: none"> Presents information and seeks advice using language and register appropriate to audience Participates in discussions using listening and questioning to elicit the views of others and to clarify or confirm understanding
Numeracy	2.6, 3.2, 3.3, 4.5, 4.6	<ul style="list-style-type: none"> Interprets and analyses statistical data and mathematical information to consider trends and resource implications of proposed strategies
Navigate the world of work	1.1-1.3	<ul style="list-style-type: none"> Works autonomously making high level decisions to achieve and improve organisational goals Takes a lead role in the development of strategies to achieve organisational goals
Interact with others	1.1, 1.4, 2.3, 3.4, 4.1, 4.2	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with internal and external stakeholders to seek or share information Collaborates with others to achieve joint outcomes, playing an active role in facilitating effective group interaction, influencing direction and taking a leadership role Seeks feedback or expert advice where required
Get the work done	1.3, 2.1, 2.2, 2.4-2.7, 3.2, 4.3-4.6	<ul style="list-style-type: none"> Develops flexible plans for complex, high impact activities with strategic implications, taking into account capabilities, efficiencies and effectiveness Systematically gathers and analyses all relevant information and evaluates options to inform decisions about organisational strategies Evaluates outcomes to identify opportunities for

		improvement <ul style="list-style-type: none"> • Applies problem solving processes to identify risks, evaluate options and determine solutions
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBMGT616 Develop and implement strategic plans	BSBMGT616A Develop and implement strategic plans	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBMGT616 Develop and implement strategic plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- consult and communicate effectively with relevant stakeholders to:
 - confirm or revise the organisation's mission, vision and values
 - validate findings of research and analysis
 - get input to and endorsement of strategic plans
 - brief relevant parties about the plan
- analyse organisation's internal and external environment to formulate strategic plans including:
 - background and research relevant to the plan
 - legislation, regulations and codes of practice, including for intellectual property
 - objectives, strategies and priorities
 - roles and responsibilities
 - performance indicators
 - timeframes
 - consideration of co-operative ventures
 - cost-benefit and risk analysis
- seek advice from appropriate experts wherever necessary
- monitor and evaluate the implementation of the plan and make refinements as appropriate
- review effectiveness of planning processes and identify opportunities for improvement.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline the legislation, regulations and codes of practice relevant to the organisation's strategic plan.
- give examples of risks and risk management strategies relevant to strategic planning including:
 - intellectual property rights and responsibilities
 - other risks
- outline strategic planning methodologies including political, economic, social and technological (PEST) analysis and strengths, weaknesses, opportunities and threats analysis (SWOT)
- identify internal and external sources of information relevant to the organisation's market, competitors, customer base, vision, values and capabilities
- outline techniques for developing organisational values.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the management and leadership field of work and include access to:

- relevant legislation, regulations, standards and codes
- workplace documentation and resources
- case studies and, where possible, real situations
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBMGT617 Develop and implement a business plan

Modification History

Release	Comments
Version 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to run a business operation and covers the steps required to develop and implement a business plan.

It applies to individuals who are running an organisation or who take a senior role in determining the effective functioning and success of the organisation. As such, they may oversee the work of a number of teams and other managers.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop business plan	1.1 Review and evaluate pre-existing strategic, business and operational plan, if available 1.2 Analyse and interpret business vision, mission, values and objectives 1.3 Consult with key stakeholders 1.4 Review market requirements for the product or service, profile customer needs and research pricing options

ELEMENT	PERFORMANCE CRITERIA
	1.5 Develop performance objectives and measures through consultation with key stakeholders 1.6 Identify financial, human and physical resource requirements for the business 1.7 Consider any permits or licences that may be required for new activity 1.8 Write business plan
2. Monitor performance	2.1 Communicate business plan to all relevant parties and ensure understanding of performance requirements and timeframes 2.2 Ensure skilled labour is available to implement plan 2.3 Test performance measurement systems and refine, if necessary 2.4 Ensure timely reports on all key aspects of the business are available, user-friendly and balanced in terms of financial and non-financial performance 2.5 Report system failures, product failures and variances to the business plan as they occur
3. Respond to performance data	3.1 Analyse performance reports against planned objectives 3.2 Review performance indicators and refine if necessary 3.3 Ensure groups and individuals contributing to under-performance are coached, and provide training where appropriate 3.4 Review system processes and work methods regularly as part of continuous improvement

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 1.4, 1.7, 2.3, 3.1, 3.2, 3.4	<ul style="list-style-type: none"> Gathers, interprets and analyses textual information when developing the business plan and monitoring operational performance Utilises understanding of distinguishing structures and features of a range of text as well as recognising and

		reflecting on context, purpose and audience
Writing	1.1, 1.2, 1.4, 1.5, 1.8, 2.3, 2.5, 3.2, 3.3, 3.4	<ul style="list-style-type: none"> Communicates relationships between ideas and information, matching style of writing to purpose and audience Researches, plans and prepares business plan for relevant stakeholders
Oral Communication	1.3, 1.5, 2.1, 3.3	<ul style="list-style-type: none"> Presents information and seeks advice using language and features appropriate to audience Participates in discussions using listening and questioning to elicit the views of others and to clarify or confirm understanding
Numeracy	1.1, 1.4, 1.5, 1.6, 1.8, 2.3, 2.4, 3.1, 3.2	<ul style="list-style-type: none"> Extracts and evaluates mathematical information to review the market, research competitors and review pricing structures
Navigate the world of work	1.7	<ul style="list-style-type: none"> Takes full responsibility for identifying and complying with legislative requirements applicable to self and the organisation
Interact with others	1.3, 1.5, 2.1, 3.3	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with internal and external stakeholders to seek or share information Collaborates with others to achieve joint outcomes, playing an active role in facilitating effective group interaction, influencing direction and taking a leadership role Provides support in field of expertise to colleagues, as required
Get the work done	1.2, 1.4, 1.5, 1.6, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3, 3.4	<ul style="list-style-type: none"> Sequences and schedules complex activities, monitors implementation and manages relevant communication Systematically gathers and analyses all relevant information and evaluates options in order to monitor performance and identify opportunities for improvement

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBMGT617Develop and implement a business plan	BSBMGT617A Develop and implement a business plan	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBMGT617 Develop and implement a business plan

Modification History

Release	Comments
Version 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- analyse and research business vision, mission, values, objectives, goals, competitors, financial targets, management arrangements, marketing approaches and strategic, business and operational plans
- write a business plan which includes a description of the business, products and services, financial, physical and human resource requirements, permit and licence requirements, marketing activity, financial indicators, productivity and performance targets for key result areas
- implement a business plan including ensuring skilled labour is available, and that training is provided where appropriate
- monitor and respond to business performance including evaluation of performance against key results indicators including profit and loss, community awareness or branding, environmental impact, governance, quality, sales, triple bottom line and the workforce
- consult, communicate with and report to key stakeholders including business partners, financiers, customers, staff and technical advisers
- provide an analysis of the strengths and weaknesses of a business plan.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline processes for developing business plans
- describe performance objectives and measures including key performance indicators
- identify key stakeholders.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the management and leadership field of work and include access to:

- appropriate documentation and resources normally used in the workplace
- strategic, business and operational plans
- business information and data
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBMGT621 Design and manage the enterprise quality management system

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to design and manage the organisation quality management system. It covers using industry benchmarks, identifying areas for improvement across the organisation, setting targets and embedding quality into the organisational culture.

It applies to individuals in any sector or type of organisation who take an active role in establishing and maintaining systems to promote quality across the organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership - Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify areas for improvement within the enterprise	1.1 Source and review relevant industry benchmarks for best practice in quality 1.2 Apply comparative analysis techniques to production performance 1.3 Identify and implement relevant codes of practice

ELEMENT	PERFORMANCE CRITERIA
	1.4 Audit business systems against best practice criteria 1.5 Analyse and evaluate marketing plans and quality assurance schemes 1.6 Audit human resource management practices against best practice criteria 1.7 Determine environmental/natural resources parameters and assess them against best practice
2. Establish systems to support quality	2.1 Consult with relevant parties to establish measurable targets and performance indicators for quality 2.2 Implement processes for systematic strategic planning within the organisation 2.3 Embed quality culture across the organisation 2.4 Define quality standards for products, physical and natural resources and inputs 2.5 Establish processes to generate commitment to and opportunities for learning 2.6 Implement communication strategies to inform and engage staff and other stakeholders
3. Undertake continuous monitoring of systems and processes	3.1 Establish mechanisms for gaining feedback information on quality systems and processes 3.2 Monitor and review performance against targets and performance indicators in an appropriate evaluation cycle 3.3 Develop procedures for documentation and reporting 3.4 Analyse feedback and evaluation data and implement improvements

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1-1.7	<ul style="list-style-type: none"> • Sources and interprets textual information including benchmarks and technical data required to plan, implement and review a strategic initiative

		<ul style="list-style-type: none"> Analyse organisational information using appropriate benchmarks to assess practices
Writing	2.1, 2.4, 2.5, 3.3	<ul style="list-style-type: none"> Develops texts dealing with complex ideas and concepts using specialised and detailed language to convey explicit information, requirements and recommendations in accordance with organisational requirements
Oral Communication	2.1, 2.6	<ul style="list-style-type: none"> Participates in a variety of spoken exchanges with stakeholders using structure and language appropriate to context and audience
Numeracy	1.2, 2.1	<ul style="list-style-type: none"> Analyse mathematical information to define measurable performance targets
Navigate the world of work	2.4, 3.3	<ul style="list-style-type: none"> Takes a lead role in the development of procedures and standards to achieve organisational goals
Interact with others	2.1, 2.3, 2.6	<ul style="list-style-type: none"> Collaborates with others to achieve joint outcomes, playing an active role in facilitating effective interaction, influencing direction and taking a leadership role
Get the work done	1.1, 1.3, 1.5, 1.7, 2.2- 2.6, 3.1, 3.2, 3.4	<ul style="list-style-type: none"> Plans, sequences and implements complex tasks and processes to achieve organisational quality requirements Systematically gathers, analyses and evaluates relevant information to decide on improvements Sources feedback and evaluates outcomes to identify opportunities for improvement

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBMGT621 Design and manage the organisation quality management system	Not applicable	New unit	No equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBMGT621 Design and manage the enterprise quality management system

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- use structured processes to evaluate current performance against best practice benchmarks to identify areas for improvement
- engage relevant stakeholders in establishing and maintaining evaluating systems and processes to achieve agreed quality targets
- use leadership and communication techniques to promote a quality culture
- undertake continuous monitoring of systems and processes.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- articulate quality management objectives with reference to relevant legislation, standards and codes of practice
- outline typical barriers to establishing quality systems in an organisation and possible strategies to address them
- explain change management techniques that can support the implementation of quality systems
- explain leadership and engagement strategies that can support a quality culture in an organisation
- describe benchmarking strategies for analysing production and financial performance.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the management and leadership field of work and include access to:

- relevant legislation, regulations, standards and codes
- workplace documentation and resources
- case studies and, where possible, real situations
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBMGT623 Monitor corporate governance activities

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the performance outcomes, skills and knowledge required to develop and implement procedures to ensure the organisation meets its corporate governance obligations. It covers researching corporate governance trends, standards and practices, establishing processes to promote compliance, reviewing compliance and taking corrective action on non-compliances.

It applies to individuals in any sector or type of organisation with responsibility for monitoring and managing compliance to corporate governance requirements.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish corporate governance standards and practices	1.1 Monitor the application of, and adherence to, professional and legal standards to identify emerging trends and interpretations of statutory and other regulatory requirements 1.2 Research governance audit reports and practices to assess methodologies and recommendations
2. Identify corporate	2.1 Analyse organisational practices to identify corporate

ELEMENT	PERFORMANCE CRITERIA
governance reporting trends	governance obligations and performance 2.2 Review queries from statutory and other regulatory authorities for corporate governance failure to identify the need for changes to internal control procedures 2.3 Analyse the organisation's governance reports, returns and review processes to identify whether they meet current requirements
3. Determine processes for corporate governance adherence	3.1 Analyse internal control procedures to determine corporate governance compliance performance indicators 3.2 Evaluate whether information technology systems meet corporate governance obligations for recording data from operations and transactions 3.3 Establish management processes to support corporate governance 3.4 Establish reporting plans to ensure the organisation meets compliance and reporting deadlines
4. Review corporate governance compliance	4.1 Monitor compliance performance indicators 4.2 Monitor compliance preparation processes for compliance 4.3 Analyse non-compliances to identify cause/s and implement corrective actions

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.2, 2.1-2.3, 3.1, 3.3, 3.4	<ul style="list-style-type: none"> Sources and researches textual information in the context of organisational strategy and compliance requirements to support plans, monitoring and reporting
Writing	3.3, 3.4	<ul style="list-style-type: none"> Develops complex texts using specialised and detailed language to convey information, requirements and recommendations in accordance with legal and organisational requirements
Navigate the world of	1.1, 2.1-2.3, 3.1, 3.2, 3.4	<ul style="list-style-type: none"> Leads in the development of organisational policies, procedures to support adherence to legal and statutory requirements

work		<ul style="list-style-type: none"> • Considers own role in terms of its contribution to broader goals of the organisation
Get the work done	1.1, 3.1-3.4, 4.1-4.3	<ul style="list-style-type: none"> • Takes responsibility for developing and implementing systems and processes to achieve organisational objectives, seeking advice and feedback as required • Monitors and evaluates performance against agreed benchmarks to ensure compliance with governance, statutory and legal requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBMGT623 Monitor corporate governance activities	Not applicable	New unit	No equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBMGT623 Monitor corporate governance activities

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- develop, implement, monitor and review corporate governance
- access and interpret legislation and regulations to identify corporate governance compliance requirements
- research and analyse information to identify trends in corporate governance practices and reporting
- establish and implement processes for corporate governance adherence including determining corporate governance indicators and establishing a reporting plan
- meet statutory reporting requirements
- monitor compliance and analyse the causes of non-compliances including analysing governance reports, returns, review processes and the information technology system
- identify and implement corrective actions.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline the legislation, regulations and statutory requirements and standards that relate to corporate governance obligations for the organisation including at least those covering:
 - finances and taxation
 - industrial relations, equal opportunity, employment records and superannuation
 - intellectual property
 - corporate entities
 - competition, ethical practice and consumer rights
 - work health and safety

- outline principles of internal control including statutory requirements
- understand statutory reporting requirements
- state the principles of valuation and apply common methods of depreciation.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the management and leadership field of work and include access to:

- relevant legislation, regulations, standards and codes
- workplace documentation and resources including governance reports and returns
- business information technology systems
- case studies and, where possible, real situations
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBMKG431 Assess marketing opportunities

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to identify marketing opportunities and to analyse and evaluate opportunities according to organisational marketing objectives.

The unit applies to individuals working in a variety of marketing communications occupational roles who have responsibility for a range of tasks involving analysis and planning.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Marketing

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify marketing opportunities	1.1 Select target market according to task requirements and in consultation with required personnel 1.2 Establish marketing objectives, organisational structure, and business and marketing plans according to task and organisational requirements 1.3 Review existing marketing clients and external environment for gaps and opportunities 1.4 Research and document marketing opportunities according to target market
2. Analyse opportunities	2.1 Perform a market segmentation according to task requirements 2.2 Identify relevant marketing factors for analysis of market

ELEMENT	PERFORMANCE CRITERIA
	segmentation according to task requirements 2.3 Review market segments against identified marketing factors 2.4 Identify opportunities for focus of marketing efforts
3. Evaluate opportunities	3.1 Analyse opportunities against marketing objectives 3.2 Select preferred marketing opportunities in consultation with relevant personnel 3.3 Document opportunities for presentation to management

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Gathers, interprets and analyses a variety of textual information from a range of sources to identify relevant and key information
Writing	<ul style="list-style-type: none"> Prepares strategic business documentation incorporating appropriate vocabulary, grammatical structure and conventions appropriate to text and audience
Oral Communication	<ul style="list-style-type: none"> Participates in a variety of spoken exchanges using suitable language and non-verbal features
Numeracy	<ul style="list-style-type: none"> Uses mathematical skills to interpret and process data and statistical information
Self-management	<ul style="list-style-type: none"> Adheres to implicit and explicit organisational goals, policies and procedures
Planning and organising	<ul style="list-style-type: none"> Develops and implements plans to manage relatively complex, non-routine tasks with an awareness of how they contribute to organisational goals Makes decisions by systematically analysing information, identifying and evaluating options against set criteria, and choosing most appropriate option

Unit Mapping Information

No equivalent unit. Supersedes but is not equivalent to:

- BSBMKG401 Profile the market
- BSBMKG408 Conduct market research.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBMKG431 Assess marketing opportunities

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- identify and evaluate at least three different marketing opportunities according to task requirements.

In the course of the above, the candidate must:

- identify and research marketing opportunities
- perform a market segmentation and identify marketing focus using segmentation results
- evaluate and select preferred marketing opportunities in consultation with relevant personnel
- document and present selected opportunities to management.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- requirements of legislation affecting marketing roles
- data collection and analysis techniques
- marketing industry knowledge, including:
 - components of marketing mix
 - elements of marketing planning
- marketing communications concepts and processes
- organisational structures, roles, responsibilities, business and marketing plans
- relevant product and service standards
- best practice techniques related to marketing
- relevant statistical terms used by the Australian Bureau of Statistics.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- legislation, regulations, standards and codes
- workplace documentation and resources relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBMKG433 Undertake marketing activities

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to prepare, coordinate and review basic marketing activities. It is a foundation unit covering general and basic marketing activities that do not require detailed or complex planning or implementation.

The unit applies to individuals working in a variety of occupational roles who have responsibility for a range of tasks involving marketing, analysis and planning. It could be undertaken as part of a broader role of a person in a small enterprise, or as part of a marketing plan for a larger enterprise.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Marketing

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to undertake marketing activity	1.1 Identify task requirements according to organisation's marketing plan and relevant policies and procedures 1.2 Review marketing activities according to industry trends and competitive activity 1.3 Develop and document action plan for marketing activities according to task requirements 1.4 Seek approval of action plans from relevant personnel
2. Co-ordinate marketing activities	2.1 Identify and access resources required for marketing activities according to action plan

ELEMENT	PERFORMANCE CRITERIA
	2.2 Contribute to assigning responsibilities and functions to relevant marketing personnel 2.3 Assist required personnel in managing marketing activities 2.4 Monitor implementation of marketing activities according to activity plan, as required
3. Review marketing activities	3.1 Measure and record outcomes of marketing activities against marketing plan 3.2 Review results of activities against expected marketing plan outcomes 3.3 Prepare report of marketing activities and share with relevant personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interprets textual information obtained from a range of sources and determines how content may be applied to organisational requirements
Writing	<ul style="list-style-type: none"> Integrates information from a number of sources to develop material that supports purposes and format of documentation, using suitable grammatical structure and clear, logical language
Oral Communication	<ul style="list-style-type: none"> Participates in a variety of spoken exchanges using suitable language and non-verbal features
Numeracy	<ul style="list-style-type: none"> Collates and analyses numeric information relating to costs, timeframes and other activities
Self-management	<ul style="list-style-type: none"> Adheres to organisational policies and procedures and considers own role in terms of its contribution to broader goals of work environment Takes responsibility for outcomes of routine decisions related directly to own role
Problem solving	<ul style="list-style-type: none"> Recognises and takes responsibility for addressing predictable and some less predictable problems in familiar work contexts
Planning and organising	<ul style="list-style-type: none"> Develops plans to manage tasks with an awareness of how they may contribute to longer term operational and strategic goals
Technology	<ul style="list-style-type: none"> Identifies functions and key features of common digital systems and tools and operates them effectively to complete routine tasks

Unit Mapping Information

Supersedes and is equivalent to BSBMKG414 Undertake marketing activities.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBMKG433 Undertake marketing activities

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- support marketing activities for a product or service, including:
 - researching marketing practices of the organisation
 - planning and implementing a marketing activity
 - recording activities and processes used in marketing activity.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- concept of marketing, including concepts relating to:
 - production
 - products
 - selling
 - societal marketing
- sources of marketing information
- basic foundations of marketing practices
- organisational marketing policies and procedures
- specific product knowledge related to products and services being marketed.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace equipment and resources relevant to performance evidence

- examples of products or services to be marketed
- marketing plans, policies and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBMKG434 Promote products and services

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to coordinate and review the promotion of an organisation's products and/or services.

The unit applies to individuals with a broad knowledge of the promotion of products and services specific to an organisation. They may have responsibility to provide guidance or to delegate aspects of these tasks to others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Technical Skills – Marketing

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish promotional activities	1.1 Identify need for promotion of product or service according to organisational and market requirements 1.2 Identify overall promotional objectives in consultation with relevant stakeholders 1.3 Analyse and select promotional activity options for meeting promotional objectives 1.4 Determine contingency strategies for selected activity options
2. Coordinate promotional activities	2.1 Allocate roles and responsibilities for delivery of promotional services and communicate to relevant personnel 2.2 Monitor progress of promotional activities according to action plan

ELEMENT	PERFORMANCE CRITERIA
	<p>2.3 Identify and address potential issues during implementation within scope of own responsibility</p> <p>2.4 Apply determined contingency strategies, if required</p>
3. Review promotional activities	<p>3.1 Analyse effectiveness of planning processes using feedback and data</p> <p>3.2 Identify possible improvements in future activities</p> <p>3.3 Collect feedback and provide to others involved in promotional activity</p> <p>3.4 Analyse costs and timelines for benefits accruing from the promotional activities</p> <p>3.5 Prepare conclusions and recommendations relating to effectiveness of promotional activities</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interprets, analyses and collates textual information relevant to promotional activities from a range of sources
Writing	<ul style="list-style-type: none"> Uses clear and specific language to develop formal and informal documents for different audiences in accordance with organisational requirements
Oral Communication	<ul style="list-style-type: none"> Actively participates in verbal exchanges of ideas and elicits the views and opinions of others by listening and questioning Uses clear and specific language to clarify, explain and present information relating to the promotional activity
Numeracy	<ul style="list-style-type: none"> Classifies, analyses and compares numeric information, including costs and timelines, relevant to the promotional activity
Self-management	<ul style="list-style-type: none"> Adheres to legislative requirements and organisational policies and procedures Evaluates effectiveness of decisions in terms of how well they meet stated goals
Teamwork	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols with a range of stakeholders to project a professional image while seeking or sharing information Recognises the importance of building rapport to establish and maintain positive working relationships
Planning and	<ul style="list-style-type: none"> Sequences and schedules complex activities, monitors

Skill	Description
organising	implementation and manages relevant communication
Technology	<ul style="list-style-type: none">• Uses a range of digital tools to access data, and to extract, organise, integrate and share relevant information

Unit Mapping Information

Supersedes and is equivalent to BSBMKG413 Promote products and services.

Supersedes but is not equivalent to:

- BSBPRO301 Recommend products and services
- BSBPRO401 Develop product knowledge.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBMKG434 Promote products and services

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- Promote at least three products or services.

In the course of the above, the candidate must:

- identify the context for the promotional activities, including:
 - relevant legislation and regulations
 - organisation's goals, objectives, systems, policies and procedures
 - budget and timelines
 - marketing needs and, if defined, marketing plans
 - objectives of the promotional activities
- consult with relevant stakeholders to plan promotional activities to meet objectives, budget and timelines
- coordinate promotional activities including:
 - allocating roles and responsibilities
 - using communication channels to convey responsibilities
 - obtaining relevant resources and promotional products
- analyse feedback and data to evaluate the effectiveness of planning processes and promotional activities and make recommendations on future directions of promotional activities.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislative and regulatory context of the organisation as relevant to promotional activities
- content of action plans, including:
 - task steps

- costs
- timeframe
- resources and responsibilities
- internal and external stakeholders involved in coordinating promotional activities
- planning processes for organising promotional activities
- organisation's marketing objectives and how they support the overall business objectives
- common promotional activities that could be used to support the marketing objectives.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- legislation, regulations, standards and codes for promoting products and services
- workplace documentation and resources for promoting products and services.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBOPS304 Deliver and monitor a service to customers

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to identify customer needs, deliver and monitor customer service and identify improvements in the provision of customer service.

The unit applies to those who apply a broad range of competencies in various work contexts. In this role, individuals often exercise discretion and judgement using appropriate knowledge of customer service. They provide technical advice and support to customers over short or long-term interactions.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Business Operations

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify customer needs	1.1 Identify and clarify customer needs and expectations 1.2 Evaluate customer needs and determine priorities for service delivery according to organisational requirements 1.3 Inform customers about available choices for meeting their needs and assist selection of preferred options 1.4 Identify limitations in addressing customer needs and seek assistance from designated individuals, where required
2. Deliver a service to customers	2.1 Provide service to meet identified customer needs according to organisational and legislative requirements 2.2 Establish and maintain rapport with customers

ELEMENT	PERFORMANCE CRITERIA
	2.3 Manage customer complaints according to organisational and legislative requirements 2.4 Provide assistance and respond to customers with specific needs according to organisational and legislative requirements 2.5 Identify and use available opportunities to promote and enhance services and products to customers
3. Evaluate customer service delivery	3.1 Review customer satisfaction with service delivery using verifiable evidence according to organisational and legislative requirements 3.2 Seek and respond to customer feedback according to organisational policies and procedures 3.3 Identify opportunities to enhance the quality of customer service 3.4 Document recommendations for customer service improvements 3.5 Submit recommendations to relevant personnel according to organisational policies and procedures

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Learning	<ul style="list-style-type: none"> Identifies and follows up on opportunities to improve work practices and outcomes
Oral communication	<ul style="list-style-type: none"> Provides information or advice using structure and language to suit the audience Asks questions and listens to gain information or confirm understanding
Reading	<ul style="list-style-type: none"> Evaluates textual information to determine customer service requirements Proofreads texts for clarity of meaning and accuracy of grammar and punctuation
Writing	<ul style="list-style-type: none"> Completes responses to customer complaints in required format Prepares reports using sequencing, format and words to communicate recommendations clearly and effectively
Planning and organising	<ul style="list-style-type: none"> Complies with organisational policies and procedures relevant to role Plans and implements systems to gather and organise information

Skill	Description
Problem-solving	<ul style="list-style-type: none"> • Uses problem solving skills to analyse and respond to customer complaints or enquiries
Teamwork	<ul style="list-style-type: none"> • Selects and uses appropriate communication conventions to establish connections, build rapport, seek information and develop professional working relationships • Adjusts personal communication style in response to the opinions, values and particular needs of others

Unit Mapping Information

Supersedes and is equivalent to BSBCUS301 Deliver and monitor a service to customers.

Supersedes but is not equivalent to:

- BSBCUE309 Develop product and service knowledge for customer engagement operation
- BSBEDU303 Assist with the provision of international education information
- BSBINT303 Organise the importing and exporting of goods
- BSBINT304 Assist in the international transfer of services
- BSBSLS407 Identify and plan sales prospects.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBOPS304 Deliver and monitor a service to customers

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- deliver a service to at least three different customers, including:
 - using communication skills to establish rapport and build relationships with customers according to organisational requirements
 - identifying customer needs using appropriate questioning and active listening skills
 - providing customer service according to organisational requirements
 - responding to and recording customer feedback and action taken according to organisational standards, policies and procedures
 - producing a report which identifies and recommends ways to improve service delivery.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key provisions of customer service legislation and consumer law
- organisational policies and procedures relating to customer service, including complaints handling
- common forms of verifiable evidence that could be used to review customer satisfaction
- customer service standards and protocols for serving customers, including customers with specific needs.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- technology required to gather and provide information and assistance to customers

- workplace documents, and organisational policies and procedures relating to customer service
- examples of customer complaints and feedback.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBOPS305 Process customer complaints

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes skills and knowledge required to handle complaints from customers.

The unit applies to those who apply a broad range of competencies and may exercise discretion and judgement using appropriate knowledge of products, customer service systems and organisational policies to provide technical advice and support to a team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Business Operations

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Receive complaints	1.1 Assess complaint according to organisational policy 1.2 Inform relevant stakeholders that complaint has been received 1.3 Document customer complaints according to organisational policies and procedures
2. Process complaints	2.1 Identify complaints requiring escalation according to organisational policy, and escalate as required 2.2 Identify additional information requirements to resolve complaints that do not require escalation 2.3 Prepare information for resolving complaint
3. Resolve complaints	3.1 Identify implications of complaint for customer and organisation

ELEMENT	PERFORMANCE CRITERIA
	3.2 Analyse options to resolve customer complaints according to legislation, organisational policies and codes of practice 3.3 Propose options according to legislative requirements and organisational policies 3.4 Escalate matters for which a solution cannot be determined to relevant personnel

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Identifies and interprets textual information to determine legislative, regulatory and organisational requirements
Writing	<ul style="list-style-type: none"> Documents complaints and actions taken according to organisational requirements Records spoken information clearly and accurately for future reference
Oral communication	<ul style="list-style-type: none"> Presents or requests information using words and non-verbal features appropriate to the audience and context Uses listening and questioning techniques to gather information and confirm understanding
Planning and organising	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and completing tasks to achieve required outcomes Follows organisational communication practices and procedures when referring complaints, seeking advice or negotiating outcomes
Problem-solving	<ul style="list-style-type: none"> Addresses less predictable problems applying problem solving processes in determining solutions that meet organisational requirements
Technology	<ul style="list-style-type: none"> Uses the main features and functions of digital tools to complete work tasks

Unit Mapping Information

Supersedes and is equivalent to BSBCMM301 Process customer complaints.

Supersedes but is not equivalent to:

- BSBCUE304 Provide sales solutions to customers

- BSBCUE308 Conduct outbound customer engagement.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBOPS305 Process customer complaints

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- process at least three customer complaints relating to business operations.

In the course of the above, the candidate must:

- follow organisational procedures when referring and resolving complaints.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key provisions of legislation relating to customers including Australian Consumer Law and consumer guarantees
- communication techniques for handling customer complaints
- organisational policies, procedures and standards for processing complaints
- organisational escalation procedures and relevant personnel.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- organisational policies and procedures relevant to customer complaints
- legislation and codes of practice relevant to customer complaints.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBOPS401 Coordinate business resources

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to determine and analyse existing and required resources, their effective application and the accountability for their use.

The unit applies to individuals with a broad knowledge of business resources and well-developed skills to ensure adequate resources are available to perform the work of the organisation. They may have responsibility to provide guidance to, or delegate aspects of these tasks to others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Business Operations

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish required resources	1.1 Identify resource requirements according to business and operational plans and organisational requirements 1.2 Create opportunities for individuals and workgroups to contribute to the identification of resource requirements 1.3 Assess proposed efficiency of resource expenditure according to budget resources 1.4 Present recommendations on resource requirements using business equipment and technology

ELEMENT	PERFORMANCE CRITERIA
2. Acquire and allocate resources	2.1 Acquire physical resources and services according to organisational requirements 2.2 Check resources and confirm quality and quantity are in line with service agreements 2.3 Allocate resources according to operational plans 2.4 Consult with individuals and teams on allocation of resources
3. Evaluate resource allocation and usage	3.1 Assess resource planning against actual costs, identified shortfalls and surpluses 3.2 Identify potential improvements in resource planning through consultation and feedback 3.3 Develop methods of monitoring and reporting resource use against business and operational plans
4. Improve resource allocation and usage	4.1 Implement improvements in resource planning according to organisational requirements 4.2 Implement identified methods of monitoring resource use 4.3 Maintain records concerning equipment and resource purchases according to organisational requirements

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Identifies and interprets information from organisational plans, policies and procedures
Writing	<ul style="list-style-type: none"> Develops a range of documents using structure and vocabulary appropriate to audience, context and purpose
Oral communication	<ul style="list-style-type: none"> Participates in spoken interactions using active listening and questioning to confirm and clarify understanding
Numeracy	<ul style="list-style-type: none"> Interprets a range of mathematical information that is embedded in familiar texts Calculates and compares numeric data to track expenditure
Initiative and enterprise	<ul style="list-style-type: none"> Identifies and responds to explicit and implicit organisational procedures and protocols and regulatory requirements
Teamwork	<ul style="list-style-type: none"> Selects the appropriate form, channel and mode of communication for a specific purpose relevant to own role Cooperates with others as part of familiar routine activities playing an

Skill	Description
	active role in facilitating group interaction
Planning and organising	<ul style="list-style-type: none"> • Applies formal processes when planning complex tasks, producing plans with logically sequenced steps, reflecting an awareness of time constraints • Identifies and takes responsibility for addressing predictable problems in familiar work contexts • Assess impacts of variables on decision outcomes to identify improvement opportunities
Technology	<ul style="list-style-type: none"> • Utilises a range of features within digital applications to access, store and share information

Unit Mapping Information

Supersedes and is equivalent to BSBADM409 Coordinate business resources.

Supersedes but is not equivalent to:

- BSBADM301 Produce texts from shorthand notes
- BSBADM302 Produce texts from notes
- BSBADM303 Produce texts from audio transcription
- BSBADM401 Produce complex texts from shorthand notes
- BSBADM406 Organise business travel
- BSBADM411 Produce complex texts from audio transcription
- BSBCUE403 Schedule customer engagement activity.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBOPS401 Coordinate business resources

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- coordinate at least three business resources.

In the course of the above, the candidate must:

- calculate and assess costs in relation to use and maintenance of business resources
- develop and present resource requirement recommendations
- consult and communicate with individuals and teams about acquiring and using resources
- monitor and assess resource acquisition, allocation, use and procedures
- follow organisational policies and procedures in relation to business resource acquisition and monitoring and maintaining records.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- functions of common business resources used in an organisation, including, organisational policies, plans and procedures in relation to business resource acquisition and monitoring
- method and format for developing recommendations on resource requirements
- organisational procedures for sourcing, assessing and costing business resources
- methods for analysing and incorporating feedback on effectiveness resource planning, monitoring resource use
- methods to implement organisational changes to resource planning and resource use.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- records concerning equipment and resource purchases
- organisational policies, procedures and operational plans.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBOPS402 Coordinate business operational plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to implement operational plans by planning and acquiring resources, monitoring and adjusting operational performance and providing reports on performance, as required.

The unit applies to individuals who plan activities to achieve team and organisational objectives. At this level, work will normally be carried out within routine and non-routine methods and involve procedures that require planning, evaluation, leadership and guidance of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Business Operations

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to implement operational plan	1.1 Consult with stakeholders to identify resource requirements relevant to operational plan 1.2 Collate, analyse and document details of resource requirements 1.3 Develop operational plan and determine implementation method 1.4 Plan for contingencies 1.5 Develop and present proposals for resource requirements
2. Implement operational plan	2.1 Assist in recruiting and onboarding employees required to implement operational plan according to organisational policies

ELEMENT	PERFORMANCE CRITERIA
	<p>and procedures</p> <p>2.2 Acquire physical resources and services according to organisational policies and procedures</p> <p>2.3 Support efficient, cost-effective and safe use of resources</p> <p>2.4 Adjust implementation of the operational plan in consultation with others to manage contingencies</p>
3. Monitor operational performance	<p>3.1 Collate relevant information and determine operational and productivity performance</p> <p>3.2 Identify and use key performance indicators (KPIs) and assess operational performance</p> <p>3.3 Identify unsatisfactory performance and take action to rectify the situation according to organisational policies</p>
4. Review operations based on performance	<p>4.1 Develop recommendations for variation to operational plans</p> <p>4.2 Present recommendations to the designated persons or groups to gain approval</p> <p>4.3 Maintain records related to operational performance according to organisational policies and procedures</p> <p>4.4 Report information on operational performance to management</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Identifies, interprets, analyses and reviews textual information related to the operational plan and monitoring of operational performance
Writing	<ul style="list-style-type: none"> Communicates relationships between ideas and information, matching style of writing to purpose and audience Researches, plans and prepares workplace documentation for relevant stakeholders using organisational formats
Oral communication	<ul style="list-style-type: none"> Participates in a variety of spoken exchanges with a range of audiences varying structure and language to suit the audience
Numeracy	<ul style="list-style-type: none"> Selects and uses familiar mathematical techniques to organise timely supply of adequate resources for the operational plan and to use budgetary information to monitor performance
Enterprise and initiative	<ul style="list-style-type: none"> Monitors adherence to organisational policies and procedures and considers own role in terms of its contribution to broader goals of the work environment

Skill	Description
Teamwork	<ul style="list-style-type: none"> • Selects and uses appropriate conventions and protocols when communicating with diverse individuals to build rapport, seek or present information • Collaborates with others to achieve joint outcomes, playing an active role in facilitating effective group communication, influencing direction and taking a leadership role on occasion
Planning and organising	<ul style="list-style-type: none"> • Takes responsibility for planning, organising, implementing and monitoring tasks required to achieve required outcomes • Evaluates effectiveness of decisions in terms of how well they met stated goals • Identifies and addresses an increasing range of familiar problems by implementing contingency plans

Unit Mapping Information

No equivalent unit. Supersedes but is not equivalent to:

- BSBFLM305 Support operational plan
- BSBMGT402 Implement operational plan.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBOPS402 Coordinate business operational plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- prepare, implement and review two operational plans.

In the course of the above, the candidate must:

- interact with a range of people and groups to identify resource requirements, performance objectives, systems, procedures and records relating to the operational plan
- plan and acquire physical and human resources using organisation's systems and procedures
- manage and support personnel to achieve performance objectives including facilitating new employee onboarding
- present information and recommendations to support implementation and variation of the operational plan
- monitor operational performance against the performance objectives and budgets and implement improvements to rectify unsatisfactory performance
- vary the operational plan and gain approval to deal with contingencies
- document and provide reports on performance as required by the organisation.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- processes to identify resource requirements
- sources of information to identify resource requirements
- methods to manage contingencies including through consultation with relevant stakeholders
- key features of performance monitoring systems and processes
- common methods for problem solving
- methods to support staff including mentoring, coaching and supervision

- implementation methods for operational plan
- budget and other financial information related to the organisation
- organisational objectives including costs, identified shortfalls and surpluses.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- organisational operational plans, policies and procedures relevant to performance evidence
- workplace documentation and resources including budgets
- physical and human resource procurement documentation
- employee onboarding and performance monitoring procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBOPS403 Apply business risk management processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to identify business risks and to apply established risk management processes to a defined area of operations that are within the responsibilities and obligations of the work role.

The unit applies to individuals with a broad knowledge of risk analysis or project management who contribute well developed skills in creating solutions to unpredictable problems through analysis and evaluation of information from a variety of sources. They may have responsibility to provide guidance or delegate aspects of these tasks to others. Risks applicable to own work responsibilities and area of operation may include projects being undertaken individually or by a team, or operations within a section of the organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Business Operations

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify risks	1.1 Identify context for risk management 1.2 Undertake required steps to identify risks 1.3 Document identified risks according to relevant policies, procedures, legislation and standards
2. Analyse and evaluate risks	2.1 Analyse risks in consultation with relevant stakeholders 2.2 Undertake risk categorisation and determine level of risk 2.3 Document analysis processes and outcomes

ELEMENT	PERFORMANCE CRITERIA
3. Treat risks	3.1 Identify control measures for risks 3.2 Assess strengths and weaknesses of control measures 3.3 Refer risks to relevant personnel, where required, according to policies and procedures 3.4 Select and implement control measures for personal area of operation and responsibilities
4. Monitor and review effectiveness of risk treatments	4.1 Review implemented treatments against measures of success 4.2 Use review results to improve the treatment of risks 4.3 Monitor and review management of risk in personal area of operation

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Learning	<ul style="list-style-type: none"> • Uses analysis and consultative processes to inform decisions about selection and implementation of risk control measures • Evaluates effectiveness of plans and results to inform improvement decisions
Reading	<ul style="list-style-type: none"> • Comprehends documents and texts of varying complexity to extract and analyse relevant information
Writing	<ul style="list-style-type: none"> • Uses specific, industry related terminology and logical organisational structure in workplace documents that identify and analyse risk and report management process outcomes
Oral communication	<ul style="list-style-type: none"> • Participates effectively in interactions with stakeholders by using questioning and listening to elicit opinions and clarify understanding
Numeracy	<ul style="list-style-type: none"> • Uses numerical tools to assess risk and uses numerical data to review plans
Enterprise and initiative	<ul style="list-style-type: none"> • Complies with organisational and legislative requirements • Takes responsibility for identification and management of risk within own work context and refers matters to others as required
Teamwork	<ul style="list-style-type: none"> • Selects appropriate communication protocols and conventions when conferring with others to establish risk management requirements
Planning and organising	<ul style="list-style-type: none"> • Determines job sequence and works logically and systematically to undertake defined tasks

Skill	Description
Technology	<ul style="list-style-type: none">• Uses familiar digital technologies and systems to access information, prepare plans and communicate with others

Unit Mapping Information

Supersedes and is equivalent to BSBRK401 Identify risk and apply risk management processes.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBOPS403 Apply business risk management processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to apply organisational policies, procedures and processes to:

- treat at least three risks by:
 - identifying different types of organisational risks
 - consulting with stakeholders to analyse and evaluate risks
 - implementing control measures
 - referring risks that are beyond own area of responsibility to others
 - maintaining risk management documentation.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislative and regulatory context of the organisation in relation to risk management
- techniques for identifying and evaluating risks
- organisational policies and procedures for risk management
- areas where risks are commonly identified in an organisation
- risks beyond scope of individual responsibility to be referred to relevant organisational personnel
- purpose and key elements of current risk management standards.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- legislation, regulations, standards and codes relating to business risk

- workplace documentation on selected organisational risks.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBOPS503 Develop administrative systems

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to plan for or review the requirements of administrative systems and procedures for implementing, monitoring and reviewing the system.

The unit applies to individuals employed in a range of work environments in senior administrative roles.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Business Operations

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan administrative system	1.1 Identify requirements for update to the administrative system according to organisational and budgetary requirements 1.2 Consult with stakeholders and verify identified requirements and modifications 1.3 Obtain quotations from suppliers or developers to address system requirements according to organisational policy and procedures 1.4 Select supplier or developer according to organisational policies and procedures
2. Implement administrative system	2.1 Identify and develop implementation strategies in consultation with staff

ELEMENT	PERFORMANCE CRITERIA
	2.2 Implement system according to organisational and legislative requirements 2.3 Support staff and provide training on the use of the system 2.4 Manage contingencies and support minimal impact on users
3. Monitor administrative system	3.1 Monitor system for usage, security and output according to organisational requirements 3.2 Modify system to meet changing needs according to organisational requirements 3.3 Identify further modifications and notify users

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Learning	<ul style="list-style-type: none"> Reinforces own knowledge and skills by training and mentoring others
Reading	<ul style="list-style-type: none"> Extracts, analyses and evaluates information from complex texts, including organisational policies and procedures
Writing	<ul style="list-style-type: none"> Creates instructional texts using grammatical structures and vocabulary appropriate to audience and context
Oral communication	<ul style="list-style-type: none"> Presents complex information adjusting presentation style and vocabulary to suit the audience
Numeracy	<ul style="list-style-type: none"> Recognises and interprets numerical information related to budgets
Enterprise and initiative	<ul style="list-style-type: none"> Develops systems to meet organisational and legislative requirements Anticipates potential problems and implements contingency plans as soon as warning signs are recognised
Teamwork	<ul style="list-style-type: none"> Selects the appropriate form, channel and mode of communication for a specific purpose relevant to own role Collaborates with others to achieve joint outcomes, providing guidance to others where necessary
Planning and organising	<ul style="list-style-type: none"> Applies formal processes when planning complex tasks, producing plans with logically sequenced steps, reflecting an awareness of time constraints Monitors progress of plans and changes them to meet new demands or priorities

Skill	Description
Technology	<ul style="list-style-type: none"><li>• Uses and investigates new digital technologies and applications to manage and manipulate data<li>• Demonstrates awareness of the importance of data security in a digital environment

Unit Mapping Information

Supersedes and is equivalent to BSBADM504 Plan and implement administrative systems.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBOPS503 Develop administrative systems

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop at least one administrative system.

In the course of the above, the candidate must:

- work with relevant personnel and stakeholders to identify administrative system improvements
- document requirements
- provide training and support for staff to use the system
- monitor the new system and identify future improvements and staff training needs.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislative and organisational policies and procedures for reviewing administrative systems
- stakeholders involved in organisational administrative systems including system users
- training procedures for communicating new system information to staff.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- organisational policy and procedure manuals relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBOPS504 Manage business risk

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes skills and knowledge required to manage business risks in a range of contexts across an organisation or for a specific business unit or area in any industry setting.

The unit applies to individuals who are working in positions of authority and who are approved to implement change across the organisation, business unit, program or project area. They may or may not have responsibility for directly supervising others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Business Operations

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish risk context	1.1 Evaluate organisational processes, procedures and requirements and determine scope for risk management process 1.2 Review strengths and weaknesses of existing arrangements 1.3 Document critical success factors, goals and objectives for area included in scope 1.4 Communicate risk management process to relevant stakeholders
2. Identify risks	2.1 Invite stakeholders to assist in the identification of risks 2.2 Research risks that may apply to scope 2.3 Document risks that apply to the scope, in consultation with relevant parties

ELEMENT	PERFORMANCE CRITERIA
3. Analyse risks	3.1 Assess likelihood of risks occurring 3.2 Assess impact or consequence if risks occur 3.3 Evaluate and prioritise risks for treatment
4. Select and implement treatments	4.1 Determine and select from options for treating risks 4.2 Develop action plan for implementing risk treatment 4.3 Communicate risk management processes to relevant parties 4.4 Implement action plan according to organisational policies and procedures 4.5 Monitor and evaluate risk management process

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Reading	<ul style="list-style-type: none"> • Synthesises a variety of relatively complex texts • Gathers, interprets and analyses textual information from a range of sources to identify relevant information
Writing	<ul style="list-style-type: none"> • Develops textual material and organises content in a manner that effectively documents risk management analysis and assessment priorities and processes
Oral communication	<ul style="list-style-type: none"> • Participates in interactions with stakeholders using questioning and listening to elicit opinions, and to confirm and clarify understanding
Numeracy	<ul style="list-style-type: none"> • Uses numerical tools to assess risk and uses numerical data to review plans
Teamwork	<ul style="list-style-type: none"> • Selects appropriate conventions and protocols when communicating with stakeholders about risk management • Consults and negotiates with stakeholders about risk management processes and outcomes
Planning and organising	<ul style="list-style-type: none"> • Sequences and schedules a range of routine and complex activities, monitors implementation, evaluates processes and manages relevant communication • Systematically analyses information to decide on appropriate risk management treatments • Refers to organisational processes, procedures and requirements when making decisions about risk management
Technology	<ul style="list-style-type: none"> • Uses digital technologies and systems to access information,

Skill	Description
	document plans and communicate with others

Unit Mapping Information

Supersedes and is equivalent to BSBR501 Manage risk.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBOPS504 Manage business risk

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- lead at least one risk management process for an organisation or work area.

In the course of the above, the candidate must:

- analyse information from a range of sources to identify the scope and context of the risk management process, including:
 - stakeholder analysis
 - political, economic, social, legal, technological and policy context
 - current arrangements
 - objectives and critical success factors for the area included in scope
 - risks that may apply to scope
- consult and communicate with stakeholders to identify and assess risks, determine appropriate risk treatment actions and priorities and explain the risk management processes
- develop and implement an action plan to treat risks
- monitor and evaluate the action plan and risk management process
- maintain documentation.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislative and regulatory context of the organisation in relation to risk management
- organisational policies, procedures and processes for risk management, including document storage
- types of business risks
- options for treating risks
- risk management process
- purpose and key elements of current risk management standards

- tools and techniques to identify risks to scope risk management processes.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- legislation, regulations, standards and codes relating to risk management
- workplace documentation and resources relating to risk management.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBOPS505 Manage organisational customer service

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to develop strategies to manage organisational systems that ensure products and services are delivered and maintained to standards agreed by the organisation.

The unit applies to individuals who supervise customer service provided by others within an organisation. At this level, individuals must exercise considerable discretion and judgement, using a range of problem solving and decision making strategies.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Business Operations

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish customer requirements	1.1 Consult with customers to identify customer service requirements 1.2 Integrate customer feedback into organisation's business plan 1.3 Identify and procure resources required to address customer service requirements
2. Deliver quality products and services	2.1 Deliver product and service according to customer specifications within organisation's business plan 2.2 Monitor team performance and assess against the organisation's quality and delivery standards 2.3 Support colleagues to overcome difficulties in meeting

ELEMENT	PERFORMANCE CRITERIA
	customer service standards
3. Evaluate customer service	3.1 Develop and use strategies for monitoring progress against product and service targets and standards 3.2 Develop and use strategies for obtaining customer feedback on provision of product and service 3.3 Adapt delivery of customer product and service in consultation with relevant individuals and groups 3.4 Manage records, reports and recommendations within the organisation's systems and processes

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Interprets and analyses textual information from a variety of sources and applies the knowledge that has been gained to evaluate standards for organisation's products and services
Writing	<ul style="list-style-type: none"> Produces a range of text types to convey information, requirements or recommendations matching style of writing to purpose and audience
Oral communication	<ul style="list-style-type: none"> Clearly articulates systems and standards in a team environment using language suitable to diverse audiences Uses listening and questioning techniques to obtain feedback and confirm understanding
Numeracy	<ul style="list-style-type: none"> Interprets and comprehends mathematical information in organisation's business and customer service plans
Planning and organising	<ul style="list-style-type: none"> Recognises and applies organisational protocols and meets expectations associated with own work
Teamwork	<ul style="list-style-type: none"> Identifies and uses appropriate conventions and protocols when communicating with colleagues and customers Collaborates with others, taking into account their strengths and experience, to achieve desired outcomes Provides support in field of expertise to team
Enterprise and initiative	<ul style="list-style-type: none"> Develops and implements plans using logical processes and monitors and evaluates progress against stated goals
Problem solving	<ul style="list-style-type: none"> Accepts responsibility for addressing complex or non-routine difficulties, applying problem solving processes in determining a

Skill	Description
	solution
Technology	<ul style="list-style-type: none">• Uses digital technology to access, organise and present information in a format that meets requirements

Unit Mapping Information

Supersedes and is equivalent to BSBCUS501 Manage quality customer service.

Supersedes but is not equivalent to:

- BSBCUE504 Integrate customer engagement within the organisation
- BSBCUE601 Optimise customer engagement operations
- BSBCUE602 Manage customer engagement information
- BSBCUE603 Design and launch new customer engagement facilities
- BSBSLS501 Develop a sales plan.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBOPS505 Manage organisational customer service

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop and review strategy for delivering and monitoring quality customer service for an organisation or work area.

In the course of the above, the candidate must:

- implement quality customer service policies and procedures
- identify and resolve system problems relating to poor customer service
- assist teams to meet customer service requirements
- develop, procure and use human and physical resources to support quality customer service delivery.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislative and regulatory frameworks governing customer service
- elements of effective customer service including quality, time and cost
- organisational policies and procedures for customer service and handling customer complaints
- relevant service standards and best practice models
- key principles of public relations and product promotion
- common techniques for solving complaints
- principles and techniques involved in managing:
 - customer behaviour
 - specific customer needs
 - customer research
 - customer relations

- ongoing product and service quality
- problem identification and resolution
- quality customer service delivery
- record keeping and management methods
- strategies for monitoring, managing and introducing ways to improve customer service relationships
- strategies to obtain customer feedback.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- legislation, regulations and codes of practice related to customer service
- workplace documentation and resources
- complex customer complaints.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBOPS601 Develop and implement business plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to lead a business operation that covers the steps required to develop and implement business plans.

The unit applies to individuals who are running an organisation or who take a senior role in determining the effective functioning and success of the organisation. These individuals may oversee the work of a number of teams and other managers.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Business Operations

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish business plan	1.1 Identify organisational and legislative frameworks relevant to development of a business plan 1.2 Review market requirements for the organisation's products and service 1.3 Identify and assess business requirements, objectives, competitors and established plans 1.4 Develop performance objectives and measures for business plan, in consultation with relevant stakeholders 1.5 Identify financial, human and physical resource requirements for the business 1.6 Develop business plan

ELEMENT	PERFORMANCE CRITERIA
2. Implement business plan	2.1 Communicate business plan to all relevant stakeholders 2.2 Confirm skilled labour is available to implement plan 2.3 Test performance measurement systems and refine, where required 2.4 Prepare reports on key aspects of the business 2.5 Report system failures, product and service failures and variances to the business plan as they occur
3. Respond to performance data	3.1 Analyse performance reports against planned objectives 3.2 Review performance indicators and refine, where required 3.3 Identify and coach under-performing staff 3.4 Establish ongoing review processes

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Gathers, interprets and analyses textual information when developing the business plan and monitoring operational performance
Writing	<ul style="list-style-type: none"> Communicates relationships between ideas and information, matching style of writing to purpose and audience Researches, plans and prepares business plan for relevant stakeholders
Oral communication	<ul style="list-style-type: none"> Presents information and seeks advice using language and features appropriate to audience Participates in discussions using listening and questioning to elicit the views of others and to clarify or confirm understanding
Numeracy	<ul style="list-style-type: none"> Extracts and evaluates mathematical information to review the market, research competitors and review pricing structures
Enterprise and initiative	<ul style="list-style-type: none"> Takes full responsibility for identifying and complying with legislative requirements applicable to self and the organisation
Teamwork	<ul style="list-style-type: none"> Collaborates with others to achieve joint outcomes, playing an active role in facilitating effective group interaction, influencing direction and taking a leadership role Provides support in field of expertise to colleagues, as required
Planning and organising	<ul style="list-style-type: none"> Sequences and schedules complex activities, monitors implementation and manages relevant communication

Skill	Description
	<ul style="list-style-type: none">• Systematically gathers and analyses all relevant information and evaluates options in order to monitor performance and identify opportunities for improvement

Unit Mapping Information

Supersedes and is equivalent to BSBMGT617 Develop and implement a business plan.

Supersedes but is not equivalent to:

- BSBCUE604 Develop and maintain a service level strategy
- BSBCUE606 Forecast and plan using customer engagement traffic information analysis
- BSBMGT618 Develop an engagement centre business plan.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBOPS601 Develop and implement business plans

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop and implement at least one business plan.

In the course of the above, the candidate must:

- analyse and research business vision, mission, values, objectives, goals, competitors, financial targets, management arrangements and marketing approaches
- write a business plan, including:
 - description of the business
 - products and services
 - financial, physical and human resource requirements
 - regulatory requirements
 - marketing strategy
 - financial indicators
 - productivity and performance targets for key result areas
- monitor and respond to business performance including evaluation of performance against key results indicators
- consult, communicate with and report to relevant stakeholders
- provide analysis of the strengths and weaknesses of a business plan.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- organisational and legislative frameworks required for the development of business plans, including:
 - pre-existing strategic, business and operational plans
 - business vision, mission, values and objectives

- permits or licences that may be required for new activity
- processes for developing and monitoring business plans
- customer needs and budgeting information
- performance objectives and measures, including key results indicators
- stakeholders involved in the development of business plans.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- business information and data relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPEF301 Organise personal work priorities

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.
Release 2	This version first released with BSB Business Services Training Package Version 7.2. Release created to amend typographical error in the foundation skills.

Application

This unit describes the skills and knowledge required to organise personal work schedules, to monitor and obtain feedback on work performance and to maintain required levels of competence.

The unit applies to individuals who exercise discretion and judgement and apply a broad range of competencies in various work contexts.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Critical Thinking & Problem Solving – Personal Effectiveness

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Organise and complete own work schedule	1.1 Develop work goals and key performance indicators (KPIs) according to task and organisational requirements 1.2 Prioritise workload according to task timeframes 1.3 Identify factors affecting achievement of work objectives 1.4 Develop personal work plans
2. Evaluate own work	2.1 Identify variations between expected and actual work

ELEMENT	PERFORMANCE CRITERIA
performance	<p>performance according to task requirements and KPIs</p> <p>2.2 Report variations to relevant personnel</p> <p>2.3 Seek feedback from relevant personnel for solutions to minimise variations in expected and actual work outputs</p> <p>2.4 Research sources of stress and access appropriate supports according to organisational policies and procedures</p>
3. Coordinate personal skill development and learning	<p>3.1 Identify personal and professional development needs for job role</p> <p>3.2 Identify opportunities to undertake personal skill development activities in consultation with supervisor</p> <p>3.3 Access professional development opportunities</p> <p>3.4 Record professional development undertaken for continuous learning and career development process</p> <p>3.5 Incorporate feedback into review of further learning needs</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Employs a range of approaches and investigative techniques to source the knowledge necessary to arrange personal learning experiences
Reading	<ul style="list-style-type: none"> Interprets textual information to determine organisation's procedures, own work performance and objectives
Writing	<ul style="list-style-type: none"> Prepares written reports and workplace documents that communicate information clearly and effectively
Oral communication	<ul style="list-style-type: none"> Provides and receives feedback using specific and relevant language Uses listening and questioning techniques to confirm understanding
Self-management	<ul style="list-style-type: none"> Complies with organisational policies, procedures and protocols
Teamwork	<ul style="list-style-type: none"> Selects the appropriate form, channel and mode of communication for a specific purpose relevant to own role Proactively collaborates with others to achieve specific goals
Planning and organising	<ul style="list-style-type: none"> Plans and organises work commitments to ensure deadlines and objectives are met Uses formal analytical thinking techniques to recognise and respond to routine problems

Skill	Description
Technology	<ul style="list-style-type: none"><li>• Uses digital systems and tools to enter, store and monitor information

Unit Mapping Information

Supersedes and is equivalent to BSBWOR301 Organise personal work priorities and development.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPEF301 Organise personal work priorities

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.
Release 2	This version first released with BSB Business Services Training Package Version 7.2. Release created to amend typographical error in the foundation skills.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- prepare and implement a personal work plan.

In the course of the above, the candidate must:

- prepare a work plan according to organisational requirements and work objectives
- use technology to schedule, prioritise and monitor completion of tasks in a work plan
- assess and prioritise own work tasks and address contingencies
- monitor and assess personal performance against job role requirements by seeking feedback from relevant personnel
- identify personal development needs and access, complete and record skill development and learning.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- organisational policies and procedures relevant to work tasks
- goals, objectives and key performance indicators for task within scope of job role
- methods to elicit, analyse and interpret feedback when communicating with other people in the workplace
- content of work plans including:
 - timeframes
 - tasks requirements

- risks
- contingencies for identified risks
- types of personal learning and professional development requirements
- principles and techniques of goal setting, measuring performance and time management
- signs and sources of stress and strategies to deal with stress in the workplace
- methods to identify and prioritise personal learning needs.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- challenges and situations to demonstrate application of performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPEF402 Develop personal work priorities

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to plan and prioritise own work tasks. It also addresses the skills and knowledge to monitor and obtain feedback on personal work performance.

The unit applies to individuals who are required to design their own work schedules and work plans and to establish priorities for their work. They will typically hold some responsibilities for the work of others and have some autonomy in relation to their own role.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Critical Thinking & Problem Solving – Personal Effectiveness

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan personal work schedule	1.1 Identify task requirements 1.2 Identify own accountabilities in line with task requirements 1.3 Assess barriers for performance of personal accountabilities 1.4 Develop a personal work schedule
2. Implement personal work schedule	2.1 Communicate personal work schedule to relevant personnel 2.2 Monitor own performance according to personal work schedule 2.3 Document variations between expected and actual work performance according to task requirements and communicate to relevant personnel

ELEMENT	PERFORMANCE CRITERIA
3. Review personal work priorities	3.1 Seek and evaluate feedback from relevant stakeholders on own work performance 3.2 Analyse variations between expected and actual work performance 3.3 Update personal work schedule according to internal and external feedback and changes in circumstances

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Develops strategies to reflect on own performance and obtain feedback
Reading	<ul style="list-style-type: none"> Identifies and applies textual information from relevant sources to understand organisation's policies and practices
Writing	<ul style="list-style-type: none"> Prepares written reports and workplace documentation that communicate complex information clearly and effectively
Numeracy	<ul style="list-style-type: none"> Analyses numerical information related work accountabilities
Enterprise and initiative	<ul style="list-style-type: none"> Identifies and understands roles and responsibilities in relation to organisational objectives, policies and procedures
Planning and organising	<ul style="list-style-type: none"> Plans, organises and implements tasks to meet organisational requirements Uses the main features and functions of digital technologies and tools to complete work tasks efficiently and effectively

Unit Mapping Information

Supersedes and is equivalent to BSBWOR404 Develop work priorities.

Supersedes but is not equivalent to:

- BSBSMB408 Manage personal, family, cultural and business obligations
- BSBWOR424 Develop a time management plan.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPEF402 Develop personal work priorities

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop, implement and review one personal work schedule.

In the course of the above, the candidate must:

- identify personal responsibilities and barriers to their fulfilment according to task requirements
- prepare a personal work schedule
- communicate work schedule to relevant personnel
- monitor personal work performance to identify variations between expected and actual work performance
- review own work performance against workgroup objectives through self-assessment and seeking and acting on feedback from internal and external stakeholders.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- content of work plans including:
 - resource requirements
 - stakeholder needs
 - workgroup targets
- business technology applications to schedule tasks and plan work
- methods of personal work performance review including:
 - self-assessment
 - feedback from others
- techniques to prepare personal plans and establish priorities
- methods to elicit, analyse and interpret feedback.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to challenges and situations to demonstrate the application of performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPEF403 Lead personal development

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to take responsibility for conscious decision -making processes to contribute to own personal development in the workplace.

The unit applies to individuals who require enhanced personal and social awareness skills within the workplace and personal situations.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Critical Thinking & Problem Solving – Personal Effectiveness

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Evaluate personal development needs	1.1 Identify impact of personal motivations, attitudes and values on workplace relationships 1.2 Analyse and record instances of personal interpersonal biases impacting workplace relationships 1.3 Create a self-regulation management plan according to organisational policy 1.4 Seek feedback on plan from relevant personnel and adjust as appropriate
2. Implement personal development techniques	2.1 Monitor impact on personal performance and on others according to self-regulation management plan 2.2 Identify tasks and opportunities to contribute to the development of emotional intelligence in others

ELEMENT	PERFORMANCE CRITERIA
	2.3 Develop strategies for reviewing strengths and limitations of personal development
3. Review and refine personal development	3.1 Identify key areas to sustain health, growth and wellbeing and coping safely and efficiently in working environment 3.2 Assess and document own interpersonal skills 3.3 Review interpersonal styles and their impacts in the workplace 3.4 Review and update self-regulation management plan

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Develops texts dealing with complex ideas and concepts using specialised and detailed language to convey explicit information regarding personal development
Enterprise and initiative	<ul style="list-style-type: none"> Identifies the implications of behaviour, language and other organisational responsibilities in carrying out own role
Planning and organising	<ul style="list-style-type: none"> Takes responsibility for developing and implementing plans and processes to achieve organisational objectives, seeking feedback and advice, as required

Unit Mapping Information

Supersedes and is equivalent to BSBWRK412 Contribute to personal development.

Links

Companion Volume Implementation Guide is found on VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPEF403 Lead personal development

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop and adapt one self-regulation plan to enhance workplace performance using understanding of emotional intelligence.

In the course of the above, the candidate must:

- research and plan opportunities for own personal development
- identify and record areas for further development in own behaviour in relation to others
- interact and apply self-awareness with others as suitable to and within job role
- monitoring progress of own interpersonal skills.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- differences between positive and negative workplace behaviour
- types of interpersonal skills including managing emotions and reactions to ongoing work experiences
- interpersonal skill concepts
- factors affecting the development of attitudes and values
- features of personal motivations and implications for workplace development
- key feature of emotional intelligence in leading personal development.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to challenges and situations to demonstrate the application of performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPEF501 Manage personal and professional development

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to implement systems and process that support the personal and professional development of self and others.

The unit applies to individuals working in a range of managerial positions who are accountable for the development and performance of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Critical Thinking & Problem Solving – Personal Effectiveness

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Manage work goal development	1.1 Document team member responsibilities and identify organisational framework for development of work goals 1.2 Support others to develop work goals, plans and activities that align with their responsibilities 1.3 Assess others' work goals, plans and activities for alignment with organisational goals and provide feedback to team members 1.4 Facilitate access to personal and professional development opportunities that align to team member goals, plans and activities
2. Facilitate achievement of work priorities	2.1 Assess and prioritise personal, team and organisational demands 2.2 Use technology to manage work priorities of the team

ELEMENT	PERFORMANCE CRITERIA
	2.3 Identify and implement techniques to manage team health and wellbeing in the workplace
3. Develop and maintain professional competence	3.1 Document own development needs, priorities and plans using applicable competency standards, where required 3.2 Seek feedback from relevant personnel on own development needs 3.3 Participate in personal and professional development activities that address identified needs, priorities and plans

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Investigates and uses a range of strategies to develop personal competence
Reading	<ul style="list-style-type: none"> Analyses and interprets textual information from organisational policies and practices or feedback to inform personal development planning
Writing	<ul style="list-style-type: none"> Uses feedback to prepare reports that summarise ways to improve competence
Oral communication	<ul style="list-style-type: none"> Uses active listening and questioning to seek and receive feedback
Enterprise and Initiative	<ul style="list-style-type: none"> Identifies how own role contributes to broader organisational goals Considers organisational protocols when planning career development of self and others
Teamwork	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with diverse stakeholders Uses interpersonal skills to establish and build positive working relationships with others
Planning and organising	<ul style="list-style-type: none"> Plans and prioritises tasks in order to meet deadlines, manage role responsibilities and to manage own personal welfare Identifies and uses appropriate technology to improve work efficiency
Technology	<ul style="list-style-type: none"> Uses technology to manage and prioritise work tasks

Unit Mapping Information

No equivalent unit. Supersedes but is not equivalent to:

- BSBLED503 Maintain and enhance professional practice
- BSBWOR501 Manage personal work priorities and professional development.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPEF501 Manage personal and professional development

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop and implement a plan for own personal and professional development
- manage personal and professional development of at least two other individuals.

In the course of the above, the candidate must:

- identify roles and responsibilities of team members
- support two different individuals to develop work goals that align with their role and responsibilities
- facilitate team member access to relevant personal and professional development activities
- use technology to organise and prioritise tasks and commitments of a team or work area
- research and implement techniques for maintaining health and wellbeing of self and others
- develop personal work goals, plans and activities to meet work goals
- measure personal work performance, including assessing competency against competency standards
- participate in personal and professional development activities to develop professional competence.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- roles and responsibilities of team members
- principles and techniques involved in the management or organisation of:
 - performance measurement
 - personal behaviour, self-awareness and personality traits identification
 - personal development plans
 - personal goal setting

- task prioritisation
- common personal and professional development activities relevant to the industry
- technology to plan and prioritise work tasks
- techniques to manage health and wellbeing in the workplace
- organisation's human resources policies and procedures relevant to professional development.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to challenges and situations to demonstrate the application of performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPMG417 Apply project life cycle management processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to assist in implementing project life cycle management processes.

It applies to individuals who are project practitioners working in a project support role.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Project Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist in establishing project	1.1 Identify and clarify project initiation documentation where required 1.2 Establish relationship between the project and broader organisational strategies and goals 1.3 Assist in negotiating and documenting project objectives, outcomes and benefits 1.4 Assist in establishing the project governance structure 1.5 Assist in drafting a project charter for approval
2. Support project	2.1 Support breakdown of project objectives into achievable

ELEMENT	PERFORMANCE CRITERIA
planning and design processes	<p>project deliverables</p> <p>2.2 Assist in identifying project stages, and key requirements for stage completion</p> <p>2.3 Identify project milestones and map clearly against time and objectives</p> <p>2.4 Assist in consolidating associated plans and baselines in project management plan</p> <p>2.5 Support negotiation with relevant stakeholders and project authority to gain approval of project plan</p>
3. Assist with project control and execution	<p>3.1 Maintain and update records against project deliverables and plans at required intervals</p> <p>3.2 Prepare status reports on project progress and identified issues</p> <p>3.3 Assist with undertaking an impact analysis of proposed changes to the project</p> <p>3.4 Maintain relevant project logs and registers accurately and regularly to assist with project audit</p> <p>3.5 Update associated plans to reflect project progress against baselines and approved changes</p>
4. Assist with project finalisation	<p>4.1 Assist with project finalisation activities where required</p> <p>4.2 Prepare project products and associated documentation for handover to client</p> <p>4.3 Assist in completing financial, legal and contractual obligations where required</p> <p>4.4 Contribute perspectives on project performance to assist with project review assessments</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1,1.2, 2.3, 2.4, 3.1, 3.2, 3.5, 4.3	<ul style="list-style-type: none"> Recognises and interprets textual information from a range of sources and determines how content may be applied to organisational requirements

Writing	1.1-1.5, 2.3, 2.4, 3.1-3.5, 4.1-4.4	<ul style="list-style-type: none"> • Uses clear, industry specific terminology, and appropriate structure, to complete and update, workplace documentation • Maintains records using required vocabulary and formats
Oral Communication	1.3-1.5, 2.2, 2.4, 2.5, 3.3, 4.1, 4.4	<ul style="list-style-type: none"> • Participates in verbal exchanges using clear language and appropriate non-verbal features to provide relevant information • Uses active listening and questioning to elicit views and opinions of others
Numeracy	2.3, 2.4, 4.3	<ul style="list-style-type: none"> • Interprets mathematical information to finalise financial obligations and measure work outputs against projections
Navigate the world of work	1.2, 2.5, 4.3	<ul style="list-style-type: none"> • Understands own responsibilities and considers implications of these when negotiating, planning and undertaking work • Adheres to organisational policies and procedures and legislative requirements
Interact with others	1.3-1.5, 2.2, 2.4, 2.5, 3.3, 4.1, 4.3, 4.4	<ul style="list-style-type: none"> • Recognises importance of taking audience, purpose and contextual factors into account when making decisions about what to communicate, with whom, why and how • Collaborates with others as part of familiar routine activities and contributes to specific activities
Get the work done	1.1, 2.1, 2.2, 2.3, 3.3, 3.4, 3.5, 4.1, 4.4	<ul style="list-style-type: none"> • Sequences and schedules required tasks, monitors implementation and manages relevant communication • Reflects on outcomes to identify opportunities for improvement

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBPMG417 Apply project life cycle management processes	BSBPMG417A Apply project life cycle management processes	<p>Updated to meet Standards for Training Packages.</p> <p>Minor edits to clarify meaning of Performance Criteria.</p>	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPMG417 Apply project life cycle management processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- work with others to plan and document a project based on organisational parameters
- complete and update all relevant documentation
- examine impact that project changes could have on final outcomes
- undertake project finalisation activities.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- explain basic project governance models
- describe project finalisation and evaluation products
- identify and describe project life cycle stages, phases and structures relevant to industry and project
- explain project planning documents and their specific formats relevant to industry and context
- outline key organisational policies and procedures
- describe various types of project initiation documentation
- identify types of project logs and registers in use in this context.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the management and leadership – project management field of work and include access to:

- project documentation, including information about life cycle processes

- case studies and, where possible, real situations
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPMG418 Apply project stakeholder engagement techniques

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to assist in managing stakeholder relationships during a project. It involves ensuring timely and appropriate involvement of key individuals, organisations and groups throughout the project.

It applies to individuals who are project practitioners working in a project support role.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Project Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist in identifying and addressing stakeholder interests	1.1 Assist in identifying stakeholders relevant to project objectives 1.2 Segment stakeholder interests and assist in determining forms of engagement 1.3 Consider interests of stakeholders when advising on project operations 1.4 Support actions to address differing stakeholder interests where required
2. Actively participate in	2.1 Apply interpersonal skills to ensure stakeholder engagement is

ELEMENT	PERFORMANCE CRITERIA
stakeholder engagement	<p>effective</p> <p>2.2 Conduct stakeholder engagement in line with agreed and defined project roles</p> <p>2.3 Establish and clarify stakeholder behaviour expectations where required</p> <p>2.4 Openly engage with stakeholder performance reviews</p> <p>2.5 Recognise and address development needs and opportunities to support stakeholder engagement</p>
3. Assist stakeholder communications	<p>3.1 Assist in determining and documenting stakeholder communication needs</p> <p>3.2 Assist in negotiating agreement on project communication method, and content and timing of stakeholder engagement</p> <p>3.3 Support communication of information as planned within authority levels, identifying and addressing variances</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2	<ul style="list-style-type: none"> Recognises and interprets textual information to determine and adhere to objectives
Writing	1.2, 3.1	<ul style="list-style-type: none"> Documents findings on communication needs using required formats and structure
Oral Communication	1.1-1.3, 2.1-2.4, 3.1-3.3	<ul style="list-style-type: none"> Participates in verbal exchanges using clear and detailed language to provide relevant information Uses active listening and questioning techniques to elicit views and opinions of others
Navigate the world of work	2.2, 3.3	<ul style="list-style-type: none"> Understands how own role meshes with others and contributes to broader work goals
Interact with others	1.1-1.4, 2.1-2.5, 3.1-3.3	<ul style="list-style-type: none"> Recognises importance of taking audience, purpose and contextual factors into account when making decisions about what to communicate, with whom, why and how Collaborates with others as part of familiar routine

		<p>activities and contributes to specific activities</p> <ul style="list-style-type: none"> • Uses interpersonal skills to build rapport, negotiate agreement and maintain positive working relationships
Get the work done	1.1, 1.2, 2.2, 2.5, 3.1, 3.3	<ul style="list-style-type: none"> • Uses analytical skills to identify stakeholders and determine their needs • Follows pre-determined plans to achieve required outcomes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBPMG418 Apply project stakeholder engagement techniques	BSBPMG418A Apply project stakeholder engagement techniques	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPMG418 Apply project stakeholder engagement techniques

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- work with others to establish various stakeholders needs and interests
- engage with project stakeholders using effective interpersonal skills and appropriate methods of communication
- select and use communications methods relevant to the project needs and stakeholder expectations
- complete all relevant documentation.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- describe different types of stakeholders
- explain the different levels of stakeholder engagement on projects
- describe techniques and strategies for stakeholder engagement
- explain why the interests and expectations of stakeholders must be considered
- describe common problems leading to variances in stakeholder engagement.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the management and leadership – project management field of work and include access to:

- project documentation detailing stakeholder engagement
- examples of stakeholder engagement activities.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPMG427 Apply project procurement procedures

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to assist with procurement for a project. It involves identifying procurement requirements, assisting with supplier selection, conducting procurement activities, and assisting with procurement finalisation activities for the project.

The unit applies to individuals who are project practitioners working in a project support role.

The project assistant may be part of a project team under the direction of a project manager, or may work as part of a smaller scale, self-directed team.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Unit Sector

Business Competence – Project Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist with procurement planning	1.1 Contribute to establishing procurement requirements according to project objectives 1.2 Contribute to developing procurement-management plan and documentation
2. Contribute to supplier selection process	2.1 Gather and evaluate information on potential suppliers 2.2 Make recommendations and assist in selection of preferred suppliers 2.3 Contribute to establishing agreed terms and conditions with

ELEMENT	PERFORMANCE CRITERIA
	<p>preferred suppliers</p> <p>2.4 Assist relevant personnel in establishing and checking relevant stakeholders perform agreed terms</p> <p>2.5 Assist in developing contractual documentation</p>
3. Conduct procurement activities	<p>3.1 Test and accept supplies and confirm fit for purpose in both quality and suitability</p> <p>3.2 Undertake procurement activities and maintain information according to reporting, confidentiality and audit requirements</p> <p>3.3 Receive, reconcile and register supplies according to established procedures</p> <p>3.4 Monitor and control suppliers and contractual supply documentation</p>
4. Assist in finalising procurement activities	<p>4.1 Assist in finalising procurement activities</p> <p>4.2 Assist in review of project outcomes using available records to determine effectiveness of procurement activities</p> <p>4.3 Contribute to making changes to project procurement procedures based on feedback received</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Applies appropriate strategies to construct meaning from a variety of texts
Writing	<ul style="list-style-type: none"> Contributes to developing project documents using vocabulary and structure appropriate to audience, context and purpose Completes project documentation using required formats and structure
Oral Communication	<ul style="list-style-type: none"> Participates in verbal exchanges using clear language and appropriate non-verbal features to provide and seek information Uses questioning and listening skills to check and confirm understanding
Numeracy	<ul style="list-style-type: none"> Uses basic mathematical formula to calculate whole numbers and decimals to confirm financial accounts match purchased items
Initiative and enterprise	<ul style="list-style-type: none"> Understands responsibilities and boundaries associated with own role Adheres to organisational policies and procedures when planning and undertaking work
Teamwork	<ul style="list-style-type: none"> Uses accepted communication practices and protocols to share or

SKILL	DESCRIPTION
	provide information <ul style="list-style-type: none">• Collaborates with others to achieve project outcomes
Planning and organising	<ul style="list-style-type: none">• Plans, organises and implements tasks required to achieve outcomes according to organisational requirements• Reflects on outcomes to gain insights into future improvements

Unit Mapping Information

Supersedes and is equivalent to BSBPMG416 Apply project procurement procedures.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPMG427 Apply project procurement procedures

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- assist application of project procurement processes during at least two different projects.

In the course of the above, the candidate must:

- document procurement requirements for a workplace project, including clear descriptions of product and service, quality specifications, resource identification, supply and delivery requirements and supply and engagement metrics
- apply procurement-management procedures to a workplace project, including selection criteria, testing and accepting, monitoring and receiving supplies
- finalise procurement agreements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- procurement-management policy, processes and procedures
- procurement documentation requirements
- components of contractual documentation and the legal obligations of all parties
- process used to select preferred contractors
- project procurement-management tools and techniques.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- examples of project procurement documentation
- examples of procurement tasks and activities

- workplace documentation and resources relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPMG428 Apply project life cycle management processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to assist in implementing project life cycle management processes.

The unit applies to individuals who are project practitioners working in a project support role.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Project Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist in establishing project	1.1 Identify project scope 1.2 Identify relevant project stakeholders and team members 1.3 Identify project initiation documentation 1.4 Assist in negotiating and documenting project objectives, outcomes and benefits 1.5 Identify relationship between the project and broader organisational strategies and goals 1.6 Assist in establishing the project governance structure
2. Support project planning and design processes	2.1 Assist in drafting a project charter for approval 2.2 Assist in developing a project budget 2.3 Support relevant personnel in breaking down project objectives into deliverables

ELEMENT	PERFORMANCE CRITERIA
	2.4 Identify project milestones and map clearly against time and objectives 2.5 Assist in compiling relevant plans and project baselines for project management plan
3. Assist with project control and execution	3.1 Prepare, maintain and update status reports on project progress and identified challenges 3.2 Seek feedback and changes required to the project from relevant stakeholders 3.3 Assist with undertaking an impact analysis of proposed changes to the project 3.4 Update associated plans and reflect project progress against baselines and approved changes
4. Assist with project finalisation	4.1 Prepare finalised project products and associated documentation for handover to client 4.2 Assist in completing financial, legal and contractual obligations 4.3 Provide feedback and suggestions for improvement to project performance 4.4 Review project performance, assessments and document lessons learned

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Recognises and interprets textual information from a range of sources and determines how content may be applied to organisational requirements
Writing	<ul style="list-style-type: none"> Uses clear, industry specific terminology, and appropriate structure, to complete and update, workplace documentation Maintains records using required vocabulary and formats
Oral Communication	<ul style="list-style-type: none"> Participates in verbal exchanges using clear language and appropriate non-verbal features to provide relevant information
Numeracy	<ul style="list-style-type: none"> Interprets mathematical information to finalise financial obligations and measure work outputs against projections
Self-management	<ul style="list-style-type: none"> Understands own responsibilities and considers implications of these when negotiating, planning and undertaking work

SKILL	DESCRIPTION
Teamwork	<ul style="list-style-type: none"> • Collaborates with others as part of familiar routine activities and contributes to specific activities
Problem solving	<ul style="list-style-type: none"> • Reflects on outcomes to identify opportunities for improvement
Planning and organising	<ul style="list-style-type: none"> • Sequences and schedules required tasks, monitors implementation and manages relevant communication
Initiative and enterprise	<ul style="list-style-type: none"> • Adheres to organisational policies and procedures and legislative requirements • Identifies importance of taking audience, purpose and contextual factors into account when making decisions about what to communicate, with whom, why and how • Uses active listening and questioning to elicit views and opinions of others

Unit Mapping Information

Supersedes and is equivalent to BSBPMG417 Apply project life cycle management processes.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPMG428 Apply project life cycle management processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- assist in implementing project life cycle management process during at least two projects.

In the course of above, the candidate must:

- work with others to plan and document a project based on organisational parameters
- examine impact that project changes could have on final outcomes.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- basic project governance models
- project charter
- project life cycle stages, phases and structures relevant to industry and project
- project planning documents and formats relevant to industry and context
- organisational strategies and goals in relation to the project
- organisational financial, legal and contractual obligations
- methods to prepare project budgets
- various types of project initiation documentation
- types of project logs and registers in use in this context.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- examples of project documentation, including information about life cycle processes

- workplace documentation and resources
- relevant legislation, regulations, standards and codes.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPMG429 Apply project stakeholder engagement techniques

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to assist in managing stakeholder relationships during a project. It involves ensuring timely and appropriate involvement of key individuals, organisations and groups throughout the project.

The unit applies to individuals who are project assistants working in a project support role.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Project Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assist in identifying and addressing stakeholder interests	1.1 Assist in identifying stakeholders relevant to project objectives 1.2 Divide stakeholder interests and assist in determining forms of engagement 1.3 Assist in identifying and supporting ways to address differing stakeholder interests
2. Assist stakeholder communications	2.1 Assist in negotiating agreement on project communication method, and content and timing of stakeholder engagement 2.2 Provide support for communication of information within authority levels, by identifying and addressing variances
3. Participate in stakeholder	3.1 Establish and confirm stakeholder behaviour expectations and communication needs

ELEMENT	PERFORMANCE CRITERIA
engagement	3.2 Confirm and conduct stakeholder engagement according to project objectives and roles
4. Review stakeholder communication	4.1 Discuss with stakeholders relevant staff and own performance review according to project expectations, objectives and roles 4.2 Identify and document relevant staff and own development needs and opportunities

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Identifies and interprets textual information to determine and adhere to objectives
Writing	<ul style="list-style-type: none"> Documents findings on communication needs using required formats and structure
Oral Communication	<ul style="list-style-type: none"> Participates in verbal exchanges using clear and detailed language to provide relevant information Uses active listening and questioning techniques to elicit views and opinions of others
Initiative and enterprise	<ul style="list-style-type: none"> Understands how own role meshes with others and contributes to broader work goals
Teamwork	<ul style="list-style-type: none"> Identifies importance of taking audience, purpose and contextual factors into account when making decisions about what to communicate, with whom, why and how Collaborates with others as part of familiar routine activities and contributes to specific activities Uses interpersonal skills to build rapport, negotiate agreement and maintain positive working relationships
Planning and organising	<ul style="list-style-type: none"> Uses analytical skills to identify stakeholders and determine their needs Follows pre-determined plans to achieve required outcomes

Unit Mapping Information

Supersedes and is equivalent to BSBPMG418 Apply project stakeholder engagement techniques.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPMG429 Apply project stakeholder engagement techniques

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- assist in conducting stakeholder engagements and communication during at least two projects.

In the course of above, the candidate must:

- work with others to establish various stakeholders needs and interests
- engage with project stakeholders using effective interpersonal skills and appropriate methods of communication
- select and use communications methods relevant to the project needs and stakeholder expectations.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- different types of stakeholders
- different levels of stakeholder engagement on projects
- techniques and strategies for stakeholder engagement
- interests and expectations of stakeholders
- common problems leading to variances in stakeholder engagement.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- project documentation detailing stakeholder engagement
- examples of stakeholder engagement activities.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPMG430 Undertake project work

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to undertake a minor project or a section of a larger project. It covers developing a project plan, administering and monitoring the project, finalising the project and reviewing the project to identify lessons learned for application to future projects.

The unit applies to individuals who play a significant role in ensuring a project meets timelines, quality standards, budgetary limits and other requirements set for the project.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Project Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish project parameters	1.1 Identify project scope 1.2 Define project stakeholders 1.3 Seek clarification from delegating authority of issues related to project and project parameters 1.4 Identify responsibilities of relevant stakeholders and reporting requirements 1.5 Clarify relationship of project to other projects and to the objectives of the organisation 1.6 Identify availability and access of resources for undertaking the project

ELEMENT	PERFORMANCE CRITERIA
2. Develop project plan	<p>2.1 Identify risks and develop a risk management plan for project, including Work Health and Safety (WHS)</p> <p>2.2 Develop project budget and timeframe and seek approval from relevant stakeholders</p> <p>2.3 Consult team members and apply their views in planning the project</p> <p>2.4 Identify and access appropriate project management tools</p> <p>2.5 Develop project plan according to project parameters and deliverables</p> <p>2.6 Finalise project plan and gain necessary approvals to commence project according to documented plan</p>
3. Administer and monitor project	<p>3.1 Communicate to project team members their responsibilities and project requirements</p> <p>3.2 Establish and maintain required recordkeeping systems throughout the project</p> <p>3.3 Implement and monitor plans for managing the project</p> <p>3.4 Undertake risk management as required</p>
4. Finalise and review project	<p>4.1 Complete financial recordkeeping associated with project and confirm according to agreed budget</p> <p>4.2 Complete project documentation and obtain sign-offs for concluding project</p> <p>4.3 Review project outcomes and processes against the project scope and plan</p> <p>4.4 Document feedback and suggested improvements</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Organises, evaluates and critiques ideas and information from a range of complex texts
Writing	<ul style="list-style-type: none"> Develops plans, reports and recommendations using vocabulary, structure and conventions appropriate to text Establishes and maintains records according to organisational requirements
Numeracy	<ul style="list-style-type: none"> Uses formal and some informal, oral and written mathematical language and representation to prepare and communicate budgetary and financial

SKILL	DESCRIPTION
	information
Oral communication	<ul style="list-style-type: none"> • Participates in verbal discussions using clear language and appropriate features to present or seek information • Using listening and questioning skills to seek information and confirm understanding
Self-management	<ul style="list-style-type: none"> • Identifies and responds to organisational and legislative/regulatory requirements
Teamwork	<ul style="list-style-type: none"> • Selects and uses appropriate communication protocols and practices to ensure shared understanding of project roles and expectations • Uses collaborative techniques to engage stakeholders in consultations and negotiations
Planning and organising	<ul style="list-style-type: none"> • Develops and implements plans to manage projects that involve diverse stakeholders with potentially competing demands • Systematically gathers and analyses all relevant information and evaluates options to make informed decisions • Evaluates outcomes of decisions to identify opportunities for improvement
Technology	<ul style="list-style-type: none"> • Uses digital technologies and applications to access, organise and share information

Unit Mapping Information

Supersedes and is equivalent to BSBPMG522 Undertake project work.

Supersedes but is not equivalent to BSBADM407 Administer projects.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPMG430 Undertake project work

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- undertake project work on a minor project or a section of a larger project.

In the course of the above, the candidate must:

- confirm the quality of project outcomes according to expectations of the organisation
- consult and communicate with relevant stakeholders to generate input and engagement in planning, implementing and reviewing the project
- provide support to team members to enable them to achieve deliverables and to transition them as appropriate at completion of the project.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- project management tools
- types of documents and other sources of information commonly used in defining the parameters of a project
- mission, goals, objectives and operations of the organisation
- relevant legislation and regulations, including work health and safety (WHS) requirements, for project planning
- project management processes according to policies and procedures of the organisation and including:
 - lines of authority and approvals
 - quality assurance
 - human resources
 - budgets and finance
 - risk management
 - recordkeeping

- reporting.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- relevant legislation, regulations, standards and codes
- workplace documentation and resources relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBPRC504 Manage a supply chain

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Application

This unit describes the skills and knowledge required to manage a supply chain, including the commercial and technical capabilities to ensure outcomes achieve organisational objectives.

It applies to individuals who are responsible for managing a supply chain in an organisation.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Administration – Procurement and Contracting

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop and implement a supply chain strategy	1.1 Identify the organisation's objectives and the strategies for achieving them 1.2 Review current supply chain management strategy and how it delivers against organisational strategies 1.3 Assess supply chain opportunities that will add value to the organisation within the requirements of the strategy and budgetary allowance 1.4 Design and implement a supply chain strategy that increases effectiveness and achieves organisational objectives

ELEMENT	PERFORMANCE CRITERIA
	<p>1.5 Gain commitment of stakeholders to implement supply chain strategy</p> <p>1.6 Assign responsibility to monitor supply chain strategy to relevant personnel</p>
2. Manage the flow of supplies through the supply chain	<p>2.1 Obtain information on the specifications of supplies in the supply chain</p> <p>2.2 Clarify the aims, objectives and plans of supplies against organisational policies and procedures</p> <p>2.3 Allocate supply chain tasks to self and other personnel</p> <p>2.4 Support personnel to achieve supply chain tasks and milestones</p> <p>2.5 Monitor and control the achievement of supply chain objectives against cost and timescales</p> <p>2.6 Present reports on the results of supply chain outcomes to stakeholders</p>
3. Manage supply chain relationships and activities	<p>3.1 Apply portfolio analysis techniques to assess relationships in supply chains in accordance with the supply chain management strategy</p> <p>3.2 Evaluate financial, technical and performance data of suppliers in accordance with supply chain strategies</p> <p>3.3 Identify opportunities to adjust supply chain strategies to respond to the changing needs of customers, supply chain and organisational objectives</p> <p>3.4 Design and implement a framework to promote collaboration with suppliers to achieve a competitive advantage</p> <p>3.5 Consult with organisation management to confirm progress of supply chain activities in accordance to organisational objectives</p>
4. Evaluate and improve supply chain effectiveness	<p>4.1 Review the effectiveness of current relationships within the supply chain in accordance with the supply chain management strategy</p> <p>4.2 Compare supply chain management models to determine most appropriate infrastructure to support organisational objectives</p> <p>4.3 Assess techniques to support the development of innovation in the supply chain</p> <p>4.4 Analyse cost reduction activities for a supply chain to achieve organisational objectives</p> <p>4.5 Consolidate analysis and evaluation results to improve future supply chain management strategies and seek feedback from</p>

ELEMENT	PERFORMANCE CRITERIA
	organisation management

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Gathers and analyses textual information from a range of sources and identifies relevant and key information to assist in the supply chain management process
Writing	<ul style="list-style-type: none"> Designs, develops and revises strategic documents appropriate to audience and context
Oral Communication	<ul style="list-style-type: none"> Uses clear language and appropriate features to provide information to a variety of individuals Uses active listening and questioning techniques to convey and clarify information
Numeracy	<ul style="list-style-type: none"> Analyses and compares financial information to assist in managing, evaluating and improving the supply chain
Navigate the world of work	<ul style="list-style-type: none"> Contributes to organisation's strategic directions by developing and revising organisational policies and procedures Complies with all legal requirements relevant to own responsibilities and considers the implications of these when negotiating, planning and undertaking work
Interact with others	<ul style="list-style-type: none"> Actively identifies the requirements of important communication exchanges, selecting appropriate channels, format, tone and content to suit purpose and audience Collaborates with others to achieve joint outcomes, playing an active role in facilitating effective group interaction
Get the work done	<ul style="list-style-type: none"> Develops plans to manage complex supply chain activities, with an awareness of how they contribute to strategic goals Makes a range of critical and non-critical decisions in relatively complex situations, taking a range of factors into account Monitors outcomes of decisions, considering results from a range of perspectives, and identifying key concepts and principles that may be adaptable to future situations Actively identifies digital systems, devices and applications with potential to meet current or future needs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBPRC504 Manage a supply chain Release 1	BSBPUR504 Manage a supply chain Release 1	Updates to elements and performance criteria, performance and knowledge evidence.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBPRC504 Manage a supply chain

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Performance Evidence

Evidence of the ability to:

- critically evaluate organisational supply chain management
- successfully manage a supply chain in accordance with organisational policies and procedures, including:
 - implement a supply chain strategy
 - monitor supply chain activities
 - co-ordinate staff and engage relevant stakeholders
 - liaise with suppliers to drive efficiencies
- evaluate and formulate recommendations to improve supply chain management strategy.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

The candidate must be able to demonstrate the following knowledge to effectively complete the tasks outlined in the elements and performance criteria of this unit, and to manage tasks and reasonably foreseeable contingencies in the context of the work role:

- key features of organisational objectives and their relationship to the supply chain strategy
- key requirements relating to the management of a supply chain, including:
 - organisational policies and procedures for procurement, tendering and contracting
 - contracting and tendering
 - ethical behaviour
 - purchasing and procurement
 - supply chain management
- techniques to establish collaborative relationships

- relevant legislation, regulations, standards and organisation policies.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the administration – procurement and contracting field of work and include access to:

- organisation policies and procedures
- supply chain strategies and relevant supply chain management records
- office equipment and supplies
- case studies and, where possible, real situations in the workplace.

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBREL402 Build client relationships and business networks

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to establish, maintain and improve client relationships and to actively participate in networks to support attainment of key business outcomes.

It applies to individuals such as marketing and sales professionals who depend on excellent interpersonal relationships and communication skills to achieve outcomes but may also apply to other individuals working in any industry.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Stakeholder Relations – Relationship Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Initiate interpersonal communication with clients	1.1 Identify and use preferred client communication styles and methods 1.2 Establish rapport with clients using verbal and non-verbal communication processes 1.3 Investigate and act upon opportunities to offer positive feedback to clients

ELEMENT	PERFORMANCE CRITERIA
	<p>1.4 Use open questions to promote two-way communication</p> <p>1.5 Identify and act upon potential barriers to effective communication with clients</p> <p>1.6 Initiate communication processes which relate to client needs, preferences and expectations</p>
2. Establish client relationship management strategies	<p>2.1 Develop client loyalty objectives focusing on the development of long term business partnerships</p> <p>2.2 Assess client profile information to determine approach</p> <p>2.3 Develop client loyalty strategies to attract and retain clients in accordance with the business strategy</p> <p>2.4 Identify and apply client care and client service standards</p>
3. Maintain and improve ongoing relationships with clients	<p>3.1 Develop strategies to obtain ongoing feedback from clients to monitor satisfaction levels</p> <p>3.2 Develop strategies to elicit feedback which provide information in a form that can be used to improve relationships with clients</p> <p>3.3 Obtain feedback to develop and implement strategies which maintain and improve relationships with clients</p>
4. Build and maintain networks	<p>4.1 Allocate time to establish and maintain business contacts</p> <p>4.2 Participate in business associations and/or professional development activities to establish and maintain a network of support for the business and to enhance personal knowledge of the market</p> <p>4.3 Establish communication channels to exchange information and ideas</p> <p>4.4 Provide, seek and verify information to the network</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.3, 1.5, 2.2, 2.3, 2.4, 3.1, 4.2- 4.4	<ul style="list-style-type: none"> Interprets information from a range of sources to determine and adhere to communication and networking requirements

Writing	1.1,1.5, 2.1, 2.3, 2.4, 3.1, 3.2, 4.2, 4.3	<ul style="list-style-type: none"> Records notes from research and discussions for future reference Develops materials for a specific audience according to organisational standards
Oral Communication	1.1-1.6, 2.3, 2.4, 3.3, 4.2-4.4	<ul style="list-style-type: none"> Participates in spoken exchanges with a range of audiences using structure and language to suit the audience Involves others in discussions using active listening and questioning techniques appropriately
Numeracy	2.4, 4.1	<ul style="list-style-type: none"> Performs calculations to determine timeframes and measure actual performance against required standards
Navigate the world of work	2.3, 2.4	<ul style="list-style-type: none"> Considers wider organisational goals when developing customer relationship strategies
Interact with others	1.1, 1.2, 1.5, 1.6, 3.3, 4.2-4.4	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with clients or business contacts to build rapport, seek or present information Recognises the need to alter personal communication style in response to the needs, values, beliefs and cultural expectations of others Adapts personal communication style to build positive working relationships and show respect for the opinions, values and particular needs of others
Get the work done	1.1, 2.1-2.4, 3.1-3.3, 4.1-4.4	<ul style="list-style-type: none"> Takes responsibility for planning, sequencing and implementing tasks and own workload to achieve business outcomes Uses analytical processes to gather relevant information, identify and evaluate options and decide on appropriate systems and strategies Actively monitors and evaluates effectiveness of decisions to identify and implement improvements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBREL402 Build client relationships and business networks	BSBREL402A Build client relationships and business networks	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBREL402 Build client relationships and business networks

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- identify clients' preferred communication styles and methods and potential barriers to communications and use appropriate communication styles and strategies
- apply communication techniques to establish rapport and promote two-way communication
- develop and implement client loyalty strategies and service standards based on business objectives and client information
- develop and implement strategies to elicit feedback from clients and use it to improve relationships and customer satisfaction
- maintain contacts and participate in formal and informal networks that support the business and enhance personal knowledge of the market.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- give examples of strategies that can build client loyalty including those that focus on:
 - financial incentives and special offers
 - premium services and private/dedicated facilities
 - loyalty programs, rewards and recognition
- outline issues that are commonly addressed in client care/service standards in the industry
- outline typical barriers to communicating with clients and possible strategies to address them
- give examples of strategies for feedback
- describe the principles and techniques for effective communication and networking
- outline networking opportunities relevant to the business with reference to:

- government, industry and professional associations
- trade shows, conferences, briefings and other professional development activities
- existing groups or networks
- businesses and individuals
- outline aspects of organisational policies, procedures and processes that are relevant to communicating with clients and participating in networks.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the stakeholder relations - relationship management field of work and include access to:

- relevant workplace documentation and resources
- case studies and, where possible, real situations
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBRES411 Analyse and present research information

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Application

This unit describes the skills and knowledge required to gather, organise, analyse and present workplace information using available systems and sources. This includes identifying research requirements and sources of information, applying information to a set of facts, evaluating the quality and reliability of the information, and preparing and producing reports.

It applies to individuals in roles in which they are required to apply their broad knowledge of the work environment to analysis and research tasks, evaluate information from a variety of sources and apply solutions to a range of predictable and unpredictable problems.

No licensing, legislation or certification requirements apply to this unit at the time of publication.

Unit Sector

Knowledge Management – Research

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify reliable sources of research information	1.1 Identify potential sources for research information relevant to the organisation requirements 1.2 Assess reliability of potential sources, considering accuracy, authority, audience, relevance and likelihood of bias 1.3 Access research information and extract in a format suitable for analysis, interpretation and dissemination in accordance with

ELEMENT	PERFORMANCE CRITERIA
	organisational requirements 1.4 Store research information, in accordance with organisational requirements
2. Analyse and synthesise research information	2.1 Clearly define objectives of research ensuring consistency with organisational requirements 2.2 Ensure that information research strategies are relevant to the requirements of the research and aligned to organisational objectives 2.3 Apply information research strategy to obtain relevant information, identifying themes and drawing conclusions in line with established objectives of research 2.4 Demonstrate that assumptions and conclusions used in analyses are clear, justified, supported by evidence and consistent with research and business objectives
3. Present research information	3.1 Identify appropriate methods of reporting, considering the intended audience and relevant organisational requirements 3.2 Report on findings in an appropriate format, style and structure within a pre-determined timeframe 3.3 Report and distribute research findings in accordance with organisational requirements 3.4 Obtain feedback and comments on suitability and sufficiency of findings in accordance with organisational requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Analyse and evaluate textual information to develop information research strategies, integrate facts and ideas and meet organisational requirements
Writing	<ul style="list-style-type: none"> Gathers, evaluates and integrates information from a range of sources Presents findings, recommendations and issues in required format using language, structure and style appropriate to audience
Oral	<ul style="list-style-type: none"> Presents recommendations and issues using language appropriate to

Communication	audience and according to organisational requirements
Navigate the world of work	<ul style="list-style-type: none"> Recognises and follows organisational policies and procedures and meets expectations associated with own role
Interact with others	<ul style="list-style-type: none"> Selects and uses appropriate communication practices when seeking or sharing information
Get the work done	<ul style="list-style-type: none"> Plans, organises and implements tasks to meet organisational requirements Takes responsibility for the outcomes of routine decisions related directly to own role Uses the main features and functions of digital technologies and tools to complete work tasks Recognises and takes responsibility for addressing foreseeable problems in familiar work contexts

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBRES411 Analyse and present research information Release 1	BSBRES401 Analyse and present research information Release 1	Updates to elements and performance criteria, performance and knowledge evidence.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBRES411 Analyse and present research information

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Performance Evidence

Evidence of the ability to:

- identify research requirements and objectives
- gather, organise and present research information
- communicate effectively with research stakeholders to clarify requirements
- maintain and handle information and documents systematically and securely
- preparing reports on research findings including:
 - recommendations based on the analysis of research information
 - clear and justified assumptions and conclusions
 - use of efficient and reliable research methods
- analyse, evaluate and interpret research information to support organisational activities.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

The candidate must be able to demonstrate the following knowledge to effectively complete the tasks outlined in the elements and performance criteria of this unit, and to manage tasks and reasonably foreseeable contingencies in the context of the work role:

- Key features of organisational policies and procedures relating to:
 - the access of digital information
 - the storage/transmission of information
 - legal and ethical obligations relating to workplace information
- key concepts related to research and analysis including reliability and validity
- key features of research processes and strategies to identify new sources (online and print) of information and efficient and effective use.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the knowledge management – research field of work and include access to:

- workplace information systems, equipment and resources
- workplace policies and procedures
- case studies and, where possible, real situations in the workplace.

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBRES801 Initiate and lead applied research

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to plan, conduct and report on applied research to influence strategic practices and outcomes within an organisational context.

The unit also covers constructing an applied research strategy, using a range of applied research techniques, and analysing and presenting findings.

It applies to leaders or managers using applied research to ensure learning can enhance individual, team and organisational performance. The intended purpose and approach to applied research may vary across a range of contexts and organisations. In this unit, the focus is on applied research to attain improved organisational outcomes.

No licensing, legislation or certification requirements apply to this unit at the time of publication.

Unit Sector

Knowledge Management – Research

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Construct an applied research strategy	1.1 Clarify and confirm applied research purpose and needs of the target group 1.2 Determine policies and procedures in relation to conducting applied research 1.3 Establish mechanisms for collecting and maintaining data in a

ELEMENT	PERFORMANCE CRITERIA
	systematic manner 1.4 Analyse factors affecting the reliability and validity of data 1.5 Review relevant research ethics and codes of conduct 1.6 Prepare applied research strategy and hypothesis 1.7 Frame a research strategy in consideration of available tools and resources
2. Use a range of applied research techniques	2.1 Review and evaluate a range of applied research methods, theories and data collection techniques 2.2 Select appropriate methods to gather and analyse data 2.3 Use suitable technology and technology services to support data collection and analysis 2.4 Access appropriate sources of information and contributors relevant to the research 2.5 Optimise relevance of the research through integrity of the data collected and analysis tools used
3. Analyse and present findings	3.1 Evaluate how research findings such as trends and changes will impact on learning strategy 3.2 Review data and research findings for accuracy of details and adherence to any legal requirements 3.3 Collate and analyse data for relevance against the original applied research strategy 3.4 Document and present research findings in a clear and logical manner consistent with audience needs 3.5 Identify the need for and an appropriate approach to, further research

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Learning	3.5	<ul style="list-style-type: none"> Evaluates and reflects on the need for further research to contribute to ongoing organisational improvement

Reading	1.1, 1.2, 1.5, 2.4, 3.1, 3.2	<ul style="list-style-type: none"> Collects, analyses, compares and evaluates textual information from a range of resources to inform research strategies
Writing	1.6, 3.3, 3.4	<ul style="list-style-type: none"> Develops texts dealing with complex ideas and concepts Uses specialised and detailed language to convey explicit information, requirements and recommendations in accordance with legal, ethical and organisational requirements
Oral Communication	1.1, 3.4	<ul style="list-style-type: none"> Uses specialised vocabulary appropriate to context and audience to discuss and confirm research requirements Applies listening and questioning techniques to check or confirm understanding
Numeracy	3.2, 3.3	<ul style="list-style-type: none"> Applies knowledge of mathematical information to statistically analyse data and identify possible trends and confirm reliability
Navigate the world of work	1.2, 1.5, 3.2	<ul style="list-style-type: none"> Is highly autonomous, taking responsibility for determining applicable organisational policies and procedures and considering legal and ethical obligations Monitors adherence to legal and regulatory rights and responsibilities for self and possibly for others
Interact with others	3.4	<ul style="list-style-type: none"> Demonstrates sophisticated control over oral, visual and/or written formats, drawing on a diverse range of communication practices to achieve goals
Get the work done	1.1, 1.2, 1.3, 1.7, 2.1, 2.2, 2.3, 2.4, 2.5, 3.3	<ul style="list-style-type: none"> Develops plans for complex activities, regularly reviewing priorities and performance during implementation, identifying and addressing issues as they arise Considers the strategic and operational potential of digital trends to achieve work goals, enhance work processes, create opportunities and enhance or reduce risks Uses formal analytical thinking to make informed decisions about research strategies and techniques, seeking input, advice and feedback as required

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBRES801 Initiate and lead applied research	BSBRES801A Initiate and lead applied research	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBRES801 Initiate and lead applied research

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- plan, conduct and report on applied research relevant to organisational strategic practices and outcomes
- formulate a research proposal or plan which includes:
 - specific research questions or hypotheses
 - valid population or sample size
 - description of the geographical, cultural, social or institutional context within which the research will be carried out
 - full description of the data collection methods
 - analysis of the limitations to research design including the reliability and validity of data
- design an applied research project using applied research tools and techniques
- document and present research findings including analysis of data, valid and reliable findings and recommendations for further research.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- describe communication processes and methods
- explain data collection and analysis methods including the use of technology and technology services
- explain legal requirements, policies, procedures and guidelines relating to research including handling and storing data, privacy and freedom of information
- describe presentation techniques

- describe reporting methods
- explain research ethics and codes of conduct
- give examples of applied research tools and methods and how they are applied.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the knowledge management – research field of work and include access to:

- business technology
- relevant workplace policies and procedures
- relevant legislation and codes of conduct
- case studies and, where possible, real situations .

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBRSK401 Identify risk and apply risk management processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to identify risks and to apply established risk management processes to a defined area of operations that are within the responsibilities and obligations of the role.

It applies to individuals with a broad knowledge of risk analysis or project management who contribute well developed skills in creating solutions to unpredictable problems through analysis and evaluation of information from a variety of sources. They may have responsibility to provide guidance or to delegate aspects of these tasks to others.

In this unit, risks applicable within own work responsibilities and area of operation, may include projects being undertaken individually or by a team, or operations within a section of the organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Regulation, Licensing and Risk – Risk Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify risks	1.1 Identify the context for risk management 1.2 Identify risks using tools, ensuring all reasonable steps have

ELEMENT	PERFORMANCE CRITERIA
	<p>been taken to identify all risks</p> <p>1.3 Document identified risks in accordance with relevant policies, procedures, legislation and standards</p>
2. Analyse and evaluate risks	<p>2.1 Analyse and document risks in consultation with relevant stakeholders</p> <p>2.2 Undertake risk categorisation and determine level of risk</p> <p>2.3 Document analysis processes and outcomes</p>
3. Treat risks	<p>3.1 Determine appropriate control measures for risks and assess for strengths and weaknesses</p> <p>3.2 Identify control measures for all risks</p> <p>3.3 Refer risks relevant to whole of organisation or having an impact beyond own work responsibilities and area of operation to others as per established policies and procedures</p> <p>3.4 Choose and implement control measures for own area of operation and/or responsibilities</p> <p>3.5 Prepare and implement treatment plans</p>
4. Monitor and review effectiveness of risk treatment/s	<p>4.1 Regularly review implemented treatment/s against measures of success</p> <p>4.2 Use review results to improve the treatment of risks</p> <p>4.3 Provide assistance to auditing risk in own area of operation</p> <p>4.4 Monitor and review management of risk in own area of operation</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.2	<ul style="list-style-type: none"> Comprehends documents and texts of varying complexity to extract and analyse relevant information
Writing	1.3, 2.1, 2.3, 3.5	<ul style="list-style-type: none"> Uses specific, industry related terminology and logical organisational structure in workplace documents that identify and analyse risk and report management process outcomes

Oral communication	2.1	<ul style="list-style-type: none"> Participates effectively in interactions with stakeholders by using questioning and listening to elicit opinions and clarify understanding
Numeracy	1.2, 4.1	<ul style="list-style-type: none"> Uses numerical tools to assess risk and uses numerical data to review plans
Navigate the world of work	1.1, 1.3, 3.3	<ul style="list-style-type: none"> Complies with organisational and legislative requirements Takes responsibility for identification and management of risk within own work context and refers matters to others as required
Interact with others	2.1	<ul style="list-style-type: none"> Selects appropriate communication protocols and conventions when conferring with others to establish risk management requirements
Get the work done	1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 4.1, 4.2, 4.3, 4.4	<ul style="list-style-type: none"> Determines job sequence and works logically and systematically to undertake defined tasks Uses analysis and consultative processes to inform decisions about selection and implementation of risk control measures Evaluates effectiveness of plans and results to inform improvement decisions Uses familiar digital technologies and systems to access information, prepare plans and communicate with others

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBRSK401 Identify risk and apply risk management processes	BSBRSK401A Identify risk and apply risk management processes	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBRK401 Identify risk and apply risk management processes

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to apply organisational policies, procedures and processes to:

- identify risks
- consult with relevant stakeholders to analyse and evaluate risks
- identify and evaluate control measures
- develop and implement treatment plans for own area or responsibility
- refer risks that are beyond own area of responsibility to others
- maintain risk management documentation.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline techniques for identifying and evaluating risks
- outline organisational policies, procedures or processes for risk management
- give examples of areas where risks are commonly identified in an organisation
- outline the purpose and key elements of current risk management standards
- outline the legislative and regulatory context of the organisation in relation to risk management
- describe the organisation's auditing requirements relating to risk management.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the regulation, licensing and risk - risk management field of work and include access to:

- relevant legislation, regulations, standards and codes
- relevant workplace documentation and resources
- case studies and, where possible, real situations
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBRSK501 Manage risk

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes skills and knowledge required to manage risks in a range of contexts across an organisation or for a specific business unit or area in any industry setting.

It applies to individuals who are working in positions of authority and are approved to implement change across the organisation, business unit, program or project area. They may or may not have responsibility for directly supervising others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Regulation, Licensing and Risk – Risk Management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish risk context	1.1 Review organisational processes, procedures and requirements for undertaking risk management in accordance with current risk management standards 1.2 Determine scope for risk management process 1.3 Identify internal and external stakeholders and their issues 1.4 Review political, economic, social, legal, technological and policy context

ELEMENT	PERFORMANCE CRITERIA
	1.5 Review strengths and weaknesses of existing arrangements 1.6 Document critical success factors, goals or objectives for area included in scope 1.7 Obtain support for risk management activities 1.8 Communicate with relevant parties about the risk management process and invite participation
2. Identify risks	2.1 Invite relevant parties to assist in the identification of risks 2.2 Research risks that may apply to scope 2.3 Use tools and techniques to generate a list of risks that apply to the scope, in consultation with relevant parties
3. Analyse risks	3.1 Assess likelihood of risks occurring 3.2 Assess impact or consequence if risks occur 3.3 Evaluate and prioritise risks for treatment
4. Select and implement treatments	4.1 Determine and select most appropriate options for treating risks 4.2 Develop an action plan for implementing risk treatment 4.3 Communicate risk management processes to relevant parties 4.4 Ensure all documentation is in order and appropriately stored 4.5 Implement and monitor action plan 4.6 Evaluate risk management process

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.4, 1.5, 2.2	<ul style="list-style-type: none"> Comprehends a variety of relatively complex texts Gathers, interprets and analyses textual information from a range of sources to identify relevant information
Writing	1.6, 1.8, 2.1, 2.3, 4.3	<ul style="list-style-type: none"> Develops textual material and organises content in a manner that effectively documents

		risk management analysis and assessment priorities and processes
Oral Communication	1.8, 2.1, 2.3, 4.3	<ul style="list-style-type: none"> Participates in interactions with stakeholders using questioning and listening to elicit opinions, and to confirm and clarify understanding
Numeracy	2.2	<ul style="list-style-type: none"> Uses numerical tools to assess risk and uses numerical data to review plans
Navigate the world of work	1.1, 2.1, 4.3	<ul style="list-style-type: none"> Refers to organisational processes, procedures and requirements when making decisions about risk management
Interact with others	1.8, 2.1, 2.3, 4.3	<ul style="list-style-type: none"> Establishes and uses appropriate conventions and protocols when communicating with stakeholders about risk management Consults and negotiates with stakeholders about risk management processes and outcomes
Get the work done	1.2, 1.3, 1.5, 1.7, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 4.1, 4.2, 4.4, 4.5, 4.6	<ul style="list-style-type: none"> Sequences and schedules a range of routine and complex activities, monitors implementation, evaluates processes and manages relevant communication Systematically analyses information to decide on appropriate risk management treatments Uses digital technologies and systems to access information, document plans and communicate with others

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBRSK501 Manage risk	BSBRSK501B Manage risk	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBR501 Manage risk

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- analyse information from a range of sources to identify the scope and context of the risk management process including:
 - stakeholder analysis
 - political, economic, social, legal, technological and policy context
 - current arrangements
 - objectives and critical success factors for the area included in scope
 - risks that may apply to scope
- consult and communicate with relevant stakeholders to identify and assess risks, determine appropriate risk treatment actions and priorities and explain the risk management processes
- develop and implement an action plan to treat risks
- monitor and evaluate the action plan and risk management process
- maintain documentation.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline the purpose and key elements of current risk management standards
- outline the legislative and regulatory context of the organisation in relation to risk management
- outline organisational policies, procedures and processes for risk management.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the regulation, licensing and risk - risk management field of work and include access to:

- relevant legislation, regulations, standards and codes
- relevant workplace documentation and resources
- case studies and, where possible, real situations
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBSMB403 Market the small business

Modification History

Release	Comments
Release 2	This version released with BSB Business Services Training Package Version 2.0. Version created to clarify intent
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to monitor and improve business performance via a clear marketing strategy integrated into the business plan.

It applies to individuals who operate a small business independently or within a larger organisation. Individuals in this role analyse and interpret market data.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Small and Micro Business

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop marketing strategies	1.1 Analyse the business and its key products or services to determine focus of marketing activities, in accordance with objectives of the business plan 1.2 Evaluate customer base and target market for the small

ELEMENT	PERFORMANCE CRITERIA
	<p>business as a basis for marketing objectives and strategies</p> <p>1.3 Conduct a competitor analysis to inform development of marketing strategies</p> <p>1.4 Determine marketing objectives in consultation with relevant people and in accordance with the business plan</p> <p>1.5 Ensure strategies are ethically and culturally appropriate and aligned with customer and industry expectations</p>
2. Determine a marketing mix for the business	<p>2.1 Assess product mix, volumes and pricing opportunities to determine marketing focus and optimise profit</p> <p>2.2 Evaluate costs and benefits of using different distribution channels or providing different levels of customer service, and consider results in determining marketing mix</p> <p>2.3 Determine marketing and promotional activities including the role of digital engagement to suit target market</p> <p>2.4 Consider the customer journey and conversations in determining marketing mix</p>
3. Implement marketing strategies	<p>3.1 Brief those involved in the marketing effort on their roles and responsibilities, to ensure success of marketing strategies</p> <p>3.2 Plan and implement marketing activities, in accordance with marketing objectives and budgetary requirements</p> <p>3.3 Consider digital devices, platforms and technologies for effectiveness in implementing marketing activities</p>
4. Monitor and improve marketing performance	<p>4.1 Monitor marketing activities and evaluate business performance according to objectives and targets of the business plan</p> <p>4.2 Analyse performance gaps and take corrective action or set new targets</p> <p>4.3 Encourage all relevant people to propose ways to improve marketing performance</p> <p>4.4 Seek and analyse customer reaction to all aspects of the marketing mix, using culturally appropriate processes, to improve targeting and outcomes</p> <p>4.5 Conduct ongoing research of customer requirements and expectations in both on-line and off-line environments to identify opportunities for change and improvement</p> <p>4.6 Identify and respond to opportunities to aid business development through new technologies and different ways of</p>

ELEMENT	PERFORMANCE CRITERIA
	marketing

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1-1.3, 2.2-2.4, 3.2, 4.1, 4.4, 4.6	<ul style="list-style-type: none"> Identifies, analyses and evaluates complex information from a range of sources
Writing	1.3, 2.3, 2.5, 3.1, 3.2, 4.4-4.6	<ul style="list-style-type: none"> Prepares reports and other workplace documentation using structure, layout and terminology appropriate to the audience
Oral Communication	1.3, 3.1, 4.3, 4.4	<ul style="list-style-type: none"> Presents ideas and requirements clearly and using language and non-verbal techniques appropriate to audience and environment Uses questioning and listening to check and confirm understanding
Numeracy	2.1, 2.2, 3.2, 4.2	<ul style="list-style-type: none"> Analyses numerical information to determine budgetary requirements and product quantities Uses a range of calculation methods to evaluate costs and benefits
Navigate the world of work	4.5	<ul style="list-style-type: none"> Regularly reviews current situation and develops strategies to address improvements in marketing performance
Interact with others	4.3	<ul style="list-style-type: none"> Recognises importance of building rapport to establish effective working relationships
Get the work done	1.1-1.3, 2.1-2.5, 3.2, 4.1, 4.2	<ul style="list-style-type: none"> Takes responsibility for planning and organising own workload, identifying ways of sequencing and combining elements for greater efficiency Implements actions as per plan, making slight adjustments if necessary and addressing some unexpected issues Makes a range of critical and non-critical decisions in relatively complex situations, taking a range of constraints into account Identifies concepts, principles and features of approaches in use in other contexts, and redesigns

		<p>these to suit own situation</p> <ul style="list-style-type: none"> • Uses formal and informal processes to monitor implementation of solutions and reflect on outcomes
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBSMB403 Market the small business Release 2	BSBSMB403 Market the small business Release 1	Updated to clarify intent	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBSMB403 Market the small business

Modification History

Release	Comments
Release 2	This version first released with BSB Business Services Training Package Version 2.0. Version created to clarify intent of unit
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- determine marketing activity focus in line with objectives of the business plan
- evaluate customer base
- understand what is ethically and culturally appropriate
- determine a marketing mix according to market and business needs, including:
 - ability to optimise sales and profit
 - ability to evaluate costs and benefits
 - determine customer needs and promotional activities
- determine marketing strategies, including briefing appropriate personnel on their responsibilities
- identify marketing opportunities in the digital environment
- develop approaches to engage, respond and monitor customers in the digital space
- monitor and evaluate activities and performance, and correct performance gaps
- consult and communicate effectively with relevant people
- research and monitor ongoing changes and improvements.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- discuss industry market trends
- identify performance evaluation methods
- explain methods of analysing costs and benefits of marketing strategies
- summarise methods of developing marketing objectives and marketing mix
- compare current digital devices, platforms and technologies for effectiveness in achieving marketing objectives
- outline methods of monitoring customer satisfaction
- identify relevant market analysis and research
- provide a detailed explanation of relevant marketing concepts and methods.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the Management and Leadership – Small and Micro Business field of work and include access to:

- business technology
- software for analysis of data
- workplace documents and case studies or where possible, real situations
- interaction with others.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBSMB406 Manage small business finances

Modification History

Release	Comments
Release 2	This version released with BSB Business Services Training Package Version 2.0. Version created to clarify intent of unit
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to implement and review financial management strategies on a regular basis.

It applies to individuals who operate a small business that stands alone, or is part of a department within a larger organisation. Individuals in this role interpret financial reports and other numerical data to develop financial management strategies.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Small and Micro Business

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Implement financial plan	1.1 Identify financial information requirements and obtain specialist services, as required, to profitably operate the business in accordance with the business plan 1.2 Produce financial budgets or projections, including cash flow

ELEMENT	PERFORMANCE CRITERIA
	<p>estimates, as required for each forward period, and distribute to relevant people in accordance with legal requirements</p> <p>1.3 Negotiate, secure and manage business capital to best enable implementation of the business plan and to meet requirements of financial backers</p> <p>1.4 Develop and maintain strategies to enable adequate financial provision for taxation in accordance with legal requirements</p> <p>1.5 Develop, monitor and maintain client credit policies, including contingencies for debtors in default, to maximise cash flow</p> <p>1.6 Select key performance indicators to enable ongoing monitoring of financial performance</p> <p>1.7 Record and communicate financial procedures to relevant people to facilitate implementation of the business plan</p>
2. Monitor financial performance	<p>2.1 Regularly monitor and report on financial performance targets, and analyse data to establish extent to which the financial plan has been met</p> <p>2.2 Monitor marketing and operational strategies for their effects on the financial plan</p> <p>2.3 Calculate and evaluate financial ratios according to own or industry benchmarks</p> <p>2.4 Assess financial plan to determine whether variations or alternative plans are needed, and change as required</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1-1.4, 2.1, 2.4	<ul style="list-style-type: none"> Evaluates complex text to determine legislative, regulatory and workplace documentation
Writing	1.2-1.5, 1.7, 2.1	<ul style="list-style-type: none"> Prepares written reports and workplace documentation that communicate complex information clearly and effectively
Oral Communication	1.3, 1.7, 2.1	<ul style="list-style-type: none"> Articulates clearly using specific and relevant language suitable to audience to convey requirements, and employs listening and questioning techniques to

		<ul style="list-style-type: none"> confirm understanding Participates in verbal negotiations using tone and language suitable to audience
Numeracy	1.1-1.5, 2.1, 2.3, 2.4	<ul style="list-style-type: none"> Interprets numerical information to calculate all relevant financial information
Navigate the world of work	1.2, 1.4	<ul style="list-style-type: none"> Appreciates implications of legal and regulatory responsibilities related to own work
Interact with others	1.7, 2.1	<ul style="list-style-type: none"> Selects appropriate form, channel and mode of communication for a specific purpose relevant to own role
Get the work done	1.1, 1.2, 1.4-1.6, 2.2, 2.4	<ul style="list-style-type: none"> Develops plans to manage relatively complex, non-routine tasks with an awareness of how they may contribute to longer-term operational and strategic goals Makes a range of critical and non-critical decisions in relatively complex situations, taking a range of constraints into account Uses formal and informal processes to monitor implementation of ideas and reflect on outcomes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBSMB406 Manage small business finances Release 2	BSBSMB406 Manage small business finances Release 1	Updated to clarify intent	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBSMB406 Manage small business finances

Modification History

Release	Comments
Release 2	This version released with BSB Business Services Training Package Version 2.0. Version created to clarify intent of unit
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- operate the business according to the business plan, including:
 - adhering to legal requirements
 - meeting requirements of financial backers
 - defining strategies for debt collection and contingencies for debtors
 - managing cash flow
 - defining key performance indicators
 - communicating with relevant people
- monitor the business against financial plan and make changes as required.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- discuss benchmarking
- explain financial decision-making relevant to the business
- summarise significant financial indicators
- outline purposes of financial reports
- clarify preparation and interpretation of budget/actual reports
- identify principles for preparing balance sheets and their interpretation
- outline debt collection procedures or strategies

- characterise principles for preparing profit and loss statements and their interpretation
- discuss stock records and stock control relevant to the business.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the Management and Leadership – Small and Micro Business field of work and include access to:

- business equipment and resources
- relevant legislation, regulations, standards and codes
- relevant workplace documentation and resources
- case studies or where possible, real situations
- interaction with others.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBSMB407 Manage a small team

Modification History

Release	Comments
Release 2	This version released with BSB Business Services Training Package Version 2.0. Version created to clarify intent of unit
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to select, induct, train and develop staff members to enhance business operations within the parameters of all relevant legislative requirements.

It applies to individuals who operate a small business that stands alone, or is part of a department within a larger organisation. Individuals in this role have a good knowledge of industrial relations and team management and use effective, responsive and supportive communication in workplace interactions.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Small and Micro Business

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop staffing plan	1.1 Determine staffing requirements to allow the business to run effectively, in accordance with requirements outlined in the

ELEMENT	PERFORMANCE CRITERIA
	<p>business plan</p> <p>1.2 Identify and compare existing skills of owner/s and staff with business requirements to identify any gaps</p> <p>1.3 Develop policies and procedures for owner/s and staff, in accordance with the business plan</p>
2. Recruit, induct, train and retain team	<p>2.1 Develop job or position descriptions, competencies required and selection criteria to meet business' needs</p> <p>2.2 Judge information obtained from each candidate against specified selection criteria, and select according to business needs and legal requirements</p> <p>2.3 Induct new staff members in accordance with policies and procedures of the business</p> <p>2.4 Make team members aware of their responsibilities and performance requirements as soon as practicable, and take opportunities to coach team members who are unfamiliar with procedures of the business</p> <p>2.5 Develop and implement a staff development program and career paths based on requirements of business and staff competencies</p> <p>2.6 Advertise staff vacancies appropriately in accordance with staffing plan</p>
3. Comply with industrial relations obligations	<p>3.1 Clarify workplace rights and obligations of employers and employees, in accordance with legal requirements and codes of practice</p> <p>3.2 Counsel staff, if required, in a positive and constructive manner and record outcomes accurately</p>
4. Maintain staff records	<p>4.1 Develop staff records system to provide timely and accurate information, in accordance with confidentiality, legal and taxation requirements</p> <p>4.2 Monitor and accurately maintain system for recording and retrieving personnel and payroll information, and seek specialist advice where required</p>
5. Manage staff	<p>5.1 Regularly review contribution and skills of self and other team members to ensure performance is in line with agreed performance measures</p> <p>5.2 Monitor and adjust staffing requirements to respond to any changes in tasks and functions required by the business</p> <p>5.3 Support and encourage staff, and acknowledge and reward</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>their contribution</p> <p>5.4 Regularly provide opportunities for staff to discuss work related issues</p> <p>5.5 Develop contingency plans to cope with unexpected or extreme situations and take appropriate corrective action as required</p>
6. Review team performance	<p>6.1 Develop positive and constructive relationships with and between team members</p> <p>6.2 Review and update team objectives in support of business goals on a regular basis in consultation with team members</p> <p>6.3 Identify strengths and weaknesses of team against current and expected work requirements</p> <p>6.4 Schedule time, on a regular basis, for team members to review work operations to maintain and improve operational efficiency</p> <p>6.5 Encourage team members to monitor their own performance, suggest improvements and identify professional development needs, in accordance with personal and business requirements</p> <p>6.6 Monitor and review staff turnover rate</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1-1.3, 2.2, 2.3, 2.5, 2.6, 3.1, 4.1, 5.1, 6.3, 6.5, 6.6	<ul style="list-style-type: none"> Evaluates complex text to determine legislative, regulatory and workplace documentation
Writing	1.3, 2.1-2.6, 3.1, 3.2, 4.1, 4.2, 5.5, 6.1-6.3, 6.5	<ul style="list-style-type: none"> Prepares written reports and workplace documentation that communicate complex information clearly and effectively
Oral Communication	1.2, 2.2-2.4, 3.1, 3.2, 4.2, 5.3, 5.4, 6.1, 6.2, 6.4, 6.5	<ul style="list-style-type: none"> Articulates clearly using specific and relevant language suitable to audience to convey requirements, and employs listening and questioning techniques to confirm understanding Participates in verbal negotiations and coaching using tone and language suitable to audience

Numeracy	6.4	<ul style="list-style-type: none"> Uses basic mathematical formulas to review staff performances within available work schedules
Navigate the world of work	1.3, 2.2, 3.1, 4.1	<ul style="list-style-type: none"> Understands own legal rights and responsibilities and is extending understanding of general legal principles across work contexts Monitors adherence to organisational policies and procedures and considers own role for its contribution to broader goals of the work environment
Interact with others	2.4, 2.6, 5.3, 6.1, 6.5	<ul style="list-style-type: none"> Collaborates with others to achieve joint outcomes, playing an active role in facilitating effective group interaction, influencing direction and taking a leadership role on occasion Looks for ways of establishing connections and building genuine understanding with a diverse range of people Actively identifies important communication exchanges, selecting appropriate channels, format, tone and context to suit purpose and audience, and monitors impact
Get the work done	1.1, 1.2, 2.2, 2.3, 2.5, 4.2, 5.1, 5.2, 5.5, 6.3, 6.6	<ul style="list-style-type: none"> Uses digital technologies and systems safely, legally and ethically when gathering, storing, accessing and sharing information Develops plans to manage relatively complex, non-routine tasks with an awareness of how they may contribute to longer-term operational and strategic goals Makes a range of critical and non-critical decisions in relatively complex situations, taking a range of constraints into account Uses formal and informal processes to monitor implementation of ideas and reflect on outcomes Recognises and anticipates an increasing range of familiar problems, their symptoms and causes, actively looking for early warning signs and implementing contingency plans

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBSMB407 Manage a small team Release 2	BSBSMB407 Manage a small	Updated to clarify intent	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
	team Release 1		

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBSMB407 Manage a small team

Modification History

Release	Comments
Release 2	This version released with BSB Business Services Training Package Version 2.0. Version created to clarify intent of unit
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- use the business plan to:
 - determine staffing requirements
 - coordinate skill-gap training where required
 - develop human resource policies and procedures
- develop job descriptions and selection criteria
- determine induction processes
- implement staff development program
- adhere to legal requirements and codes of practice
- develop staff records system
- conduct ongoing performance measures
- communicate effectively with staff members
- develop contingency plans
- develop strategies to review team performance
- monitor and review staff.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- discuss all government legislative requirements relating to staffing the business operation

- explain work health and safety (WHS) responsibilities and procedures for managing hazards
- summarise relevant industry awards or enterprise agreements
- outline staff development pathways
- identify training course options for staff development
- summarise staff counselling, grievance and disciplinary procedures
- identify unfair dismissal legislation and procedures.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the Management and Leadership – Small and Micro Business field of work and include access to:

- business equipment and resources
- relevant legislation, regulations, standards and codes
- relevant workplace documentation and resources
- case studies or where possible, real situations
- interaction with others.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBSMB420 Evaluate and develop small business operations

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Application

This unit describes the skills and knowledge required to evaluate and develop small business operations.

It applies to individuals who operate a small business which stands alone, or that is part of a department within a larger organisation. Individuals in this role use problem-solving skills and take responsibility for developing approaches to evaluating and developing business operations.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Small and Micro Business

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review and evaluate operational strategies and procedures	1.1 Develop a detailed operational plan that sets out clear action points to fulfil on business goals and objectives 1.2 Identify work health and safety (WHS) and environmental issues and implement strategies to minimise risk factors 1.3 Review and evaluate, where appropriate, a quality assurance process for the business in line with industry standards, compliance requirements and cultural criteria 1.4 Develop operational KPIs that align with the business plan 1.5 Align KPIs to business strategies, including utilisation of

ELEMENT	PERFORMANCE CRITERIA
	existing or new technologies, where practicable, to optimise business performance
2. Implement operational strategies and procedures	<p>2.1 Implement systems to evaluate business performance and customer satisfaction, including by setting key performance indicators or targets</p> <p>2.2 Implement systems to control stock, expenditure or cost, wastage or shrinkage and risks to health and safety in accordance with the business plan, incorporating new digital technologies where possible</p> <p>2.3 Identify and manage staffing requirements, considering a range of permanent and flexible arrangements, and adhering to budgetary constraints</p> <p>2.4 Provide goods or services in accordance with established legal, ethical cultural and technical standards</p> <p>2.5 Provide goods or services in accordance with time, cost and quality specifications, and customer requirements, incorporating new digital technologies where possible</p> <p>2.6 Apply quality procedures to address product or service and customer requirements</p>
3. Evaluate business performance	<p>3.1 Use digital technologies to regularly evaluate and review achievement of operational targets to ensure optimum business performance, in accordance with business goals and objectives</p> <p>3.2 Review and document systems and structures, with a view to more effectively supporting business performance</p> <p>3.3 Investigate and analyse operating problems to establish causes and implement changes as required, as part of the business quality system</p> <p>3.4 Update operational policies and procedures to incorporate corrective action</p>
4. Review business operations	<p>4.1 Review and adjust business operations to increase business success, in accordance with business goals and objectives</p> <p>4.2 Research new and emerging digital technologies periodically, implementing as relevant, in accordance with business goals and objectives</p> <p>4.3 Undertake ongoing research into new business opportunities and adjust business goals and objectives as new business opportunities arise</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Evaluates complex text to determine legislative, regulatory and workplace documentation
Writing	<ul style="list-style-type: none"> Prepares written reports and workplace documentation that communicate complex information clearly and effectively
Oral Communication	<ul style="list-style-type: none"> Articulates clearly using specific and relevant language suitable to audience to convey requirements, and employs listening and questioning techniques to confirm understanding
Numeracy	<ul style="list-style-type: none"> Interprets numerical information to manage performance information and regulate cash flow
Navigate the world of work	<ul style="list-style-type: none"> Evaluates adherence to organisational policies and procedures and considers own role for its contribution to broader goals of the work environment Appreciates implications of legal and regulatory responsibilities related to own work with specific reference to safety
Get the work done	<ul style="list-style-type: none"> Reflects on how digital systems and tools are used or could be used to achieve work goals, and begins to recognise strategic and operational applications Identifies concepts, principles and features of approaches in use in other contexts and considers how these may suit own situation Develops plans to manage relatively complex, non-routine tasks with an awareness of how they may contribute to longer-term operational and strategic goals Uses each experience to reflect on how variables impact decision outcomes, and to gain insights into what constitutes an effective decision in different contexts

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBSMB420 Evaluate and develop small business operations	BSBSMB405 Monitor and manage small business operations	Updates to title, elements, performance criteria and assessment requirements	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBSMB420 Evaluate and develop small business operations

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Performance Evidence

Evidence of the ability to:

- develop strategies and procedures to successfully manage business operations, including:
 - developing an operational plan
 - identifying risk management procedures
 - developing a quality assurance process
 - developing and implementing performance measures
 - utilising existing, new and emerging digital technologies to optimise business performance
- implement and evaluate strategies and procedures developed, including:
 - controlling stock, expenditure, and work health and safety risks
 - identifying and meeting staffing requirements
 - analysing and correcting business problems
 - reviewing and adjusting the business plan
- record and research business improvements, including the potential to implement new and emerging digital technologies
- make appropriate adjustments to business operations as required.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

The candidate must be able to demonstrate the following knowledge to effectively complete the tasks outlined in the elements and performance criteria of this unit, and to manage tasks and reasonably foreseeable contingencies in the context of the work role.

- Key features of relevant legislation and industry codes of practice
- Key features of methods for implementing operation and revenue control systems

- Key features of methods for evaluating performance and implementing improvements
- Key features of work health and safety (WHS) responsibilities and procedures for managing hazards
- Key features of relevant principles of risk management, including risk assessment
- Key features of quality assurance system principles and methods
- Key features of the role of digital technologies and innovation in modern business
- Key features of systems to manage staff, stock, expenditure, services and customer service
- Key features of required technical or specialist skills relevant to business operations.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the Management and Leadership – Small and Micro Business field of work and include access to:

- business equipment and resources, including business technology
- relevant legislation, regulations, standards and codes
- relevant workplace documentation and resources
- case studies or possible, real situations
- interaction with others.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBSMB421 Manage small business finances

Modification History

Release	Comments
Release 2	This version first released with BSB Business Services Training Package Version 5.0. Version created to clarify intent of unit
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Application

This unit describes the skills and knowledge required to implement and review financial management strategies on a regular basis, including by using new and emerging digital technologies.

It applies to individuals who operate a small business that stands alone, or that is part of a department within a larger organisation. Individuals in this role interpret financial reports and other numerical data to develop financial management strategies.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Management and Leadership – Small and Micro Business

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Implement financial strategy	1.1 Identify financial information requirements and obtain specialist services, as required, to profitably operate the business 1.2 Produce financial budgets or projections, including cash flow

ELEMENT	PERFORMANCE CRITERIA
	<p>estimates, as required for each forward period, and distribute to relevant people in accordance with legal requirements</p> <p>1.3 Develop a plan to negotiate and manage business capital to best enable implementation of the business plan</p> <p>1.4 Develop and maintain strategies to enable adequate financial provision for taxation in accordance with legal requirements</p> <p>1.5 Develop, monitor and maintain client credit policies, including contingencies for debtors in default, to maximise cash flow</p> <p>1.6 Select key performance indicators to enable ongoing monitoring of financial performance in line with the business plan</p> <p>1.7 Record and communicate financial procedures to relevant personnel to facilitate implementation of the business plan</p>
2. Monitor financial performance	<p>2.1 Use available digital technologies to regularly monitor and report on financial performance targets, and analyse data to establish extent to which the financial goals have been met</p> <p>2.2 Monitor marketing and operational strategies for their effects on the financial goals</p> <p>2.3 Calculate and evaluate financial ratios according to own or industry benchmarks</p> <p>2.4 Assess financial plan to determine whether variations or alternative plans are needed, and change as required</p> <p>2.5 Undertake research regularly to identify opportunities to implement new and emerging technologies to boost business profitability in accordance with the business plan</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Evaluates complex text to determine legislative, regulatory and workplace documentation
Writing	<ul style="list-style-type: none"> Prepares written reports and workplace documentation that communicate complex information clearly and effectively
Oral Communication	<ul style="list-style-type: none"> Articulates clearly using specific and relevant language suitable to audience to convey requirements, and employs listening and questioning techniques to confirm understanding

	<ul style="list-style-type: none"> Participates in verbal negotiations using tone and language suitable to audience
Numeracy	<ul style="list-style-type: none"> Interprets numerical information to calculate all relevant financial information
Navigate the world of work	<ul style="list-style-type: none"> Appreciates implications of legal and regulatory responsibilities related to own work
Interact with others	<ul style="list-style-type: none"> Selects appropriate form, channel and mode of communication for a specific purpose relevant to own role
Get the work done	<ul style="list-style-type: none"> Develops plans to manage relatively complex, non-routine tasks with an awareness of how they may contribute to longer-term operational and strategic goals Makes a range of critical and non-critical decisions in relatively complex situations, taking a range of constraints into account Uses formal and informal processes to monitor implementation of ideas and reflect on outcomes

Unit Mapping Information

Supersedes and is equivalent to BSBSMB406 Manage small business finances.

Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBSMB421 Manage small business finances

Modification History

Release	Comments
Release 2	This version first released with BSB Business Services Training Package Version 5.0. Version created to clarify intent of unit
Release 1	This version first released with BSB Business Services Training Package Version 3.0.

Performance Evidence

Evidence of the ability to:

- manage the business according to financial goals, including:
 - adhering to legal requirements
 - produce relevant financial projections, including cash flow estimates
 - develop a plan to negotiate and manage business assets and financial capital
 - defining strategies for debt collection and contingencies for debtors
 - managing cash flow
 - defining key performance indicators
 - communicating with relevant people
 - seeking specialist services where required
- monitor the business against financial plan and make changes as required
- identify opportunities to implement new and emerging digital technologies to support the financial management of the business.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

The candidate must be able to demonstrate the following knowledge to effectively complete the tasks outlined in the elements and performance criteria of this unit, and to manage tasks and reasonably foreseeable contingencies in the context of the work role.

- Key features of benchmarking

- Key features of financial decision-making relevant to the business
- Key features of significant financial indicators
- Key purposes of financial reports
- Key features of balance sheet preparation and interpretation
- Key features of debt collection procedures or strategies
- Key features of profit and loss statement preparation and interpretation
- Key features of stock records and stock control relevant to the business.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the Management and Leadership – Small and Micro Business field of work and include access to:

- business equipment and resources, including business technology
- relevant legislation, regulations, standards and codes
- relevant workplace documentation and resources
- case studies or where possible, real situations
- interaction with others.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBSTR301 Contribute to continuous improvement

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to support continuous improvement in an organisation. Particular emphasis is on actively encouraging teams to participate in the process, monitoring and reporting on specified outcomes and supporting opportunities for further improvements.

The unit applies to individuals who use initiative, and organisational and communication skills to influence the ongoing development of the organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Critical Thinking and Problem Solving – Business Strategy

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Coordinate continuous improvement	1.1 Communicate objectives and continuous improvement processes of the organisation to team members 1.2 Establish roles and skills within the team and identify training needs and performance improvement opportunities 1.3 Encourage team members to participate in decision making processes and exercise initiative
2. Monitor and report specified outcomes	2.1 Monitor team progress using systems and technology of the organisation and identify ways planning and operations could be improved 2.2 Report changes to processes and training to relevant

ELEMENT	PERFORMANCE CRITERIA
	stakeholders 2.3 Develop plans, in collaboration with team members, to apply continuous improvement techniques and processes
3. Support opportunities for further improvement	3.1 Communicate recommendations for improvements in achieving organisational objectives to team members 3.2 Monitor work performance and support team members to identify further opportunities for improvement 3.3 Maintain records, reports and recommendations for improvement within the organisation's systems and processes

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Learning	<ul style="list-style-type: none"> Contributes to ongoing organisational improvement by mentoring others to support continuous improvement processes
Reading	<ul style="list-style-type: none"> Interprets everyday workplace documentation
Writing	<ul style="list-style-type: none"> Uses appropriate vocabulary and grammatical structures to achieve precise meaning in a range of documentation
Oral communication	<ul style="list-style-type: none"> Articulates information in a positive manner using appropriate terminology, tone and style appropriate to context and audience Uses questioning and listening techniques to exchange and clarify information
Enterprise and initiative	<ul style="list-style-type: none"> Identifies the nature and purpose of own role and associated responsibilities and how own role relates to others and contributes to broader work goals Takes responsibility for adherence to organisational processes and systems
Teamwork	<ul style="list-style-type: none"> Shares information and resources, offers assistance and facilitates effective group interactions
Planning and organising	<ul style="list-style-type: none"> Takes responsibility for routine low-impact decisions within familiar situations Evaluates effectiveness of decisions in terms of how well they meet stated goals
Technology	<ul style="list-style-type: none"> Uses a range of digitally based technology and applications to organise, monitor, manage and communicate relevant information effectively

Unit Mapping Information

No equivalent unit. Supersedes but is not equivalent to:

- BSBFLM309 Support continuous improvement systems and processes
- BSBINN201 Contribute to workplace innovation.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBSTR301 Contribute to continuous improvement

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- coordinate, monitor and support the continuous improvement of a work task for a team or work area.

In the course of the above, the candidate must:

- identify options and benefits for improvements
- address barriers to continuous improvement
- use analysis work performance to identify improvement opportunities
- use technology to monitor operational progress
- apply recordkeeping processes.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- principles and techniques relating to:
 - continuous improvement systems and processes
 - benchmarking
 - best practice
- benefits and barriers to continuous improvement
- quality approaches that may be implemented in an organisation
- methods that can be used in continuous improvement
- organisational recording, reporting and recommendation processes.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace documents and resources relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBSTR401 Promote innovation in team environments

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to identify and implement ways of promoting innovation within team environments in the workplace.

The unit applies to individuals who are team participants or team leaders responsible for playing a proactive role in demonstrating innovation in a formal or informal team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Critical Thinking and Problem Solving – Business Strategy

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify opportunities to maximise innovation	1.1 Identify team requirements relating innovation 1.2 Determine team dynamic and own relationship with team 1.3 Assist in evaluating team requirements according to workplace policies and procedures 1.4 Assist in identifying team's current ways of working according to team objectives 1.5 Assist in identifying opportunities in areas for innovation 1.6 Assist in creating processes that allow team members to suggest options for innovation and innovative ideas
2. Organise and agree on effective ways of	2.1 Identify ideas for ways of working better

ELEMENT	PERFORMANCE CRITERIA
working	2.2 Delegate responsibilities across the team, and encourage and reinforce team-based innovation 2.3 Agree and share responsibilities and confirm best use of team strengths and abilities 2.4 Schedule activities that allow time for thinking, challenging and collaboration 2.5 Establish reward and stimulation as an integral part of the team's way of working
3. Support and guide colleagues to promote innovation	3.1 Demonstrate behaviour that supports innovation within team 3.2 Create an environment for staff to proactively share information, knowledge and experiences with other team members 3.3 Dedicate time with team members to challenge and test ideas 3.4 Discuss and explore innovation ideas with other team members
4. Evaluate innovation ideas and promotion	4.1 Identify criteria to review successful innovation in the workplace 4.2 Share innovation successes and examples of successful innovation within own workplace 4.3 Reflect on implemented innovation ideas 4.4 Seek and respond to feedback from relevant stakeholders to generate discussion and identify improvements in promoting innovation 4.5 Discuss with relevant stakeholders the challenges of being innovative 4.6 Document feedback received for improvements in promoting innovation for future activities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Interprets and analyses textual information, from a wide range of sources, to identify information relevant to team activities
Writing	<ul style="list-style-type: none"> Uses clear language and formats appropriate for the audience to highlight and present specific information
Oral communication	<ul style="list-style-type: none"> Actively participates in verbal exchanges of ideas and elicits the views and opinions of team members by listening and questioning Uses clear language to clarify rules and roles relating to team

SKILL	DESCRIPTION
	activities in formal and informal situations
Numeracy	<ul style="list-style-type: none"> Interprets numeric information relevant to team activities
Planning and organising	<ul style="list-style-type: none"> Selects the appropriate form, channel and mode of communication for a specific purpose relevant to own role
Teamwork	<ul style="list-style-type: none"> Uses inclusive techniques to initiate, contribute and promote discussion amongst potentially diverse team members Recognises the importance of establishing and building effective working relationships
Planning and organising	<ul style="list-style-type: none"> Plans, sequences and prioritises tasks for efficient and effective outcomes
Problem solving	<ul style="list-style-type: none"> Uses problem-solving processes to address less predictable problems, and when appropriate, seeking input from others Contributes to continuous improvement of current work practices by applying basic principles of analytical and lateral thinking Reflects on outcomes and further explores own and the team's role in implementing innovation
Initiative and enterprise	<ul style="list-style-type: none"> Understands the nature and purpose of own role and how it affects others in the work context

Unit Mapping Information

No equivalent unit. Supersedes but is not equivalent to BSBINN301 Promote innovation in a team environment.

Links

Companion Volume Implementation Guide is found on VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBSTR401 Promote innovation in team environments

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- on at least two occasions assist a team to create an innovative team environment.

In the course of the above, the candidate must:

- encourage others to contribute to innovation
- identify ways of working
- implement and communicate improvements
- plan and schedule activities
- reflect on activities, feedback and challenges to identify improvement options
- model open and respectful communications
- contribute to the make-up and rules of the team.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- types of innovation and their benefits
- ways of working, including:
 - working hours
 - working spaces
 - agile working
- workplace policies and procedures
- internal and external factors that contribute to a team becoming and remaining innovative, including:
 - team characteristics
 - role of group dynamics and diversity
 - broader environmental factors

- activities that can encourage and hinder innovation in a team, including:
 - allocation of time and activities
 - modelling behaviour
 - rewards and recognition
 - communications
 - feedback.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace equipment and resources relevant to performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBSUS411 Implement and monitor environmentally sustainable work practices

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to analyse and implement improvements to the environmental sustainability of work practices and monitor their effectiveness.

The unit applies to individuals with responsibility for the practices of a specific work area or who lead a work group or team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Business Competence – Sustainability

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish sustainable work contexts	1.1 Identify and assess organisational compliance against environmental legislation, regulations and standards 1.2 Collect data on environmental efficiency in organisational systems and processes 1.3 Analyse data on environmental efficiency and current purchasing strategies and identify areas for improvement 1.4 Consult stakeholders and external data sources on sustainability best practice 1.5 Develop efficiency targets and methods to monitor outcomes
2. Implement sustainable	2.1 Identify and source tools to set efficiency targets

ELEMENT	PERFORMANCE CRITERIA
work practices	2.2 Implement and integrate efficiency targets with other operational activities 2.3 Support team members to identify possible areas for improved resource efficiency in work areas 2.4 Seek and act on feedback from stakeholders on implementation
3. Monitor performance of sustainable work practices	3.1 Assess outcomes using monitoring method developed 3.2 Document and communicate outcomes to key personnel and stakeholders 3.3 Identify changes required to targets and tools from strategies and improvement plans 3.4 Promote successful strategies in development of new efficiency targets

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Analyses numerical information to measure usage and calculates metric measurements, quantities and ratios and financial data using appropriate tools
Oral communication	<ul style="list-style-type: none"> Presents information and seeks advice using structure and language appropriate to audience Participates in discussions using listening and questioning to elicit the views of others and to clarify or confirm understanding
Reading	<ul style="list-style-type: none"> Identifies and analyses texts to determine legislative and regulatory requirements relevant to work area Reviews reported information to evaluate workplace strategies and improvement practices
Writing	<ul style="list-style-type: none"> Documents findings of investigations from written and oral sources according to organisational requirements Provides updates about progress using formats and language appropriate to the audience and context
Initiative and Enterprise	<ul style="list-style-type: none"> Identifies and follows legislative requirements and organisational policies and procedures associated with own role
Teamwork	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with internal and external stakeholders to seek or share information

Skill	Description
	<ul style="list-style-type: none"> Collaborates and consults with a range of stakeholders to achieve shared understanding of individual roles in meeting objectives
Planning and organising	<ul style="list-style-type: none"> Develops plans to manage routine and non-routine tasks for own work group with an awareness of how they contribute to the broader organisation Uses systematic, analytical processes to set environmental targets, gather relevant information, identify and evaluate alternative approaches Evaluates outcomes of decisions to identify opportunities for improvement
Technology	<ul style="list-style-type: none"> Uses the main features and functions of digital tools to complete work tasks and access information

Unit Mapping Information

Supersedes and is equivalent to BSBSUS401 Implement and monitor environmentally sustainable work practices.

Supersedes but is not equivalent to:

- BSBSUS402 Implement an environmental management plan
- BSBSUS403 Measure, monitor and reduce carbon emissions
- BSBSUS404 Assess, implement, monitor and report on waste management
- BSBSUS405 Assess, monitor and reduce water use
- BSBSUS406 Identify and apply sustainability rating tools.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBSUS411 Implement and monitor environmentally sustainable work practices

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- implement and monitor at least three environmentally sustainable work practices.

In the course of the above, the candidate must:

- identify current procedures, practices and compliance requirements in relation to environmental and resource sustainability in the workplace
- engage and consult with relevant stakeholders to develop and implement sustainability improvements, encourage feedback and to report on outcomes
- plan and organise work group activities to:
 - measure current resource usage
 - evaluate alternative solutions to workplace environmental issues
 - resolve workplace sustainability issues and generate ideas for improvements
 - evaluate and implement strategies to improve resource usage
 - comply with environmental requirements
- apply continuous improvement approaches to enhance organisation's sustainability performance
- apply change management techniques to support sustainability performance.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- compliance requirements for the work area with reference to legislation, regulations, codes of practice and workplace procedures that relate to environmental and sustainability issues
- relevant internal and external sources of information for the development of efficiency targets
- benchmarks for environmental and resource sustainability relevant to organisation

- Australian and international standards for corporate social sustainability
- continuous improvement approaches for workplace practices
- resources for monitoring sustainable work practices including:
 - questionnaires and surveys
 - visual calculations
 - supply records and invoices
 - previous internal and external audit documents
- organisational systems and procedures that relate to environmental and resource sustainability improvements, including:
 - supply chain, procurement and costing strategies
 - quality assurance
 - recommendation development and seeking approvals
 - sales strategies and operations.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- environmental sustainability legislation, regulations, standards and codes
- workplace reference materials for environmental sustainability and practices.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBTEC201 Use business software applications

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to select and use software and organise electronic information and data.

The unit applies to those who use a limited range of practical skills with a fundamental knowledge of equipment use and the organisation of data in a defined context, under direct supervision or with limited individual responsibility.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Digital Competence - Technology Use

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select and prepare to use technology	1.1 Identify task purpose, audience, format and presentation requirements, and clarify with relevant personnel, where required 1.2 Select relevant technology and software applications to achieve requirements of the task 1.3 Adjust workspace, furniture and equipment to suit own ergonomic requirements
2. Input and process information or data	2.1 Identify and open application, according to task and organisational requirements 2.2 Enter information or data into application according to organisational requirements

ELEMENT	PERFORMANCE CRITERIA
	2.3 Ensure information or data is checked and amended according to organisational and task requirements 2.4 Format information or data using appropriate application functions according to organisational and task requirements 2.5 Use relevant help functions to overcome simple issues
3. Finalise and store document	3.1 Review and edit final information or data, and prepare for storage in accordance with organisational and task requirements 3.2 Name and store document and exit application

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Recognises and interprets information from familiar sources to determine job role and task requirements
Writing	<ul style="list-style-type: none"> Produces and amends files to meet task and organisational requirements Completes required documentation using organisational formats

Unit Mapping Information

Supersedes and is equivalent to:

- BSBITU211 Produce digital text documents
- BSBITU212 Create and use spreadsheets
- BSBWOR204 Use business technology.

Supersedes but is not equivalent to BSBCUE301 Use multiple information systems.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBTEC201 Use business software applications

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- select and use at least three business software applications on two occasions each.

In the course of the above, the candidate must:

- select and use technology safely and according to organisational requirements
- identify and address faults according to requirements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key features of:
 - organisation's work health and safety requirements relevant to own role
 - organisation's requirements for file naming and storage
 - applications used for organising electronic information and data.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace equipment and resources
- electronic files, information and data
- workplace documentation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBTEC202 Use digital technologies to communicate in a work environment

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to effectively identify, select and use available methods of digital communication in a workplace context. These methods may include email, instant messaging and other similar platforms.

The unit applies to those who use digital technology to communicate with relevant stakeholders. This will be particularly relevant to individuals in teams that work remotely. The individual will use a limited range of practical skills and fundamental knowledge in a defined context under direct supervision or with limited individual responsibility.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Digital Competence - Technology Use

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify purpose and methods of digital communication	1.1 Identify purpose for communication, intended audience and content of proposed communication 1.2 Identify available digital communication applications by accessing relevant sources of information and clarify with relevant personnel, where required 1.3 Select most appropriate application for communication according to available resources and relevant organisational policies and procedures

ELEMENT	PERFORMANCE CRITERIA
2. Implement procedures to send and receive digital communications	2.1 Access application for sending and receiving digital communications according to organisational policies and procedures 2.2 Create outgoing digital communication, check for accuracy and ensure that any required attachments are included according to application requirements and organisational policies and procedures 2.3 Identify urgent, confidential, personal, suspicious or dangerous digital communication and take appropriate action, clarify with relevant stakeholder, where required 2.4 Access and identify most appropriate action in response to incoming digital communications, according to organisational policies and procedures
3. Assist with managing digital communications	3.1 Follow established security levels and filters for incoming digital communications according to organisational policies and procedures 3.2 Assist relevant personnel to create plan for monitoring and maintaining digital communications across multiple applications according to organisational policies and procedures 3.3 Store digital communications and attachments according to organisational policies and procedures 3.4 Archive or permanently delete digital communications according to organisational policies and procedures 3.5 Create methods for communicating electronically with targeted groups of stakeholders as relevant to organisation

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Recognises textual information within different materials and interprets information to determine requirements, as well as confirming accuracy of content
Writing	<ul style="list-style-type: none"> Records key information relevant to requirements and prepares simple correspondence using basic punctuation, text and correct spelling
Oral Communication	<ul style="list-style-type: none"> Obtains information through listening and questioning and uses clear and appropriate language suitable to audience

SKILL	DESCRIPTION
Self-management	<ul style="list-style-type: none">• Recognises and follows explicit and implicit protocols and meets expectations associated with own role
Problem solving	<ul style="list-style-type: none">• Recognises and responds to routine problems in context of own work

Unit Mapping Information

Supersedes and is equivalent to BSBITU213 Use digital technologies to communicate remotely.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBTEC202 Use digital technologies to communicate in a work environment

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- on four occasions send digital communications
- on four occasions receive and process digital communications.

In the course of the above, the candidate must:

- follow organisational and technology provider requirements when communicating electronically across multiple digital applications, including in relation to security of communications
- follow organisational policy and procedures when managing all aspects of digital communication, including by storing, filing, archiving, and deleting inbound communications
- communicate electronically with targeted groups of colleagues, clients or similar as relevant to organisation.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- existing and emerging methods of digital communication, including strengths and limitations
- industry practice relating to digital communication etiquette in a workplace setting
- commercial sensitivities in relation to knowledge management
- organisational policies and procedures relating to the use of digital communication
- security levels and filters for digital communications.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- industry applications/platforms for communicating digitally
- relevant organisational policies and procedures
- relevant workplace documentation and resources.

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBTEC301 Design and produce business documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to design and produce various business documents. It includes selecting and using a range of functions on a variety of computer applications.

The unit applies to those who possess fundamental skills in computer operations. They may exercise discretion and judgement using appropriate theoretical knowledge of document design and production to provide technical advice and support to a team.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Digital Competence - Technology Use

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select and prepare resources	1.1 Select and use technology and software applications to produce required business documents 1.2 Select layout and style of publication according to information and organisational requirements 1.3 Use basic design principles and ensure document design is consistent with organisational requirements 1.4 Discuss and clarify format and style with required stakeholder
2. Design document	2.1 Identify, open and create files according to task and organisational requirements 2.2 Design document and ensure efficient entry of information

ELEMENT	PERFORMANCE CRITERIA
	2.3 Use a range of functions to ensure consistency of design and layout
3. Produce document	3.1 Complete document production according to organisational policies, procedures and requirements 3.2 Check document produced to ensure it meets task requirements for style and layout 3.3 Store document appropriately and save document 3.4 Use help function to overcome basic difficulties with document design and production, where required
4. Finalise document	4.1 Proofread document for readability, accuracy and consistency of language, style and layout prior to final output 4.2 Modify document according to task requirements 4.3 Name and store document in accordance with organisational requirements and exit application 4.4 Present document according to task requirements

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Recognises and interprets textual information from a range of sources to determine and adhere to requirements
Writing	<ul style="list-style-type: none"> Develops documents using required format, accurate spelling and grammar and terminology specific to requirements Organises content to support purposes and audience of material, using clear and logical language
Self-management	<ul style="list-style-type: none"> Recognises and follows explicit and implicit protocols and meets expectations associated with own role

Unit Mapping Information

Supersedes and is equivalent to:

- BSBITU306 Design and produce business documents
- BSBITU313 Design and produce digital text documents.

Supersedes but is not equivalent to:

- BSBINT305 Prepare business documents for the international trade of goods
- BSBITU309 Produce desktop published documents.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBTEC301 Design and produce business documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- design, produce and finalise four different types of business documents, using at least two different software applications.

In the course of the above, the candidate must:

- comply with organisational policies and procedures for producing business documents
- adhere to task requirements when producing documents including:
 - applying basic design principles
 - applying consistent formatting
 - using appropriate styles
 - using correct layouts
 - proofreading
- use required data storage options.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- technology required to produce document
- key functions and features of contemporary computer applications
- organisational policies and procedures
- organisational requirements for document design, including style guide.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace equipment and resources
- relevant software applications
- style guide
- organisational policies and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBTEC401 Design and produce complex text documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to design and develop business documents using complex technical features of word processing software.

The unit applies to those who work in a range of business environments and have skills which may be applied in the provision of administrative support within an enterprise, or by technical experts responsible for producing their own word-processed documents.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Digital Competence - Technology Use

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to produce word processed documents	1.1 Identify ergonomics requirements and organise personal work environment 1.2 Use safe work practices to ensure ergonomic, energy and resource conservation requirements are met 1.3 Identify document purpose, audience and presentation requirements, and clarify with relevant stakeholders, where required 1.4 Identify organisational requirements for text-based business documents to ensure consistency of style and image 1.5 Evaluate complex technical functions of software for usefulness in fulfilling requirements of the task

ELEMENT	PERFORMANCE CRITERIA
2. Design complex documents	<p>2.1 Design document structure and layout according to purpose, audience and information requirements of task</p> <p>2.2 Design document to enhance readability and appearance, and to meet organisational and task requirements for style and layout</p> <p>2.3 Use complex software functions to enable efficient manipulation of information and other material, and ensure consistency of design and layout</p> <p>2.4 Use help function to overcome problems with document design and production</p>
3. Add complex tables and other data	<p>3.1 Insert a table into document, change cells according to information requirements</p> <p>3.2 Format rows and columns, where required</p> <p>3.3 Insert images and other data and format, where required</p>
4. Produce documents	<p>4.1 Develop documents, and achieve required results</p> <p>4.2 Preview, adjust and publish documents according to organisational and task requirements</p> <p>4.3 Name and store documents in accordance with organisational requirements and exit application</p> <p>4.4 Prepare document according to organisational requirements, policies and procedures</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Recognises and interprets textual information from a range of resources to determine and confirm requirements and to assist with document issues
Writing	<ul style="list-style-type: none"> Develops material using required format and incorporating technical functions to meet business needs
Self-management	<ul style="list-style-type: none"> Recognises and follows explicit and implicit protocols and meets expectations associated with own role
Teamwork	<ul style="list-style-type: none"> Collaborates with others to achieve joint outcomes
Planning and organising	<ul style="list-style-type: none"> Applies formal processes when planning complex tasks, producing plans with logically sequenced steps

Unit Mapping Information

Supersedes and is equivalent to BSBITU401 Design and develop complex text documents.

Supersedes but is not equivalent to BSBITU404 Produce complex desktop published documents.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBTEC401 Design and produce complex text documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- prepare design and produce at least four complex text documents.

In the course of the above, the candidate must:

- follow organisational and safe work practices
- adhere to organisational requirements for:
 - producing documents within designated timelines
 - naming and storing documents
- adhere to task requirements when producing complex documents including:
 - using appropriate styles and layout consistently throughout the document
 - using correct formatting and document structure
- use the following features:
 - mail merge
 - document styles
 - references (footnotes/endnotes)
 - Table of Contents
 - paragraph
 - line spacing
 - section breaks
 - alternating headers
 - footers
- resolve issues by referring to user documentation and online help
- apply knowledge of complex operation and functions of industry software applications.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- formatting styles and their effect on formatting, readability and appearance of documents
- organisational requirements for ergonomics, work periods and breaks, and conservation techniques
- purpose and contents of an organisational style guide
- key aspects of organisational policies and procedures.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

- This includes access to:
- organisational policies and procedures
- workplace documentation and resources relevant to performance evidence
- industry software packages and user instructions.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBTWK401 Build and maintain business relationships

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to establish, develop and maintain effective work relationships and networks through relationship building and negotiation skills required by workers. These workers may be within an organisation as well as freelance or contract workers.

The unit applies to individuals with a broad knowledge of networking and negotiation who contribute to creating solutions to unpredictable problems. They may have responsibility for and provide guidance to others.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Social Competence – Teamwork and Relationships

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish business relationships	1.1 Identify business development and networking objectives of the organisation and own role 1.2 Determine networking opportunities according to identified objectives and organisational policies and procedures 1.3 Confirm communication channels for information exchange with business contacts 1.4 Engage with business contacts using written and verbal communication to promote business opportunities
2. Maintain business	2.1 Use communication techniques to establish rapport with

ELEMENT	PERFORMANCE CRITERIA
relationships	business contacts 2.2 Identify barriers to business development opportunities 2.3 Use problem-solving techniques to negotiate solutions to identified situations 2.4 Seek specialist advice in the development of contacts, as required
3. Build and improve business relationships	3.1 Develop strategies to represent and promote organisational interests to contacts 3.2 Participate in formal and informal networks that promote the organisation 3.3 Communicate issues regarding relationships in writing and verbally to organisational personnel 3.4 Seek and respond to feedback from management on the quality of relationships with business contacts

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

SKILL	DESCRIPTION
Learning	<ul style="list-style-type: none"> Seeks opportunities to develop and extend expertise and identify areas for professional improvement
Reading	<ul style="list-style-type: none"> Sources and analyses information to establish networks that consistently promotes business opportunities
Writing	<ul style="list-style-type: none"> Uses appropriate vocabulary, layout and grammatical structure to convey ideas and information
Oral Communication	<ul style="list-style-type: none"> Uses persuasive language and appropriate non-verbal features to achieve mutually acceptable outcomes Uses active listening and questioning techniques to confirm understanding
Initiative and enterprise	<ul style="list-style-type: none"> Identifies and adheres to organisational policies and procedures
Teamwork	<ul style="list-style-type: none"> Looks for ways to establish connections and build genuine understanding with a diverse range of people Cultivates relationships with people with the knowledge, skills and influence to get things done or provide support

SKILL	DESCRIPTION
Planning and organising	<ul style="list-style-type: none">• Takes responsibility for planning, sequencing and implementing tasks required to build and maintain networks• Uses analytical processes to identify problems, gather relevant information, evaluate options and determine solutions

Unit Mapping Information

Supersedes and is equivalent to BSBREL401 Establish networks.

Supersedes but is not equivalent to:

- BSBREL402 Build client relationships and business networks
- BSBREL403 Implement international client relationship strategies
- BSBSMB411 Manage specialist external advisory services.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBTWK401 Build and maintain business relationships

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- communicate with others to build and maintain at least two different business relationships.

In the course of the above, the candidate must:

- promote professional business relationship using written and verbal communication techniques
- identify methods to improve business relationships
- participate in formal and informal networking opportunities that promote the business.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- strategies for establishing and maintaining business relationships
- methods of engaging with business contacts including through participation in professional networks and associations
- relevant networks, organisations, agencies, associations or individuals
- principles and techniques needed to negotiate positive outcomes
- organisational policies, plans and procedures relevant to business relationships
- methods for obtaining feedback on business relationships.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- workplace documentation and resources

- interaction with others.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBWHS302 Apply knowledge of WHS legislation in the workplace

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to understand and comply with work health and safety (WHS) Acts, regulations and codes of practice in the workplace.

This unit applies to individuals who contribute to actions to achieve compliance with WHS legislation as part of their WHS responsibilities, which are in addition to their main duties.

NOTE: The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State/Territory OHS legislative requirements.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Regulation, Licensing and Risk – Work Health and Safety

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine the legal framework for WHS in	1.1 Identify and access current WHS legislation and related documentation relevant to the workplace, occupation and industry

ELEMENT	PERFORMANCE CRITERIA
the workplace	<p>1.2 Apply knowledge of the relationship between WHS Acts, regulations and codes of practice to assist in identifying WHS legislative requirements in the workplace</p> <p>1.3 Identify duty holders</p> <p>1.4 Identify legal obligations and duties for who to consult with regarding training of workers and health and safety representatives</p> <p>1.5 Identify consequences of non-compliance with WHS Acts, regulations, codes of practice, standards and organisational WHS policies, procedures, processes and systems</p>
2. Contribute to activity that reflects WHS legislative requirements	<p>2.1 Contribute to monitoring compliance with legislation</p> <p>2.2 Contribute to ensuring that workplace complies with legislation</p> <p>2.3 Identify and take appropriate action on non-compliance with legislation</p> <p>2.4 Recognise limits of own expertise and legal duties, and access help and advice when required</p>
3. Keep up-to-date with legislation and relevant publications	<p>3.1 Use relevant sources to keep up-to-date with legislation and relevant publications</p> <p>3.2 Communicate information on relevant legislative changes and relevant publications to others</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Learning	3.1	<ul style="list-style-type: none"> Identifies and evaluates information from formal and informal sources to update knowledge
Reading	1.1-1.5, 3.1	<ul style="list-style-type: none"> Interprets a range of textual information to determine regulatory and procedural requirements and necessary actions
Writing	2.3, 3.2	<ul style="list-style-type: none"> Documents WHS information in a sequential manner using required format, correct grammar and industry specific language
Oral	2.1, 2.2, 2.3, 3.2	<ul style="list-style-type: none"> Provides information or advice using language appropriate to audience

communication		<ul style="list-style-type: none"> • Uses listening and questioning to clarify and confirm understanding
Navigate the world of work	2.1- 2.3, 3.1	<ul style="list-style-type: none"> • Follows policies, procedures and legislative requirements relevant to own role • Keeps up to date on changes to legislation or regulations relevant to own role
Interact with others	2.4, 3.2	<ul style="list-style-type: none"> • Selects appropriate communication protocols and conventions to provide or seek information
Get the work done	1.1-1.5, 2.3, 3.1	<ul style="list-style-type: none"> • Plans, sequences and prioritises tasks and activities to support compliance with WHS regulatory requirements • Initiates standard procedures in response to non-compliance issues, requesting assistance if necessary • Uses the main features and functions of digital tools to complete work tasks and access information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBWHS302 Apply knowledge of WHS legislation in the workplace	BSBWHS302A Apply knowledge of WHS legislation in the workplace	<p>Updated to meet Standards for Training Packages</p> <p>Minor edits to clarify intent of performance criteria</p>	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBWHS302 Apply knowledge of WHS legislation in the workplace

Modification History

Release	Comments
Version 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- identify and apply work health and safety (WHS) legislative requirements applicable to the workplace, occupation and industry, including keeping up to date with legislation and relevant publications
- identify and act on non-compliances with WHS legislation
- identify duty holders
- communicate WHS information to others
- refer issues of non-compliance to responsible persons or authorities and seek advice from appropriate sources.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- explain the WHS legislative duties of self and others including limits on own expertise
- outline the key organisational WHS policies, procedures, processes and systems
- outline the key requirements in relevant commonwealth and state or territory WHS Acts, regulations, codes of practice, standards and guidance material, and other relevant publications
- identify obligations and duties for consultation and who must be consulted
- identify people who could be accessed for help
- identify the consequences of non-compliance
- explain ways to get information about compliance with legislation.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced by individuals carrying out work health and safety duties in the workplace and include access to:

- organisational policies, standard operating procedures, procedures and plans with information on compliance requirements
- relevant Acts, regulations, codes of practice, licensing requirements and standards
- guidance materials and alerts issued by the relevant WHS regulator
- relevant WHS data files
- appropriate office equipment and resources.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBWHS513 Lead WHS risk management

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to lead the management of work health and safety (WHS) risks in an organisation. The unit includes facilitating the identification of hazards and potential hazards, leading the assessment of associated risks, selecting and implementing suitable risk controls, and evaluating the overall effectiveness of the organisational WHS risk management process. It involves communicating with stakeholders throughout the process.

The unit applies to those in an organisation who provide specialised knowledge and guidance to a range of personnel when leading the management of WHS risks.

NOTES

1. The terms ‘occupational health and safety’ (OHS) and ‘work health and safety’ (WHS) are equivalent, and generally either can be used in the workplace. In jurisdictions where *model WHS laws* have not been implemented, registered training organisations (RTOs) are advised to contextualise this unit of competency by referring to existing WHS legislative requirements.
2. The *model WHS laws* include the model WHS Act, model WHS Regulations and model WHS Codes of Practice. See Safe Work Australia for further information.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Regulation, Licensing and Risk – Work Health and Safety

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
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ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Facilitate identification of WHS risk management requirements	1.1 Identify and review internal and external sources of WHS information and data that apply to risk management processes 1.2 Identify legislative requirements for WHS risk management 1.3 Identify duty holders, individuals and/or parties to consult about and participate in risk management processes, according to organisational and legislative requirements 1.4 Identify and communicate roles and responsibilities of individuals and/or parties that impact on risk management 1.5 Identify organisation-specific factors that will impact on hazard identification, risk assessment and risk controls 1.6 Confirm that risk management scope is clearly defined according to organisational policies and procedures
2. Lead risk assessment	2.1 Lead hazard identification process according to organisational policies and procedures 2.2 Identify and document risk factors as they apply to identified hazards according to organisational policies and procedures 2.3 Apply knowledge of WHS laws, workplace WHS information and data, and identified hazards and risk factors to analyse and assess risk 2.4 Document risk assessment according to organisational policies and procedures, and legislative requirements 2.5 Communicate outcomes of risk assessment to required personnel according to organisational and legislative requirements
3. Lead risk control	3.1 Identify organisational risk control policies and procedures appropriate to identified hazards 3.2 Select suitable risk controls according to assessed level of risk, organisational WHS hazard and risk control policies and procedures, and WHS laws 3.3 Plan to implement selected risk controls according to organisation's WHS management system (WHSMS) and WHS information system (WHISIS) 3.4 Implement selected risk controls according to organisational policies and procedures

ELEMENTS	PERFORMANCE CRITERIA
	3.5 Document and communicate selected risk controls to required personnel, according to organisational and legislative requirements
4. Evaluate effectiveness of WHS risk management process	<p>4.1 Establish nature and scope of evaluation process and key performance indicators</p> <p>4.2 Review effectiveness of implemented risk management process according to organisation's WHSMS and legislative requirements</p> <p>4.3 Modify risk management process as required in response to evaluation</p> <p>4.4 Document risk management process according to WHSIS requirements</p> <p>4.5 Communicate evaluation findings according to organisational requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Organises, analyses and integrates information from a range of sources
Writing	<ul style="list-style-type: none"> Documents results of investigations using clear and comprehensible language and layout
Oral Communication	<ul style="list-style-type: none"> Uses listening and questioning techniques to clarify understanding of others' views Presents information with varying level of technical vocabulary to suit audience
Numeracy	<ul style="list-style-type: none"> Collates, interprets and compares mathematical and statistical information relevant to requirements
Navigate	<ul style="list-style-type: none"> Considers legal and regulatory

Skill	Description
the world of work	<p>responsibilities when implementing, monitoring or reviewing risk-management processes</p> <ul style="list-style-type: none"> Leads effective consultation and participation during all stages of WHS risk-management process
Interact with others	<ul style="list-style-type: none"> Identifies and uses appropriate conventions and protocols when communicating with others Plays a lead role in situations requiring effective collaboration skills, demonstrating the ability to guide discussions and outcomes
Get the work done	<ul style="list-style-type: none"> Develops plans or processes to manage WHS risk management tasks, with an awareness of how they contribute to operational and strategic goals Determines whether, and how, others should be involved, using consultative or collaborative processes as an integral part of the decision-making process Applies problem-solving processes to determine solutions to WHS risk management issues Uses analytical and lateral thinking to review practices and suggest improvements Uses a range of digitally-based technology and applications to access, organise and share relevant information in effective ways

Unit Mapping Information

Supersedes and is equivalent to BSBWHS503 Contribute to the systematic management of WHS risk.

Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBWHS513 Lead WHS risk management

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, and to:

- plan, implement and evaluate a systematic process for managing work health and safety (WHS) risk in a work area.

During the above, the candidate must:

- identify, interpret and apply information from a range of sources, including organisational and legislative requirements
- review WHS risk-management process according to established scope and key performance indicators
- consult effectively with required stakeholders using appropriate interpersonal communication skills.
-

Knowledge Evidence

The candidate must demonstrate the knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit. This includes knowledge of:

- commonwealth and state/territory WHS laws relating to WHS risk management, including WHS Acts, regulations, codes of practice and standards
- WHS information and data that applies to WHS risk-management process, including:
 - organisational and duty holder legal requirements
 - organisational policies and procedures relating to identifying hazards, assessing risks and implementing risk controls
 - key components of the work health and safety management system (WHSMS)
- internal and external sources of WHS information and data, and procedures for accessing them

- organisational behaviour and culture in relation to WHS risk management activities and their impact on WHS and the work team, including organisation's risk appetite
- key components of effective consultation and participation strategies
- tools and techniques to:
 - identify health and safety hazards
 - assess risks, taking into account nature and impact of risk, and likelihood of risk arising
 - identify and select suitable risk controls
 - facilitate effective communication and consultation processes, and identify key personnel related to communication
- application and limitations of techniques and tools for identifying hazards, and analysing and assessing risks
- hierarchy of control measures:
 - its use in establishing level of risk
 - factors limiting effectiveness of types of controls
 - role and limitations of procedural controls
 - use of personal protective equipment
- other functional areas in the organisation that impact on the management of WHS-related risks
- impact of workforce characteristics and composition on WHS risk and its management, including:
 - cultural background/diversity
 - gender
 - labour market changes
 - levels of language, literacy and numeracy skills in the workforce
 - workforce structure and organisation, including part-time, casual and contract workers, shift rosters and geographical location
 - workers with specific support needs and limitations
 - workplace cultural attitudes towards alcohol and other drug use
- principles of decision-making.
-

Assessment Conditions

Assessment must comply with WHS laws, legal responsibilities and duty of care required for this unit. It must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities undertaken by individuals carrying out WHS duties in the workplace, and must include access to:

- workplace equipment and resources
- WHS laws, and organisational policies and procedures required to demonstrate the performance evidence
- case studies and, where possible, real situations
- opportunities for interaction with others.

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBWHS518 Manage WHS hazards associated with maintenance and use of plant

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to effectively manage work health and safety (WHS) hazards and to comply with WHS laws, as they apply to the management or control of items of plant being maintained and used in a workplace. It requires strong communication skills and systematic approaches to identify and resolve WHS issues associated with plant.

The unit applies to those who provide guidance to others in the workplace in managing WHS hazards associated with plant. The unit does not apply to the design, manufacture, supply, installation, construction or commissioning of plant or issuing of licences associated with plant.

NOTES

1. The terms ‘occupational health and safety’ (OHS) and ‘work health and safety’ (WHS) are equivalent, and generally either can be used in the workplace. In jurisdictions where *model WHS laws* have not been implemented, registered training organisations (RTOs) are advised to contextualise this unit of competency by referring to existing WHS legislative requirements.

2. The *model WHS laws* include the model WHS Act, model WHS Regulations and model WHS Codes of Practice. See Safe Work Australia for further information.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Regulation, Licensing and Risk – Work Health and Safety

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify WHS hazards associated with plant	1.1 Access sources of WHS information, data and advice relating to items of workplace plant 1.2 Inspect items of plant and identify how they are to be used, according to organisational policies and procedures 1.3 Determine WHS hazards arising from plant use, condition, suitability, location and potential abnormal situations 1.4 Consult with others to confirm hazard identification 1.5 Record and report identified hazards according to organisational policies and procedures
2. Assess WHS risks associated with plant	2.1 Access sources of information, data and advice to assist with assessing WHS risks associated with identified plant hazards 2.2 Consult with others to inform WHS risk assessment according to organisational policies and procedures 2.3 Record and report on WHS risk assessment according to WHS laws and organisational policies and procedures
3. Control WHS risks associated with maintenance and use of plant	3.1 Access sources of information, data and advice to inform development of risk controls for safe maintenance and use of plant 3.2 Develop risk controls to be implemented according to the hierarchy of control measures, WHS legislative requirements and organisational policies and procedures 3.3 Consult with, and report to, required internal and specialist personnel in relation to risk controls to be implemented 3.4 Communicate rights, obligations and duties of workplace personnel in relation to identified hazards and risk controls associated with plant 3.5 Monitor effectiveness of implemented risk controls 3.6 Record and report on implemented risk controls according to WHS legislative requirements and organisational policies and procedures
4. Advise on registration,	4.1 Identify types of plant requiring registration and tasks

ELEMENTS	PERFORMANCE CRITERIA
licensing and certification issues associated with plant	<p>requiring operator licensing and/or certification according to WHS legislative requirements</p> <p>4.2 Document registration, licensing and certification requirements according to organisational procedures</p> <p>4.3 Monitor and report compliance with WHS regulatory requirements for registration, licensing and certification according to organisational procedures</p> <p>4.4 Communicate registration, licensing and certification requirements to required personnel</p>
5. Manage training requirements for plant maintenance and operation	<p>5.1 Identify WHS-related training needs associated with plant items, and applicable registration, licensing and certification requirements</p> <p>5.2 Identify skill gaps of those maintaining and using plant, and determine and communicate their associated training needs</p> <p>5.3 Ensure training is undertaken and completed prior to commencing work with new plant and/or new system of work</p> <p>5.4 Maintain training records according to WHS requirements and organisational policies and procedures</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Analyses a wide range of WHS-related technical and non-technical information and data to determine actions, and adheres to requirements associated with plant maintenance and use
Writing	<ul style="list-style-type: none"> Uses appropriate formats, vocabulary and grammatical structures to record, report and present information associated with plant
Oral	<ul style="list-style-type: none"> Explains information clearly and

Skill	Description
Communication	involves others in collaborative discussions using listening and questioning techniques
Numeracy	<ul style="list-style-type: none"> Collates, interprets and compares mathematical and statistical information
Navigate the world of work	<ul style="list-style-type: none"> Follows WHS policies, procedures and legislative requirements, and identifies organisational implications of new WHS laws Modifies or develops systems of work to comply with legislative and organisational requirements
Interact with others	<ul style="list-style-type: none"> Establishes and uses appropriate conventions and protocols when communicating with others regarding management of WHS hazards associated with plant
Get the work done	<ul style="list-style-type: none"> Develops and applies organisational processes to aid compliance with WHS legislative requirements Sequences and schedules own activities, monitors implementation, records progress and manages relevant communication Systematically gathers and analyses information and evaluates options in order to make informed decisions Evaluates effectiveness of systems and processes to inform decisions on how to implement risk control improvements Fully utilises features of digital tools to complete tasks

Unit Mapping Information

No equivalent unit.

Supersedes and is equivalent to BSBWHS508 Manage WHS hazards associated with plant.

Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBWHS518 Manage WHS hazards associated with maintenance and use of plant

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, and to:

- develop and implement work health and safety (WHS) related risk controls for at least two different items of plant according to the hierarchy of control measures, WHS legislative requirements and organisational policies and procedures
- identify and manage licensing and training requirements associated with at least two different items of plant.

During the above, the candidate must:

- manage effective identification of hazards
- communicate, according to established protocols, to:
 - advise relevant personnel of their rights, obligations, and duties in relation to hazards and risk controls associated with plant
 - seek specialist advice as required.
-

Knowledge Evidence

The candidate must demonstrate the knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit. This includes knowledge of:

- key features of WHS Acts, regulations, codes of practice and other instruments issued by WHS regulators relating to managing WHS hazards associated with plant, including role and duty of persons conducting a business or undertaking (PCBUs)
- organisational WHS policies, procedures, processes and systems relating to hazard management process, including:
 - identifying and accessing internal and external sources of WHS information and data
 - inspecting plant and its use
 - consulting with internal and external personnel

- recording and reporting identified WHS hazards
- recording and reporting risk assessment outcomes and risk controls
- developing risk controls and monitoring the effectiveness of their implementation
- documenting registration, licensing and certification requirements
- monitoring and reporting compliance with regulatory requirements for registration, licensing and certification
- basic principles of incident causation and injury processes relating to plant
- differences between a hazard and a risk
- factors that impact on risk
- hierarchy of control measures and its use in choosing between different risk controls
- strategies for identifying risk controls and monitoring their effectiveness, including:
 - workplace inspections
 - robotic and technological processes, and their potential risks and limitations
 - review of adequacy of plant operating procedures
- high-risk work licences required for specific plant
- methods for providing evidence of compliance with WHS laws
- plant-specific knowledge:
 - basic physics of fluids under pressure and pressure vessels, and behaviour of pressurised fluid when pressure is released
 - hazards associated with plant
 - systems of work associated with plant
 - industry practices related to permit to work, and isolation and tag-out systems
 - registration requirements of plant, licensing and certification competencies
- risk controls relating to operation of plant, including:
 - strategies for guarding moving parts in machinery
 - access and egress
 - dangerous parts
 - emergency stops and warning devices
- WHS-related training requirements for plant operators relating to:
 - items of new plant
 - new or changed systems of work associated with plant.
-

Assessment Conditions

Assessment must comply with WHS laws, legal responsibilities and duty of care required for this unit. It must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities undertaken by individuals carrying out WHS duties in the workplace, and must include access to:

- WHS laws, and organisational policies and procedures required to demonstrate the performance evidence
- sources of information, data and advice in relation to plant hazards

- workplace equipment and resources, including manufacturer manuals, specifications, and operational information and data
- case studies and, where possible, real situations
- opportunities for interaction with others.

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBWOR204 Use business technology

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to select and use computer software and organise electronic information and data.

It applies to individuals who apply a limited range of practical skills with a fundamental knowledge of equipment use and the organisation of data in a defined context, under direct supervision or with limited individual responsibility.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Industry Capability – Workplace Effectiveness

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Select and use technology	1.1 Select appropriate technology and software applications to achieve requirements of the task 1.2 Adjust workspace, furniture and equipment to suit user's ergonomic requirements 1.3 Use technology according to organisational requirements and in a way that promotes a safe work environment
2. Process and organise	2.1 Identify, open, generate or amend files and records according

ELEMENT	PERFORMANCE CRITERIA
data	<p>to task and organisational requirements</p> <p>2.2 Operate input devices according to organisational requirements</p> <p>2.3 Store data appropriately and exit applications without damage to or loss of, data</p> <p>2.4 Use manuals, training booklets and/or online help or helpdesks to overcome basic difficulties with applications</p>
3. Maintain technology	<p>3.1 Identify and replace used technology consumables in accordance with manufacturer's instructions and organisational requirements</p> <p>3.2 Carry out and/or arrange routine maintenance to ensure equipment is maintained in accordance with manufacturer's instructions and organisational requirements</p> <p>3.3 Identify equipment faults accurately and take action in accordance with manufacturer's instructions or report fault to designated person</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.3, 2.1, 2.2, 2.4, 3.1-3.3	<ul style="list-style-type: none"> Recognises and interprets information from familiar sources to determine job role and task requirements
Writing	2.1, 2.3, 3.2, 3.3	<ul style="list-style-type: none"> Produces and amends files to meet task and organisational requirements Completes required documentation using organisational formats
Oral Communication	3.3	<ul style="list-style-type: none"> Uses specific and relevant language to refer faults to others
Navigate the world of work	1.2, 1.3, 2.1, 2.2, 3.1-3.3	<ul style="list-style-type: none"> Recognises and follows legislative requirements and organisational policies and procedures associated with own role
Get the work done	1.1, 1.3, 2.1-2.4, 3.1-3.3	<ul style="list-style-type: none"> Uses business technologies and systems safely, when gathering, storing, accessing and sharing information Understands purposes, specific functions and key

		features of common digital systems and business tools <ul style="list-style-type: none"> Operates digital systems and business tools effectively to complete routine tasks using some basic troubleshooting strategies as required
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBWOR204 Use business technology	BSBWOR204A Use business technology	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBWOR204 Use business technology

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- select and use technology safely and according to organisational requirements
- access, retrieve and store required data
- demonstrate basic maintenance on a range of equipment using manuals or help-files
- identify and address faults according to requirements.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline the organisation's work health and safety requirements
- outline the organisation's requirements for file naming and storage
- explain why regular back-ups of data are done
- list 'routine maintenance' tasks
- summarise the procedure for addressing equipment faults.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the industry capability – workplace effectiveness field of work and include access to:

- office equipment and resources
- electronic files and data
- workplace documentation and equipment manuals
- case studies and, where possible, real situations

- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBWOR501 Manage personal work priorities and professional development

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to create systems and process to organise information and prioritise tasks.

It applies to individuals working in managerial positions who have excellent organisational skills. The work ethic of individuals in this role has a significant impact on the work culture and patterns of behaviour of others as managers at this level are role models in their work environment.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Industry Capability – Workplace Effectiveness

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish personal work goals	1.1 Serve as a positive role model in the workplace through personal work planning 1.2 Ensure personal work goals, plans and activities reflect the organisation's plans, and own responsibilities and accountabilities 1.3 Measure and maintain personal performance in varying work conditions, work contexts and when contingencies occur

ELEMENT	PERFORMANCE CRITERIA
2. Set and meet own work priorities	<p>2.1 Take initiative to prioritise and facilitate competing demands to achieve personal, team and organisational goals and objectives</p> <p>2.2 Use technology efficiently and effectively to manage work priorities and commitments</p> <p>2.3 Maintain appropriate work-life balance, and ensure stress is effectively managed and health is attended to</p>
3. Develop and maintain professional competence	<p>3.1 Assess personal knowledge and skills against competency standards to determine development needs, priorities and plans</p> <p>3.2 Seek feedback from employees, clients and colleagues and use this feedback to identify and develop ways to improve competence</p> <p>3.3 Identify, evaluate, select and use development opportunities suitable to personal learning style/s to develop competence</p> <p>3.4 Participate in networks to enhance personal knowledge, skills and work relationships</p> <p>3.5 Identify and develop new skills to achieve and maintain a competitive edge</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Learning	3.1, 3.2, 3.3, 3.4, 3.5	<ul style="list-style-type: none"> Investigates and uses a range of strategies to develop personal competence
Reading	1.2, 3.1, 3.2	<ul style="list-style-type: none"> Analyses and interprets textual information from organisational policies and practices or feedback to inform personal development planning
Writing	3.2	<ul style="list-style-type: none"> Uses feedback to prepare reports that summarise ways to improve competence
Oral Communication	3.2	<ul style="list-style-type: none"> Uses active listening and questioning to seek and receive feedback
Navigate the world of work	1.2, 2.1	<ul style="list-style-type: none"> Understands how own role contributes to broader organisational goals Considers organisational protocols when planning own career development

Interact with others	1.1, 3.2, 3.4	<ul style="list-style-type: none"> Selects and uses appropriate conventions and protocols when communicating with diverse stakeholders Uses interpersonal skills to establish and build positive working relationships with others
Get the work done	1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1	<ul style="list-style-type: none"> Plans and prioritises tasks in order to meet deadlines, manage role responsibilities and to manage own personal welfare Identifies and uses appropriate technology to improve work efficiency

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
BSBWOR501 Manage personal work priorities and professional development	BSBWOR501B Manage personal work priorities and professional development	<p>Updated to meet Standards for Training Packages</p> <p>Minor edits to clarify Performance Criteria</p>	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBWOR501 Manage personal work priorities and professional development

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- use business technology to create and use systems and processes to organise and prioritise tasks and commitments
- measure and maintain personal work performance including assessing competency against competency standards and seeking feedback
- maintain an appropriate work-life balance to manage personal health and stress
- participate in networks
- develop a personal development plan which includes career objectives and an action plan
- develop new skills.

Note: if a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- explain principles and techniques involved in the management and organisation of:
 - performance measurement
 - personal behaviour, self-awareness and personality traits identification
 - a personal development plan
 - personal goal setting
 - time
- discuss management development opportunities and options for self
- describe methods for achieving a healthy work-life balance
- outline organisation's policies, plans and procedures
- explain types of learning style/s and how they relate to the individual
- describe types of work methods and practices that can improve personal performance.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the industry capability - workplace effectiveness field of work and include access to:

- workplace equipment and resources
- case studies and, where possible, real situations
- interaction with others.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBWRT311 Write simple documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to plan, draft and finalise a simple document.

The unit applies to individuals who administer a broad range of competencies in various work contexts and may exercise some discretion and judgement to produce a range of simple documents.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Social Competence – Written Communication

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan simple document	1.1 Determine audience, purpose and requirements for document according to organisation policies and procedures 1.2 Determine required format, style and structure for document 1.3 Establish method of communication 1.4 Establish key points for inclusion
2. Draft simple document	2.1 Develop draft document to communicate key points according to purpose and requirements for document 2.2 Check that draft meets document purposes and requirements 2.3 Obtain and include additional required information
3. Finalise simple	3.1 Ensure draft is proofread, where appropriate, by supervisor or

ELEMENT	PERFORMANCE CRITERIA
document	colleague 3.2 Make and proofread necessary changes

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Interprets a variety of text to determine and confirm task requirements Proofreads document checking for grammar, spelling, structure, and suitability of style and format for audience
Oral Communication	<ul style="list-style-type: none"> Uses listening and questioning skills to seek additional information or confirmation of task completion
Self-management	<ul style="list-style-type: none"> Follows accepted communication practices and protocols when seeking information or feedback from others Takes responsibility for planning, sequencing and prioritising tasks to achieve required outcomes
Technology	<ul style="list-style-type: none"> Uses the main features and functions of digital tools to complete work tasks

Unit Mapping Information

Supersedes and is equivalent to BSBWRT301 Write simple documents.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBWRT311 Write simple documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- plan, draft and finalise three different simple documents that accurately convey the required basic information in a format suitable for the intended audience and purpose according to organisational policies and procedures for document production.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- processes for checking:
 - basic readability, grammar, spelling, sentence and paragraph sequencing and structure, and punctuation
 - suitability of document for audience, purpose, and format
- organisational policies and procedures relating to written communication
- written communication methods, including:
 - general emails
 - procedures
 - business letters
 - meeting agendas
- different formats, styles and structures for documents.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- office equipment and resources to assist in the production of documents

- organisational policies and procedures
- examples of documents to review.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

BSBWRT411 Write complex documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to plan, draft and finalise complex documents.

The unit applies to individuals who work in a range of business environments and are skilled in the creation of documents that are more complex than basic correspondence, memos and/or forms and that require review and analysis of a range of information sources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Social Competence – Written Communication

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan complex document	1.1 Determine audience, purpose and requirements of document according to organisation policies and procedures 1.2 Determine required format, style and structure for document 1.3 Establish method of communication 1.4 Develop content overview of document 1.5 Determine categories and logical sequence of information according to proposed structure, content and document requirements
2. Draft complex document	2.1 Confirm information is cohesive and satisfies document purpose and requirements 2.2 Develop draft document to communicate data, information and

ELEMENT	PERFORMANCE CRITERIA
	knowledge according to organisational policies and procedures 2.3 Identify gaps in required data, information and knowledge, and collect additional material from relevant sources, if required 2.4 Draft text according to document purposes and requirements
3. Finalise complex document	3.1 Review draft text and confirm document purpose and requirements are met 3.2 Check grammar, spelling and style for accuracy and punctuation 3.3 Confirm draft text is approved by relevant organisation personnel 3.4 Review and incorporate any amendments in final copy 3.5 Apply basic design elements for document appropriate to audience and purpose 3.6 Check document and confirm all requirements are met

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Interprets a variety of text to determine and confirm task requirements Proofreads document checking for grammar, spelling, structure, and suitability of style and format for audience
Oral Communication	<ul style="list-style-type: none"> Uses listening and questioning skills to seek additional information or confirmation of task completion
Self-management	<ul style="list-style-type: none"> Follows accepted communication practices and protocols when seeking information or feedback from others Takes responsibility for planning, sequencing and prioritising tasks to achieve required outcomes
Technology	<ul style="list-style-type: none"> Uses the main features and functions of digital tools to complete work tasks

Unit Mapping Information

Supersedes and is equivalent to BSBWRT401 Write complex documents.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBWRT411 Write complex documents

Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- plan, draft and finalise three different complex documents that convey the required information in a format suitable for the intended audience and purpose according to organisational policies and procedures for document production.

In the course of the above, the candidate must:

- review and analyse a range of information sources
- use business technology to apply formatting and incorporate graphics
- apply organisation style guide/house style.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- organisation style guide/house style
- format and its impact on readability, cohesion and appearance of document
- categories and logical sequences of information
- rules and conventions for written English
- key features of word processing software
- key features of written communication methods, including:
 - general emails
 - procedures
 - business letters
 - meeting agendas
- organisational policies and procedures relating to written communication
- process for checking:
 - suitability of document for audience, purpose, format, and structure

- grammar, spelling and style for accuracy and punctuation
- key text elements including basic design elements.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- office equipment and resources
- organisational policies and procedures
- organisational style guides.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

CHCCDE002 Develop and implement community programs

Modification History

Release	Comments
Release 1	<p>This version was released in <i>CHC Community Services Training Package release 2.0</i> and meets the requirements of the 2012 Standards for Training Packages.</p> <p>Significant changes to performance criteria</p> <p>New evidence requirements for assessment including volume and frequency requirements</p>

Application

This unit describes the skills and knowledge required to develop community programs to ensure maximum participation.

This unit applies to workers in both health and community sectors and/or a community development work context. Workers at this level will be part of a professional team and have the responsibility of supervision of others.

The skills in this unit must be applied in accordance with Commonwealth and State/Territory legislation, Australian/New Zealand standards and industry codes of practice.

Elements and Performance Criteria

Elements define the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|-------------------------------|--|
| 1. Develop program parameters | <p>1.1 Analyse issues of wide community concern to develop an agency position and to ascertain the priority for new program</p> <p>1.2 Undertake appropriate work to ascertain support, capacity for a coordinated effort and factors which will effect provision of services</p> <p>1.3 Undertake research to identify key people, priorities to be addressed, possible strategies and options for action</p> <p>1.4 Identify measures and evidence of program plan</p> |
|-------------------------------|--|

success and possible risks

1.5 Develop appropriate plans via participation of relevant communities and stakeholders

2. Design programs with the community

2.1 Develop a program plan which reflects identified parameters and incorporates an evaluation of a range of program options within organisation policy

2.2 Engage stakeholder participation to determine preferred program options particularly in areas of high priority or with targeted communities

2.3 Seek help from participating agencies for implementation arrangements

2.4 Develop and implement promotion and marketing strategies

2.5 Develop and maintain systems and resources for administrative support of community programs

2.6 Identify and seek resources

3. Implement programs

3.1 Conduct and evaluate pilots and make adjustments to ensure the program achieves its objectives

3.2 Implement and monitor in accordance to the plan

4. Evaluate programs

4.1 Evaluate program design and outcomes according to criteria and specifications identified in the program plan

4.2 Use results of evaluation for revision and ongoing development

4.3 Involve interested and/or relevant people in program evaluation

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

No equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e0c25cc-3d9d-4b43-80d3-bd22cc4f1e53>

Assessment Requirements for CHCCDE002 Develop and implement community programs

Modification History

Release	Comments
Release 1	<p>This version was released in <i>CHC Community Services Training Package release 2.0</i> and meets the requirements of the 2012 Standards for Training Packages.</p> <p>Significant changes to performance criteria</p> <p>New evidence requirements for assessment including volume and frequency requirements</p>

Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the job role. There must be demonstrated evidence that the candidate has:

- developed, implemented and evaluated at least 1 community program

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge required to effectively complete tasks outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:

- relevant legislation and public policies
- social, community and youth issues
- contemporary economics and politics and their impact on community development
- traditional community development approaches:
 - needs-based
 - gap-based
- principles and practices of contemporary community development approaches and techniques for mobilisation in relation to:
 - asset-based (ABCD)
 - rights-based
- social movements
- sociology fundamentals, including:
 - commonly accepted social theories
 - social inequality

- sociology of class
- sociology of gender, including impacts of culture on gender dynamics

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions. Where simulation is used, it must reflect real working conditions by modelling industry operating conditions and contingencies, as well as, using suitable facilities, equipment and resources.

Assessors must satisfy the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e0c25cc-3d9d-4b43-80d3-bd22cc4f1e53>

CHCCDE010 Develop and lead community engagement strategies to enhance participation

Modification History

Release	Comments
Release 1	<p>This version was released in <i>CHC Community Services Training Package release 2.0</i> and meets the requirements of the 2012 Standards for Training Packages.</p> <p>Significant changes to performance criteria</p> <p>New evidence requirements for assessment including volume and frequency requirements</p> <p>Significant changes to knowledge evidence</p>

Application

This unit describes the skills and knowledge required to apply advanced community engagement skills to increase participation in the community development environment.

The high level engagement skills described in this unit apply to a range of workplace contexts involving skill development, application and evaluation of engagement strategies to ensure effective community participation in relevant projects and activities.

This unit applies to workers in both health and community sectors and/or a community development work context. Workers at this level will be part of a professional team and have the responsibility of supervision of others.

The skills in this unit must be applied in accordance with Commonwealth and State/Territory legislation, Australian/New Zealand standards and industry codes of practice.

Elements and Performance Criteria

ELEMENT

Elements define the essential outcomes

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

ELEMENT

PERFORMANCE CRITERIA

1. Develop an effective community engagement plan

- 1.1 Document the purpose and scope of the community engagement
- 1.2 Identify and document relevant stakeholders and individuals who should be involved in the engagement process
- 1.3 Analyse and determine the level of impact that stakeholders have in any decisions and the level of public participation required
- 1.4 Specify the engagement tools and methods to be used within specified timeframes and considering any specific barriers to participation
- 1.5 Identify and document evaluation mechanisms
- 1.6 Develop a budget proposal
- 1.7 Present the completed plan to management and the community for revision and endorsement

2. Implement the engagement plan

- 2.1 Organise the participation activity according to the plan
- 2.2 Proactively identify and address the specific priorities of individuals who are disengaged
- 2.3 Promote participation to the relevant stakeholders using appropriate communication methods
- 2.4 Undertake the engagement activity using relevant tools and techniques
- 2.5 Encourage all group members to contribute their ideas constructively and respectfully during group discussions
- 2.6 Routinely use strategies that enhance effective group interactions and communication
- 2.7 Respond to questions in a manner consistent with organisation standards
- 2.8 Document the participation feedback from participants
- 2.9 Conduct an evaluation of the participation activities

3. Evaluate and review the outcomes and effectiveness of

- 3.1 Review the engagement activities in comparison with the plan objectives

ELEMENT

the participation plan

PERFORMANCE CRITERIA

3.2 Document the outcomes and evaluation feedback

3.3 Report this information to relevant stakeholders

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

No equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e0c25cc-3d9d-4b43-80d3-bd22cc4f1e53>

Assessment Requirements for CHCCDE010 Develop and lead community engagement strategies to enhance participation

Modification History

Release	Comments
Release 1	<p>This version was released in <i>CHC Community Services Training Package release 2.0</i> and meets the requirements of the 2012 Standards for Training Packages.</p> <p>Significant changes to performance criteria</p> <p>New evidence requirements for assessment including volume and frequency requirements</p> <p>Significant changes to knowledge evidence</p>

Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the job role. There must be demonstrated evidence that the candidate has:

- developed 1 engagement plan
- facilitated at least 3 group discussions, including:
 - used a range of group facilitation strategies to enhance interactions between group members and to gather relevant feedback
 - provided feedback to the group regarding outcomes

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:

- communication styles and techniques
- group facilitation processes and mechanisms for group support
- principles of effective community engagement and participation
- traditional and contemporary models of engagement
- community engagement techniques including online tools and use of social media
- methods of research
- sustainability
- empowerment; community control and hegemony

- capacity building
- asset based community development
- methods of engagement and participation
- evaluation and review
- building and maintaining partnerships
- social capital
- reporting mechanisms
- reengagement strategies for individuals who are disengaged

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions. Where simulation is used, it must reflect real working conditions by modelling industry operating conditions and contingencies, as well as, using suitable facilities, equipment and resources.

Assessors must satisfy the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory competency requirements for assessors

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e0c25cc-3d9d-4b43-80d3-bd22cc4fle53>

CHCCDE012 Work within organisation and government structures to enable community development outcomes

Modification History

Release	Comments
Release 1	<p>This version was released in <i>CHC Community Services Training Package release 2.0</i> and meets the requirements of the 2012 Standards for Training Packages.</p> <p>Significant changes to performance criteria</p> <p>New evidence requirements for assessment including volume and frequency requirements</p> <p>Significant changes to knowledge evidence</p>

Application

This unit describes the skills and knowledge required to work within community and government structures to enable community development processes.

This unit applies to workers in both health and community sectors and/or a community development work context. Workers at this level will be part of a professional team and have the responsibility of supervision of others.

The skills in this unit must be applied in accordance with Commonwealth and State/Territory legislation, Australian/New Zealand standards and industry codes of practice.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements define the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

1. Work within the structures and process of the organisation

1.1 Identify and work within the management and governance structure, philosophy and purpose of own organisation

1.2 Work within lines of decision-making and accountability in contributing to planning processes in relation to

ELEMENT

PERFORMANCE CRITERIA

organisation's community development activities

1.3 Ensure decisions and processes are documented and accessible to all involved

2. Assess extent to which organisation supports community development work

2.1 Plan for aspects of the management structure, philosophy and purpose, governance structures, policies and procedures which are supportive of community development work

2.2 Plan for aspects of the management structure, philosophy and purpose, governance structures, policies and procedures which may create barriers to community development work

3. Utilise all levels of government for community development activities and projects

3.1 Research all levels of government that provide community funding

3.2 Identify current and possible future funding sources for community resources and programs

3.3 Plan for government policy barriers and, with community members, identify strategies to support change

3.4 Develop strategic alliances between organisation, community members and relevant government agencies to support community development activities

3.5 Proactively seek opportunities to influence government decision and policy making in line with community issues and priorities

3.6 Ensure community development activities and projects adhere to relevant commonwealth, state/territory and local government legal requirements

3.7 Regularly update information about current legal requirements and if appropriate, develop proposals to modify organisation policy and procedures in relation to community development activities

4. Maintain the profile of community development work within the organisation

4.1 Use formal and informal networks to communicate the organisation's community development activities and achievements

4.2 Use a range of communication media and activities to convey information about community development activities and achievements of the organisation to encourage support

ELEMENT

PERFORMANCE CRITERIA

and interest

4.3 Seek and utilise opportunities to promote the organisation and its community development work and activities

4.4 Display confidentiality and sensitivity in details, content and extent of public comment on organisation's activities

5. Maintain management support for community development activities and projects

5.1 Identify and advise management of political, social, cultural and economic trends that may impact on community development activities and projects

5.2 Ensure community development activities and project work is within the policies and procedures of the organisation

5.3 Promptly address problems in implementing defined procedures to ensure resolution

5.4 Identify and seek to resolve conflict between organisation policies and community or public issues

5.5 Ensure information about community development activities and projects is provided within the management structures to facilitate effective and informed deliberations and decision-making

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

No equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e0c25cc-3d9d-4b43-80d3-bd22cc4f1e53>

Assessment Requirements for CHCCDE012 Work within organisation and government structures to enable community development outcomes

Modification History

Release	Comments
Release 1	<p>This version was released in <i>CHC Community Services Training Package release 2.0</i> and meets the requirements of the 2012 Standards for Training Packages.</p> <p>Significant changes to performance criteria</p> <p>New evidence requirements for assessment including volume and frequency requirements</p> <p>Significant changes to knowledge evidence</p>

Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the job role. There must be demonstrated evidence that the candidate has:

- identified aspects of at least 1 organisation's structure and philosophy which support community development work and the potential implicit barriers to that work
- prepared at least 1 report on community development activities and projects in a comprehensive and accurate manner and presented to relevant stakeholders and management

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge required to effectively complete tasks outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:

- relevant legislation and public policies
- structures and systems that support or present barriers to community development
- principles of participatory democracy
- range of management and governance structures operating with the community services industry
- social, economic, political, cultural and economic development
- all possible funding sources

- critical theories for analysing human service organisations
- critique of managerial approaches including:
 - management systems and principles
 - performance standards
 - service quality development
 - consumer focus
 - enterprise agreements
 - performance monitoring and review
- change management principles

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions. Where simulation is used, it must reflect real working conditions by modelling industry operating conditions and contingencies, as well as, using suitable facilities, equipment and resources.

Assessors must satisfy the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e0c25cc-3d9d-4b43-80d3-bd22cc4f1e53>

CHCMGT007 Work effectively with the Board of an organisation

Modification History

Release	Modification History
Release 1	This version was released in <i>CHC Community Services Training Package release 2.0</i> and meets the requirements of the 2012 Standards for Training Packages. New Unit

Application

This unit covers the skills required to work effectively with the Board or committee of an organisation or facility.

This unit applies to senior workers in a range of sectors and settings who are required to work with and provide information to Board or committee members.

The skills in this unit must be applied in accordance with Commonwealth and State/Territory legislation, Australian/New Zealand standards and industry codes of practice.

Unit Sector

Elements and Performance Criteria

ELEMENT

Elements define the essential outcomes

1. Plan for working with Board

PERFORMANCE CRITERIA

Performance criteria specify the performance needed to demonstrate achievement of the element.

- 1.1 Differentiate and document the member, governance and management issues of the organisation in the organisation's governance policy guidelines
- 1.2 Identify and document the relationships between governance issues and management issues
- 1.3 Identify and document roles, responsibilities and

ELEMENT	PERFORMANCE CRITERIA
Elements define the essential outcomes	Performance criteria specify the performance needed to demonstrate achievement of the element. procedures for Board members
2. Facilitate the development of Board	<ul style="list-style-type: none">2.1 Communicate the organisation's governance policy to new Directors2.2 Inform Directors of continuing professional development opportunities2.3 Monitor relevant aspects of the appropriate federal, state and local legislation and by-laws for organisation compliance and provide advice to ensure Directors follow legal requirements when carrying out Board duties2.4 Communicate with Board members when their input and assistance is needed to contribute to organisational outcomes
3. Provide detailed information for the Board	<ul style="list-style-type: none">3.1 Prepare a structured Board paper containing an agenda and all necessary information and recommendations3.2 Provide Board members with the papers in sufficient time to study them before the meeting3.3 Communicate emerging issues in the industry that are likely to have an impact on the organisation's business and strategic plan3.4 Evaluate the identified emerging issues within a risk management and due diligence framework for their impact on the organisation and communicate this information to the Board3.5 Differentiate governance and management issues and agree with the Board3.6 Communicate organisational progress in relation to business and strategic plans as well as areas of

ELEMENT	PERFORMANCE CRITERIA
Elements define the essential outcomes	<p>Performance criteria specify the performance needed to demonstrate achievement of the element.</p> <p>concern</p> <p>3.7 Provide recommendations for future actions and directions</p> <p>3.8 Agree on future actions, directions, timeframes and responsibilities and document decisions</p> <p>3.9 Ensure complete and accurate minutes are recorded and reported to the Board</p>
4. Ensure regular communication with the Board	<p>4.1 Implement actions and communicate outcomes as per documented decisions and in accordance with policies and procedures</p> <p>4.2 Provide information and advice regularly to the Board to foster ongoing informed decision-making</p> <p>4.3 Brief the Chairperson in detail on all key issues at all times</p> <p>4.4 Seek feedback from the Board in relation to performance</p>

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency

Unit Mapping Information

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e0c25cc-3d9d-4b43-80d3-bd22cc4f1e53>

Assessment Requirements for CHCMGT007 Work effectively with the Board of an organisation

Modification History

Release	Modification History
Release 1	This version was released in <i>CHC Community Services Training Package release 2.0</i> and meets the requirements of the 2012 Standards for Training Packages. New Unit

Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the job role. There must be demonstrated evidence that the candidate has:

- developed a Governance Policy for at least one organisation
- prepared Board Papers that included:
 - o progress against the organisation's strategic plan and/or business plan
 - o information and recommendations for at least 2 governance issues and 2 management issues
- participated in a Board meeting, including:
 - o communicating concerns and recommendations for at least 2 issues
 - o obtaining a decision on future directions for at least 2 issues
 - o recording minutes

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge required to effectively complete tasks outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:

- different types of Boards
- purpose, structure and requirements of business plan and strategic plans
- legal framework under which the organisation operates and the Memorandum and/or Articles of Association of the organisation
- roles and responsibilities of particular functions on the Board
- role policies and procedures play in the effective running of an organisation

- separation of the governance (Board) and management (Chief Executive Officer) functions of the organisation and how the management issues are effectively functions of the Board that are delegated to the Chief Executive Officer (CEO)
- human resource management practices as they relate to the development of effective working relationships between paid staff and volunteer and/or paid Boards
- organisation's governance policy guidelines including policies and procedures in:
 - o role of Board
 - o Board structure
 - o role of individual Directors
 - o role of Chairperson
 - o role of Company Secretary
 - o role of Chief Executive Officer (CEO)
 - o Board meetings
 - o Board meeting agenda
 - o Board papers
 - o Board minutes
 - o the Board calendar
 - o delegation of authority
 - o monitoring
 - o strategy formulation
 - o service and advice
 - o contacts
 - o Chief Executive Officer (CEO) evaluation
 - o Director protection
 - o Board evaluation
 - o Director development
 - o Director selection and induction

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions. Where simulation is used, it must reflect real working conditions by modelling industry operating conditions and contingencies, as well as, using suitable facilities, equipment and resources.

Assessors must satisfy the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e0c25cc-3d9d-4b43-80d3-bd22cc4f1e53>

CHCVOL003 Recruit, induct and support volunteers

Modification History

Release	Comments
Release 1	<p>This version was released in <i>CHC Community Services Training Package release 2.0</i> and meets the requirements of the 2012 Standards for Training Packages.</p> <p>Significant changes to performance criteria</p> <p>New evidence requirements for assessment including volume and frequency requirements</p> <p>Significant changes to knowledge evidence</p>

Application

This unit describes the skills and knowledge required to recruit, orientate, develop and support volunteer workers in an agency, service or program. Workers at this level will be responsible for the ongoing coordination and supervision of volunteers who may be working in a range of contexts.

This unit applies to a range of sectors.

The skills in this unit must be applied in accordance with Commonwealth and State/Territory legislation, Australian/New Zealand standards and industry codes of practice.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements define the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

1. Plan and develop a volunteer recruitment program

1.1 Develop and implement processes and procedures to support the identification of volunteer roles

1.2 Apply models of volunteering to develop volunteering roles within the organisation

1.3 Plan and develop recruitment, selection and induction policies and procedure

ELEMENT**PERFORMANCE CRITERIA**

Elements define the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

2. Select and induct volunteers

2.1 Develop appropriate advertising strategies ensuring compliance with organisation policy and legal requirements

2.2 Undertake appropriate screening, interviewing and selection processes

2.3 Develop and implement volunteer induction program

3. Develop and implement volunteer support systems

3.1 Develop and implement training appropriate for volunteer roles

3.2 Establish and maintain regular communication with volunteers

3.3 Regularly review roles and performance and provide feedback to the volunteer

3.4 Review recruitment, induction and support systems and identify areas for continuous improvement

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e0c25cc-3d9d-4b43-80d3-bd22cc4f1e53>

Assessment Requirements for CHCVOL003 Recruit, induct and support volunteers

Modification History

Release	Comments
Release 1	<p>This version was released in <i>CHC Community Services Training Package release 2.0</i> and meets the requirements of the 2012 Standards for Training Packages.</p> <p>Significant changes to performance criteria</p> <p>New evidence requirements for assessment including volume and frequency requirements</p> <p>Significant changes to knowledge evidence</p>

Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the job role. There must be evidence that the candidate has:

- planned and implemented all aspects of the recruitment of 2 volunteers
- developed and implemented 1 induction program for volunteers, that included:
 - organisation purpose and services
 - role of volunteers in the organisation
 - insurance
 - rights & responsibilities of all parties including work health and safety (WHS)
 - organisation structure and lines of communication and authority
 - expenses and reimbursements processes
 - relevant policies and procedures and codes of conduct
- conducted a performance review for 1 volunteer

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge required to effectively complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the work role. This includes knowledge of:

- relevant legislation and public policies relating to the employment of unpaid workers
- rights and responsibilities of both organisation and volunteer
- implications of differences in attitudes and values in working in the organisation

- *Universal declaration on volunteering* and current national volunteering codes and standards
- definitions of volunteering
- paid versus unpaid role responsibilities and the delineation of these roles
- structure of volunteer sector including support and recruitment agencies
- role of government and government bodies in volunteering
- motivations of volunteers, what can de-motivate volunteers and how volunteer motivation changes over time
- different models of volunteering taken from an organisation perspective, including the involvement of volunteers as service providers, fundraisers, corporate volunteering, activist and in community development
- range of diverse sectors and roles where volunteers are involved
- screening processes, including police checks, interviews, application forms, referee checks and meetings
- current trends and issues in volunteering
- engagement strategies for volunteering
- performance appraisal methods and techniques
- recognition and rewards for volunteers

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions. Where simulation is used, it must reflect real working conditions by modelling industry operating conditions and contingencies, as well as, using suitable facilities, equipment and resources.

Assessors must satisfy the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5e0c25cc-3d9d-4b43-80d3-bd22cc4f1e53>

CPCBC4001 Apply building codes and standards to the construction process for Class 1 and 10 buildings

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.4.

Typographical error corrected in the Knowledge Evidence. Word 'detects' corrected to read 'defects'.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is not equivalent to CPCBC4001A Apply building codes and standards to the construction process for low rise building projects.

CPCBC4001A Apply building codes and standards to the construction process for low rise buildings has been split into two units, one for residential low-rise buildings and one for commercial low-rise buildings.

Attainment of both CPCBC4001 and CPCBC4053 is equivalent to CPCBC4001A.

Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to access, interpret and apply relevant building codes and standards applicable to the National Construction Code (NCC) Classes 1 and 10 buildings, to a maximum of two storeys. It includes knowledge of the structure of the NCC, as well as the ability to access relevant information from the code as applicable to various building projects.

It applies to builders, site managers and related construction industry professionals responsible for ensuring compliance with building codes and standards related to residential construction projects.

This unit of competency is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|---|---|
| 1 Classify building. | 1.1 Determine nature of building, its use and arrangement from construction plans and specifications. |
| | 1.2 Access, read and interpret relevant Australian Standards and codes for residential building and construction projects. |
| | 1.3 Define classification of building from the NCC. |
| | 1.4 Identify and interpret multiple classifications from the NCC. |
| 2 Determine construction compliance requirements. | 2.1 Identify NCC Performance Requirements relevant to Class 1 and 10, up to two storeys, building projects. |
| | 2.2 Determine range of criteria to ensure that construction methods comply with NCC Performance Requirements. |
| | 2.3 Identify and document non-conforming construction methods against NCC Performance Requirements. |
| | 2.4 Propose and discuss Performance Solution with design and building and construction professionals. |
| | 2.5 Analyse and apply Assessment Methods to determine compliance with Performance Solution or Deem-to-Satisfy Solution (DTS). |

- | | | |
|---|-----|--|
| | 2.6 | Meet the evidence of suitability requirements for building materials and products stated in the NCC. |
| | 2.7 | Complete relevant documentation to meet NCC requirements. |
| 3 Determine fire protection requirements. | 3.1 | Identify NCC and other legislative requirements for passive and active fire control elements in buildings. |
| | 3.2 | Determine level of fire resistance required for the construction of various buildings. |
| | 3.3 | Check existing buildings for compliance with passive and active fire protection requirements. |

Foundation Skills

As well as the foundation skills explicit in the performance criteria of this unit, candidates require:

- problem-solving skills to:
 - analyse non-conforming construction methods, define key problem and produce appropriate solution
 - seek clarification of appropriate solution to meet construction method compliance
- technology skills to:
 - use digital tools and devices to communicate and collaborate effectively with others
 - use equipment and programs to access, extract information and develop relevant documentation.

Unit Mapping Information

Supersedes and is not equivalent to CPCBC4001A Apply building codes and standards to the construction process for low rise building projects.

CPCBC4001A Apply building codes and standards to the construction process for low rise buildings has been split into two units, one for residential low-rise buildings and one for commercial low-rise buildings.

Attainment of both CPCBC4001 and CPCBC4053 is equivalent to CPCBC4001A.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC4001 Apply building codes and standards to the construction process for Class 1 and 10 buildings

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.4.

Typographical error corrected in the Knowledge Evidence. Word 'detects' corrected to read 'defects'.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is not equivalent to CPCBC4001A Apply building codes and standards to the construction process for low rise building projects.

CPCBC4001A Apply building codes and standards to the construction process for low rise buildings has been split into two units, one for residential low-rise buildings and one for commercial low-rise buildings.

Attainment of both CPCBC4001 and CPCBC4053 is equivalent to CPCBC4001A.

Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by applying codes and standards to the construction process of one Class 1 or 10 building project, to a maximum of two storeys.

In doing this, the candidate must:

- determine type of construction and use of building from construction plans and specifications and class of building using National Construction Code (NCC) classifications
- identify current building and construction codes and Australian Standards relevant to the building project
- apply NCC Performance Requirements in relation to the design and construction of the building:
 - energy efficiency
 - damp and weatherproofing
 - fire safety
 - health and amenity

- structure
- safe movement and access
- ancillary provisions
- apply Performance Solutions to ensure that construction complies with NCC Performance Requirements
- identify faults and problems and propose actions to rectify
- inspect a building to determine fire protection compliance with NCC and other legislative requirements.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- government building legislation, codes and standards:
 - the NCC:
 - Performance Requirements and General Requirements
 - Performance Solutions and Assessment Methods
 - Performance Hierarchy
 - evidence of suitability for building materials and products
 - classes of building and types of construction
- organisational policies and procedures, quality systems and best practice approaches
- workplace safety requirements
- properties, characteristics and limitations of specified building materials and components
- processes, procedures and techniques of construction
- basic building design principles and the behaviour of structures under stress, strain, compression, bending or combined actions
- causes and implications of building defects related to failure of applying building codes and standards to residential and commercial buildings
- extent of remedial work required for various defects cause by inadequate design and application of building codes and practices
- environmental requirements and sustainability principles and concepts
- project plans, specifications, working drawings and structural details
- construction terminology.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- relevant government building and construction regulations
- current building and construction codes and standards
- NCC Volume 2
- construction drawings, site plans and specifications
- organisational policies and procedures and other quality documentation to undertake the performance criteria and assessment requirements
- digital technology devices, applications and software to source and document information.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCBC4002 Manage work health and safety in the building and construction workplace

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Typographical error in Element and Performance Criteria 2.4 corrected.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4002A Manage occupational health and safety in the building and construction workplace. Title change. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to inspect workplaces for hazards and conduct work health and safety (WHS) risk analyses. It includes the development and implementation of appropriate responses to mitigate risks to meet government legislation and regulations.

This unit of competency applies to builders, site managers and forepersons who are responsible for the management of risk in building and construction workplaces.

This unit of competency is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|---|--|
| 1 Assess workplace risk. | 1.1 Evaluate construction site safety and identify potential risk areas. |
| | 1.2 Assess on site worker's health and safety. |
| | 1.3 Identify hazards and determine control measures that comply with legislative requirements and organisational policies. |
| | 1.4 Consult with workers to evaluate effectiveness of existing control measures and WHS experts, as necessary, to contribute to an inspection report. |
| | 1.5 Complete a workplace inspection report with recommended actions to minimise workplace incidents and mitigate risk. |
| 2 Establish and implement safety plans. | 2.1 Establish a workplace safety plan incorporating information from the workplace inspection report to raise safety awareness and support safe workplace practices. |
| | 2.2 Implement processes to identify hazards, rate the risks and put control measures in place. |
| | 2.3 Establish educational programs specific to the building and construction workplace to ensure workers carry out safe work practices. |
| | 2.4 Negotiate and resolve safety issues and conflicts. |
| 3 Monitor workplace safety. | 3.1 Monitor and audit workplace safety to ensure compliance with WHS regulations and workplace safety requirements. |
| | 3.2 Record findings and recommend and implement actions to address non-compliance. |

- 3.3 Review effectiveness of educational programs to ensure all workers have been inducted and maintain safe work practices.
- 3.4 Monitor, review and document effectiveness of control measures to determine changes and improvements as required.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCBC4002A Manage occupational health and safety in the building and construction workplace

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC4002 Manage work health and safety in the building and construction workplace

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Typographical error in Element and Performance Criteria 2.4 corrected.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4002A Manage occupational health and safety in the building and construction workplace. Title change. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by conducting a workplace safety audit for a construction worksite.

In doing this, a candidate must:

- access and interpret relevant government work health and safety (WHS) legislation and regulations
- identify faults, problems and non-compliances and their impact on workplace safety
- introduce safety systems allowing for ease of reporting safety issues, controlling hazards and maintaining worker safety and competence.

Knowledge Evidence

To be competent in this unit, a person must demonstrate knowledge of:

- current WHS Acts and regulations
- relevant safety codes, standards and guidelines
- organisation's workplace safety policies and procedures:
 - workplace safety and reporting requirements
- inspection, auditing and investigation processes
- hazards arising from:
 - high-risk construction work:
 - crane operation
 - dogging and rigging
 - concrete pumping

- tilt-up panel construction
- scaffolding
- operation of plant and equipment
- demolition
- asbestos removal and exposure to asbestos fibres
- exposure to silica
- airborne contaminants
- exposure to excessive noise
- electrical work
- working at heights
- hazardous materials and substances
- working in confined spaces
- safe work practices:
 - emergency, first aid and evacuation procedures
 - waste management and environmental practices
 - personal protective equipment (PPE)
- educational programs:
 - worker site-specific induction training
 - contractor detailed WHS induction
 - WHS induction for visitors
 - Health and Safety Representative (HSR) training
- mental health first aid and welfare of workers
- digital tools and devices to communicate and collaborate effectively with others
- a range of digitally-based technology and applications to access, extract, integrate and compile information.

Assessment Conditions

Assessors must satisfy the requirements for assessors listed in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- WHS legislation and regulations
- safety codes, standards and guidelines
- organisational policies and procedures and other quality documentation required to undertake the performance criteria and assessment requirements
- workplace incident data and incident reports
- business equipment to collect and record data, and produce reports

- digital devices, applications and software to research, transmit and receive information electronically.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCBC4003 Select, prepare and administer a construction contract

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Typographical error in Element and Performance Criteria 3.3 corrected.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes but is not equivalent to CPCCBC4003A Select and prepare a construction contract. Combines CPCCBC4003A Select and prepare a construction contract and CPCCBC4016A Administer a construction contract. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to select, prepare and administer contracts for commercial and residential construction projects. It includes contract selection, administration of a range of documents related to the contract and identifying causes of breach of contract.

It applies to National Construction Code (NCC) classifications:

- Residential - Class 1 and 10 buildings, maximum two storeys
- Commercial - Class 2 to 9, Type C only constructions.

It applies to builders, estimators and project and site managers who interpret complex documents and communicate clearly and succinctly during contract negotiations.

This unit of competency is suitable for people operating with autonomy. A person working at this level would be expected to take responsibility for selecting and preparing construction contracts.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|--|---|
| 1 Identify and analyse business contracts. | 1.1 Recognise various types of building and construction contracts, their legal requirements and application. |
| | 1.2 Analyse the importance of the intention to create legal relations. |
| | 1.3 Read and interpret essential contract elements, terms, sections and clauses of a valid construction contract. |
| | 1.4 Evaluate rights, obligations and liabilities of all parties. |
| | 1.5 Identify and analyse circumstances that constitute a breach of contract. |
| | 1.6 Identify factors involved in the termination of contracts. |
| | 1.7 Identify legislative requirements and procedures. |
| 2 Select appropriate contract. | 2.1 Communicate clearly and directly with all parties to confirm the capacity to form a binding agreement. |
| | 2.2 Prepare and compile the range of documents that collectively make up the contract. |
| | 2.3 Establish factors and special conditions associated with the parties' consent to a contract. |
| | 2.4 Recognise and apply the requirements associated with an offer and acceptance of a contract. |
| | 2.5 Select a contract appropriate to the type of construction. |

- 3 Prepare the contract.
 - 3.1 Draft appropriate contract accurately incorporating all details, including definitions of unreasonable or vexatious notice, repudiation of a contract by either party, conditions for completion at the cost of the contractor, ousting the contractor from the building or construction site and abandonment of a contract.
 - 3.2 Assess and schedule progress payments, including processes for applying for extension of time.
 - 3.3 Ensure any discrepancies or disagreements are resolved prior to contract preparation.
 - 3.4 Ensure legality and validity of draft contract in consultation with relevant persons.
 - 3.5 Prepare final contract in accordance with the organisation's legal process.
- 4 Administer the contract.
 - 4.1 Process progress payments accurately as due under the contract.
 - 4.2 Process applications for extension of time in accordance with organisational policies and contract conditions.
 - 4.3 Identify, negotiate and document variations to contract.
 - 4.4 Act to minimise liquidated damages or penalties nominated in the contract.
 - 4.5 Administer contract and resolve contractual disputes in accordance with contract and relevant legislation and regulations.
 - 4.6 Assess conditions for issuing a final certificate.
- 5 Finalise a contract.
 - 5.1 Apply process for practical completion of contract.
 - 5.2 Finalise defects liability under a building or construction contract.
 - 5.3 Finalise contract in accordance with relevant legislation and contract provisions.
 - 5.4 Issue appropriate certificate upon completion of the

contract work.

- 5.5 Complete and secure documentation arising from finalisation of a contract for records purposes.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

- Supersedes and is not equivalent to CPCBC4003A Select and prepare a construction contract
- Supersedes and is not equivalent to CPCBC4016A Administer a construction contract.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC4003 Select, prepare and administer a construction contract

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Typographical error in Element and Performance Criteria 3.3 corrected.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes but is not equivalent to CPCBC4003A Select and prepare a construction contract. Combines CPCBC4003A Select and prepare a construction contract and CPCBC4016A Administer a construction contract. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by selecting, preparing and administering one contract for a construction project.

In doing this, the candidate must:

- select the correct contract by analysing identified legislative requirements and construction type
- prepare the construction contract specifying requirements for contract termination and special conditions agreed by all parties
- administer the contract following government legal and regulatory requirements and to the organisation's standards
- monitor price and time variations and negotiate with various parties to resolve contract anomalies
- collect all related construction contract and final inspection documentation and issue completion certificate.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- Australian legal system and its relevance to contracts
- various types of housing and construction industry contracts and the circumstances they cover
- definitions and interpretations commonly applied to contracts
- Australian Standards

- *AS2124 General conditions of contract*, and
- *AS4000 General conditions of contract series*
- relationships between the organisation and its clients
- range of documents associated with a contract:
 - equipment, site accommodation and services information
 - human resource projections
 - materials lists
 - construction drawings and specifications
 - project timelines
 - schedules
- digital tools and devices to communicate and collaborate effectively with others
- range of digitally-based technology and applications to access, extract, integrate and compile information.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- relevant government building and construction and contract legislation
- current building and construction codes and standards
- relevant construction industry contracts
- construction drawings and specifications
- organisational policies and procedures and other quality documentation required to undertake the performance criteria and assessment requirements
- digital devices, applications and software to transmit and receive information electronically.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCBC4004 Identify and produce estimated costs for building and construction projects

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4004A Identify and produce estimated costs for building and construction projects. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to establish estimated costs associated with the acquisition of materials and labour for building and construction projects. It includes factoring in relevant overhead costs and margins.

This unit of competency applies to estimators, builders, managers and trade contractors within the construction industry responsible for producing estimated costs on various residential and commercial construction projects within their scope of work as a trade contractor or builder.

This unit of competency is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|---|---|
| 1 Establish project requirements. | <ul style="list-style-type: none"> 1.1 Read and interpret construction drawings and specifications in conjunction with relevant building and construction regulations, codes and standards. 1.2 Identify building site features, type of building and method of construction, and specified building materials. 1.3 Establish site facilities, and communication and temporary boundary fencing requirements. 1.4 Identify waste removal requirements and apply waste management site fees. 1.5 Identify additional project-specific statutory, approvals or compliance costs. |
| 2 Calculate materials and labour costs. | <ul style="list-style-type: none"> 2.1 Produce a materials and consumables quantity list and obtain a price from supplier. 2.2 Identify and estimate off-site production costs, including delivery. 2.3 Identify numbers of contractors, sub-contractors and employees appropriate for the project and work rates. 2.4 Estimate labour hours and calculate labour costs, including on-costs and worker insurance costs. |
| 3 Identify type and cost of physical resources. | <ul style="list-style-type: none"> 3.1 Identify physical resources required for the project. 3.2 Determine limitations, conditions, operational costs and timeframes for hire of physical resources. 3.3 Obtain supplier prices, including transport of physical resources. 3.4 Identify, itemise and cost plant, equipment and machinery. |

- 4 Produce estimated project costs.
 - 4.1 Review and compile materials, consumables and off-site production costs and delivery charges.
 - 4.2 Compile labour costs inclusive of rates and entitlements.
 - 4.3 Compile costs of physical resources.
 - 4.4 Apply organisational overhead recovery and margins.
 - 4.5 Produce estimated project costs for inclusion in a tender or bill.
 - 4.6 Manage and mitigate risks associated with estimating project costs.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCBC4004A Identify and produce estimated costs for building and construction projects.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC4004 Identify and produce estimated costs for building and construction projects

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4004A Identify and produce estimated costs for building and construction projects. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by estimating the cost of one residential or commercial building and construction project.

In doing this, the candidate must:

- estimate project costing from construction drawings, specifications and written information
- list physical resources appropriate for the construction of the project
- produce project cost using an appropriate software program.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- government building and construction regulations
- building and construction standards and codes
- the National Construction Code (NCC)
- organisational policies and procedures
- organisational scope, processes and requirements for using employee and subcontractor labour
- Environmental Protection Authority (EPA) regulations
- construction drawings and specifications
- relevant physical resources and requirements for their operations:
 - earth moving and excavation equipment
 - hoists and lifting equipment
 - mobile cranes
 - compressors
 - generators
 - pumps

- calculating unit costs:
 - construction cost per square metre
 - laying of foundation per metre
 - laying of slabs per square metre
 - masonry walls per square metre
 - laying of steel tray roofing per square metre
 - installation of pipes per metre
 - installation of sanitary ware per unit
 - tiling per square metre
 - painting per square metre
- a range of digitally-based technology and applications to estimate quantities, calculate costs and maintain records
- workplace procedures, workplace safety and environmental requirements.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- current construction drawings and specifications
- building and construction standards and codes
- government building and construction regulations
- organisational policies and procedures and other quality documentation required to undertake the performance criteria and assessment requirements
- calculating technology, online applications and software to produce building and construction costs.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCBC4005 Produce labour and material schedules for ordering

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.4.

Correction to Training Package title in the Modification History from CPC Property Services to CPC Construction, Plumbing and Services Training Package.

Release 1 This version first released with CPC Property Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4005A Produce labour and material schedules for ordering. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to produce schedules for physical and human resources and materials for residential or commercial projects. It includes monitoring project schedules and tracking and recording costs as they are incurred.

This unit of competency applies to site managers and forepersons, estimators, project managers and builders in the construction industry with responsibility for producing schedules for ordering materials and allocating labour.

This unit of competency is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | | | |
|---|---|-----|--|
| 1 | Assess physical and human resource requirements. | 1.1 | Check conditions of approval from local government and regulatory bodies and project commencement dates. |
| | | 1.2 | Identify variations to scope of works and contractual terms and arrangements by the client. |
| | | 1.3 | Compile a list of nominated and approved suppliers and contractors and develop channels for effective communication. |
| | | 1.4 | Confirm availability of materials with suppliers and labour with contractors. |
| | | 1.5 | Enter critical project information into project schedule. |
| 2 | Produce schedules. | 2.1 | Prepare electronic call forward sheet and site files containing necessary site documentation. |
| | | 2.2 | Break down project into stages and tasks and set milestones and timeframes for commencement and completion. |
| | | 2.3 | Itemise materials and labour required for the stages of construction. |
| | | 2.4 | Sequence material delivery dates and commencement times for labour. |
| | | 2.5 | Factor in unplanned delays. |
| 3 | Monitor project costs and maintain project files. | 3.1 | Monitor construction stage progression costs and approved variation costs against estimated project cost. |
| | | 3.2 | Manage and monitor project progress against scheduled timelines. |

- 3.3 Record unscheduled and approved variations, changes to the approved plan and specifications and delays to the project.
- 3.4 Resolve issues, within scope of responsibilities, and maintain a cost analysis against final estimated project cost.

Foundation Skills

As well as the foundation skills explicit in the performance criteria of this unit, candidates require:

- technology skills to:
 - use digital devices to communicate and collaborate effectively with suppliers, contractors and others
 - use equipment and programs to prepare and access electronic call forward sheets and files.

Unit Mapping Information

Supersedes and is equivalent to CPCBC4005A Produce labour and material schedules for ordering

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC4005 Produce labour and material schedules for ordering

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.4.

Correction to Training Package title in the Modification History from CPC Property Services to CPC Construction, Plumbing and Services Training Package.

Release 1 This version first released with CPC Property Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4005A Produce labour and material schedules for ordering. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by producing a schedule for the ordering of materials and allocation of labour for a residential or commercial building and construction project.

In doing this, the candidate must:

- produce a labour and materials schedule across the life of the project
- develop and manage efficient communications between staff, contractors and suppliers
- monitor, maintain and record project progress and variations, estimated and increased costs and changes to construction drawings and specifications.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- relevant government building legislation and regulations
- building and construction codes and standards
- construction drawings and specifications
- building and construction contractor and supplier contracts
- local authority building application processes, approval and conditions
- organisational policies and procedures:
 - costing and ordering materials
 - selecting and engaging suppliers
 - approving and contacting contractors

- projects costs:
 - organisational and subcontractor labour
 - organisation overheads
 - public liability, professional indemnity and workers' compensation
 - temporary electrical, plumbing and draining services
 - temporary site facilities, storage facilities and boundary fencing
 - communications
 - project administration
- workplace procedures, workplace safety and environmental requirements.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- current construction drawings and specifications
- relevant organisational policies and procedures
- various construction industry contracts
- organisational policies and procedures and other quality documentation required to undertake the performance criteria and assessment requirements
- digital devices, applications and software to set up electronic call forward sheets, compile site files and create channels of communication with internal and external stakeholders.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCBC4006 Select, procure and store construction materials for building and construction projects

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4006B Select, procure and store construction materials for low rise projects. Title change. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to supervise the systems through which construction materials are typically selected, acquired and stored on site for residential and commercial building and construction projects. It includes knowledge of relevant building and construction materials and technologies, environmental effects on materials and identifying non-compliant materials to ensure the delivered construction materials meet National Construction Code (NCC) requirements and contract and service specifications.

It applies to NCC classifications:

- Residential - Class 1 and 10 buildings, maximum two storeys and
- Commercial - Class 2 to 9, Type C only constructions.

It applies to builders, managers and industry professionals responsible for applying quality standards when procuring and supervising on-site storage of compliant construction materials.

This unit of competency is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|---|---|
| 1 Identify and evaluate building materials. | 1.1 Identify and read current and relevant project plans, specifications, codes and construction requirements. |
| | 1.2 Identify properties of specified materials and assess their suitability for the building project in the region. |
| | 1.3 Evaluate materials based on their quality, compatibility and compliance. |
| | 1.4 Establish environmental impacts of materials. |
| | 1.5 Determine impact of allowable tolerances on the conversion of naturally occurring materials. |
| | 1.6 Establish material assembly and installation tolerances to meet requirements of relevant construction industry standards. |
| 2 Select and procure building material. | 2.1 Select materials that are structurally adequate and appropriate for the building system specified in the contract. |
| | 2.2 Select materials for their safety, fire resistance rating, suitability, durability, serviceability and cost effectiveness. |
| | 2.3 Consider short and long-term degradation of materials in relation to the building's proposed life cycle. |
| | 2.4 Evaluate and consider alternative materials if specified materials are unavailable or unsuitable. |
| | 2.5 Finalise selection of materials for use in accordance with contractual requirements and in consultation with relevant professionals and the client. |
| | 2.6 Procure and order materials following organisation's purchasing requirements. |

- 2.7 Collect evidence of suitability from suppliers or manufacturers to ensure non-compliant materials are not used.
- 3 Supervise on-site delivery and storage of materials.
- 3.1 Determine limitations and effects of transportation on materials and components and take action to limit potentially damaging circumstances.
- 3.2 Check delivered materials are compliant with specifications, are not damaged and correspond with delivery order.
- 3.3 Allocate on-site storage space, supervise safe handling of materials and ensure the security and protection of materials to meet manufacturer specifications.
- 3.4 Implement processes for inspecting all materials delivered on site for quantity, quality, defects, or damage and store safely.
- 3.5 Inform relevant persons of actions relating to quality and inconsistencies of delivered building materials.
- 3.6 Instruct relevant persons of established workplace safety requirements when accepting and storing delivered materials.
- 3.7 Maintain records of deliveries, damaged and inferior materials and variations to specified materials.

Foundation Skills

As well as the foundation skills explicit in the performance criteria of this unit, candidates require:

- technology skills to:
 - use digital tools and devices to communicate and collaborate effectively with others
 - use equipment and programs to access and extract information and develop relevant documentation
- communication skills to:
 - use written and verbal communication with manufactures and suppliers, and other building professionals.

Unit Mapping Information

Supersedes and is equivalent to CPCBC4006B Select, procure and store construction materials for low rise projects.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC4006 Select, procure and store construction materials for building and construction projects

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4006B Select, procure and store construction materials for low rise projects. Title change. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by selecting, procuring and supervising the delivery and on-site storage of materials for one construction project for a residential or commercial building up to a maximum of two storeys.

In doing this, the candidate must:

- analyse reports, manufacturer specifications and other reference material regarding material technologies, sustainability and environmental efficiency
- test and measure products against relevant industry standards
- develop, supervise and maintain systems to select, acquire and store project materials on site
- seek expert advice from manufacturers, architects, designers and engineers about selecting and procuring alternative materials.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- relevant government building and construction legislation
- relevant project plans, specifications, standards and codes
- the National Construction Code (NCC):
 - evidence of suitability relating to non-conforming building materials and products
- properties, applications and limitations of specified building materials, products and components:
 - cements
 - ceramics
 - concrete

- engineered timber products
- flooring
- framing
- glass
- mortars
- paints and coatings
- plasterboard
- plaster
- roofing
- structural steel
- environmental effects on materials, and preservation and protection methods:
 - timber
 - ferrous and non-ferrous metals
- alternative sustainable materials:
 - structural insulated panel systems
 - mud brick, straw bale and hemp
- construction supply processes and systems
- processes, procedures and techniques for:
 - identifying materials from plans and specifications
 - selecting and ordering compliant materials
 - external quality testing or inspection of materials to meet industry standards
 - referencing external reports and manufacturer specifications
 - seeking expert appraisal from architects, designers, engineers and relevant industry experts
 - refusing to accept non-compliant or substandard materials and taking appropriate action
- operational and functional features of materials handling equipment
- digital technology and applications to access, extract, integrate and compile information
- workplace safety:
 - relevant work health and safety (WHS) Act and regulations
 - hierarchy of control
 - hazardous manual tasks
 - mechanical material handling
 - licensing and competency for operating mechanical material handling equipment.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- current relevant government legislation
- the NCC and other relevant codes and standards
- construction drawings, site plans and specifications
- organisational policies, procedures and other quality documentation to undertake the performance criteria and evidence requirements
- manufacturer reports on materials
- digital devices, applications and software to research, transmit and receive information electronically.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCBC4008 Supervise site communication and administration processes for building and construction projects

Modification History

- Release 5 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.5.
Changes to Foundation Skills, Knowledge Evidence and Performance Evidence.
- Release 4 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.4.
Correction to version release numbering.
- Release 3 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.0.
Typographical error in Element 4 corrected.
Element 4.2 corrected from; Conduct onsite inspections for project monitoring according to schedule using relevant inspection checklists to:
4.2 Conduct onsite project monitoring and inspection of work quality
- Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.
Typographical corrections in Performance Evidence.
- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCCBC4008B Conduct on-site supervision of building and construction projects. Title change for clarity purposes. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to supervise site communications, monitor and maintain compliance with codes and standards and implement project administration processes on a building and construction project.

It is strongly recommended that the site, as specified in the performance evidence, is 'live' (see Companion Volume for guidance).

This unit of competency specifies the skills and knowledge required to supervise the administration of quality control compliance and the use of site communications and record keeping systems; and conduct onsite inspections to complete the required project administration processes.

This unit applies to National Construction Code (NCC) classifications:

- Residential - Class 1 buildings to a maximum of two storeys
- Commercial - NCC Class 2 to 9, Type C only constructions.

This unit of competency is suitable for builders, site managers, forepersons and other construction industry professionals using specialised knowledge and skills to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems.

Completion of the general construction induction training program, specified in the model Code of Practice for Construction Work, is required by anyone carrying out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | | |
|---|-----|---|
| 1 Supervise the administration of quality control compliance. | 1.1 | Identify project quality control compliance requirements. |
| | 1.2 | Communicate organisational quality control processes and industry requirements to relevant personnel. |
| | 1.3 | Develop processes to ensure onsite work performance meets industry regulatory framework, jurisdictional requirements and quality control standards. |
| | 1.4 | Confirm that regulatory, jurisdictional and organisational compliance and quality control requirements have been met. |
| | 1.5 | Access or develop schedules and checklists detailing specific inspections to be conducted at appropriate stages |

of construction.

- | | | | |
|---|--|-----|--|
| 2 | Supervise the administration of projects. | 2.1 | Identify project administration requirements. |
| | | 2.2 | Authorise payment of material and contractor invoices, drawing against contract allowances and back-charges, as required. |
| | | 2.3 | Authorise variations to contracts and take corrective action as required. |
| | | 2.4 | Process insurance claims for site loss or damage. |
| 3 | Supervise the use of site communications and record keeping systems. | 3.1 | Develop and implement systems for effective communication between onsite and offsite staff, contractors and suppliers that systematically gather onsite information. |
| | | 3.2 | Develop and implement construction project recording systems to capture relevant project details. |
| | | 3.3 | Maintain a daily communications diary and key events. |
| | | 3.4 | Record information relating to certifier inspections, union and legislative matters. |
| 4 | Conduct onsite project monitoring and inspection of work quality | 4.1 | Apply workplace safety requirements and project administration procedures during onsite visit. |
| | | 4.2 | Conduct onsite project monitoring and inspection of work quality. |
| | | 4.3 | Inspect and record quality of work, notify relevant people of defects and issue rectification notice. |
| | | 4.4 | Develop systems to monitor rectified work to ensure compliance with organisational quality control requirements, building standards and client satisfaction. |
| 5 | Complete project administration processes. | 5.1 | Record work defects notified by external parties, establish liabilities and remedial action required, and develop inspection checklist. |

- 5.2 Notify client of rectification, and record client's response to completed work.
- 5.3 Instigate procedures that will result in client approval and acceptance where this was not the client's initial response.
- 5.4 Confirm contract requirements are fulfilled with relevant company personnel and client.
- 5.5 Arrange for local authority completion inspection.
- 5.6 Prepare certificates and appropriate client handover information, including all guarantees, warranties and termite protection forms.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria, including:

- technology skills to:
 - use communication tools and devices to communicate and collaborate effectively with others
 - use equipment and programs to access, extract information and develop relevant documentation

Unit Mapping Information

Supersedes and is equivalent to CPCBC4008B Conduct on-site supervision of building and construction projects.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC4008 Supervise site communication and administration processes for building and construction projects

Modification History

- Release 5 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.5.
Changes to Foundation Skills, Knowledge Evidence and Performance Evidence.
- Release 4 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.4.
Correction to version release numbering.
- Release 3 This version first released with CPC Construction, Plumbing and Services Training Package Release 6.0.
Typographical error in Element 4 corrected.
Element 4.2 corrected from; Conduct onsite inspections for project monitoring according to schedule using relevant inspection checklists to:
4.2 Conduct onsite project monitoring and inspection of work quality
- Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.
Typographical corrections in Performance Evidence.
- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCBC4008B Conduct on-site supervision of building and construction projects. Title change for clarity purposes. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency in this unit, a candidate must meet the elements and performance criteria by:

1. Developing a plan to supervise the administration processes for one building and construction project which is either a:
 - Class 1 to a maximum of two storeys, or

- Class 2 to 9, Type C building

In doing this, the candidate must:

- a. Create a plan to implement, administer, maintain and monitor site quality control.
 - b. Read and understand thoroughly the Site Safety Plan used on site.
 - c. Outline the communication systems that will be used on site.
 - d. Outline how systematic gathering of onsite information will be recorded.
 - e. Develop a progress inspection checklist for at least two trades for a section of building.
2. Conducting at least one site inspection to evaluate safety, project progress and work quality for at least one section of a building. This worksite must be for a building and construction project which is either a:
- Class 1 to a maximum of two storeys, or
 - Class 2 to 9, Type C building

In doing this, the candidate must submit the following two documents:

- a. The inspection checklist used
- b. The rectification plan which outlines:
 - i. What must be rectified
 - ii. Why it must be rectified (with reference to appropriate standard, code or plan specification, etc)
 - iii. The recommended order in which rectifications should be done
 - iv. Expected duration of each rectification and when they are expected to be rectified by
 - v. Who will carry out the rectification and how they will be notified
 - vi. Will any rectifications affect the work remaining schedule, if yes - who did you notify.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- building and construction industry contracts
- construction methodologies

- workplace procedures
- work health and safety (WHS):
 - hierarchy of control
 - duty of care
 - risk assessment
- organisational quality management systems related to:
 - communicating with regulatory authorities
 - worker and contractor payment systems
 - issuing of completion certificates and appropriate documentation
 - finalising project contractual agreements
- onsite communication:
 - emails
 - face-to-face verbal communication
 - telephone contacts
 - site diaries
 - written reports and memoranda

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated workplace is one that fully replicates the resources, environment and any time and productivity pressures that exist in the actual workplace, and which meets industry standards for safety and environmental practices. The simulated workplace environment must be developed in consultation with industry stakeholders. (see Companion Volume for guidance).

Candidates must have access to:

- relevant jurisdictional safety legislation and regulations
- building and construction codes and standards
- relevant project plans and specifications
- organisational quality control documentation relevant to supervising the administration of quality control compliance, communications and recording systems, and work progress and quality
- business and safety equipment and materials to supervise administration processes for a building and construction project onsite.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCBC4009 Apply legal requirements to building and construction projects

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4009B Apply legal requirements to building and construction projects. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to apply legal requirements to residential and commercial building and construction projects. It includes meeting licensing requirements, complying with financial and insurance laws and meeting the conditions of building contracts.

It applies to National Construction Code (NCC) classifications:

- Residential - Class 1 and 10 buildings, maximum two storeys
- Commercial --Class 2 to 9, Type C only constructions.

This unit of competency applies to builders, site managers, forepersons, estimators and other construction industry personnel responsible for applying legal requirements to residential or commercial building and construction projects.

This unit of competency is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems relating to legal requirements of building and construction projects.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|--|---|
| 1 Identify legislation relating to the construction project. | 1.1 Identify legal requirements from relevant government Acts and regulations appropriate to the type of building and construction project. |
| | 1.2 Identify legal requirements for building contracts, construction insurance, industrial relations obligations and payroll systems. |
| | 1.3 Determine class of building for the project and check for limitations of builder's registration and licence. |
| | 1.4 Identify any construction activity restrictions, limitations and conditions from building approvals and permits for the project. |
| | 1.5 Check licensing requirements or competencies for subcontractors, site supervisors and managers. |
| | 1.6 Identify sustainability, environmental and waste management legislated requirements. |
| | 1.7 Identify work health and safety (WHS) legislation and requirements of Construction work Code of Practice. |
| 2 Apply site safety requirements. | 2.1 Apply all the relevant requirements of WHS regulations that apply to the project. |
| | 2.2 Adapt organisation's workplace procedures and workplace safety requirements to align with the project. |
| | 2.3 Implement strategies to ensure all workers are inducted, informed and regularly updated of their on-site safety responsibilities. |
| 3 Apply legal | 3.1 Apply contract law in accordance with common law principles, relevant state or territory laws and |

- requirements. regulations, and fair trading legislation.
- 3.2 Apply the contract agreements and meet all the conditions during construction of the project.
 - 3.3 Confirm all mandatory building, subcontractor and worker's compensation insurances are current and applied to comply with legal requirements.
 - 3.4 Administer payroll system which incorporates employee and contractor payments, deduction of taxes, including goods and services tax (GST), tracking of transactions and calculating wages.
- 4 Apply industrial relations.
- 4.1 Apply workplace and subcontractor agreements and relevant awards to comply with industrial relations legislation.
 - 4.2 Identify and apply provisions for training agreements and make information available to all workers.
 - 4.3 Take proactive measures to ensure discrimination and harassment are not practiced in the workplace.
- 5 Resolve disputes and complaints.
- 5.1 Apply dispute resolution processes following organisational policies.
 - 5.2 Address complaints promptly, consult with complainant and resolve issue with the best solution for all.
 - 5.3 Record dispute outcome and maintain documentation.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCBC4009B Apply legal requirements to building and construction projects

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC4009 Apply legal requirements to building and construction projects

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4009B Apply legal requirements to building and construction projects. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by applying legal requirements to one residential or commercial building and construction project.

In doing this, the candidate must:

- identify and apply relevant legislative requirements applicable to the building and construction project
- apply legal obligations for:
 - insurance covering workers, materials and building
 - industrial relations, financial transactions, payment of wages and payment of subcontractor and supplier invoices
 - contractual agreements
- apply building and construction standards and codes during construction.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- building and construction industry contracts
- builder registration and licensing
- Construction work Code of Practice
- appropriate government legislation:
 - business registration and licensing
 - industrial relations
 - work health and safety (WHS)
 - taxation and financial transactions
 - insurance
 - waste management and environmental protection

- organisational policies and procedures.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- relevant government building and construction legislation
- current building and construction codes and standards
- relevant construction industry contracts
- organisational policies and procedures, insurance, industrial relations and other quality documentation required to undertake the performance criteria and assessment requirements
- digital devices, applications and software to obtain legal and building and construction information and record outcomes of disputes.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCBC4010 Apply structural principles to residential and commercial constructions

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Correction to mapping.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes but is not equivalent to CPCBC4010B Apply structural principles to residential low rise constructions.

Combines CPCBC4010B Apply structural principles to residential low rise constructions and CPCBC4011B Apply structural principles to commercial low rise constructions.

Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to apply structural principles to the construction of residential or commercial structures. This unit includes applying structural principles to footing, floor, wall and roof systems.

It applies to National Construction Code (NCC) classifications:

- Residential - Class 1 and 10 buildings, maximum two storeys
- Commercial - Class 2 to 9, Type C only constructions.

This unit of competency applies to builders, site managers, forepersons and other managers in the building and construction industry who apply structural principles to the demolition or construction of structures.

This unit of competency is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems relating to building application approvals.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

- CPCBC4053 Apply building codes and standards to the construction process for Class 2 to 9 Type C buildings
- CPCBC4001 Apply building codes and standards to the construction process for Class 1 and 10 buildings

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|---|---|
| 1 Analyse the structural integrity of building project. | 1.1 Determine the class of building, intended use of building and climate zone from the NCC. |
| | 1.2 Analyse project for compliance with NCC bushfire, high wind, earthquake and alpine environment requirements. |
| | 1.3 Analyse building design and structural integrity from project plans and specifications, building standards and codes. |
| | 1.4 Determine the effect of section properties on various materials. |
| | 1.5 Determine if structural performance meets the General Requirements and Performance Requirements of NCC. |
| | 1.6 Confirm analysis with relevant industry professionals. |
| | 1.7 Conduct pre-commencement site inspection to confirm analysis. |
| | 1.8 Assess new and emerging building technologies for application to the construction process and their compliance with NCC requirements and relevant Australian Standards. |
| 2 Plan, coordinate and | 2.1 Identify earthworks and footing or slab configuration |

- manage the laying of footings.
- 2.2 Establish cut and fill, excavation and compaction compliance with geotechnical report.
 - 2.3 Assess performance of reinforcement, concrete and other elements which contribute to structural integrity of specified footings.
 - 2.4 Determine compliance with building and construction regulations, standards and codes.
 - 2.5 Set out footings in accordance with project plans and specifications.
- 3 Plan, coordinate and manage laying of flooring systems.
- 3.1 Identify flooring systems materials, components and configuration from project plans and specifications.
 - 3.2 Establish footing type and tie-down details.
 - 3.3 Assess suspended flooring system component sections' compliance with standards and codes' span requirements.
 - 3.4 Determine if floor framing and flooring is compliant with NCC Performance Requirements for climate zone, fire resistance and rising damp requirements.
 - 3.5 Supervise and check laying of specified floor system complies with project documentation.
- 4 Plan, coordinate and manage the building of wall systems.
- 4.1 Identify and analyse structural and non-structural wall systems used in the planning of the building and construction project.
 - 4.2 Determine materials used for timber and steel framing and structural steel members meet the Performance Requirements of the NCC and timber framing complies with *AS 1684 Residential timber-framed construction*.
 - 4.3 Identify, implement and check processes for erecting structural and non-structural wall systems comply with manufacturer's specifications and building and construction standards and codes.
 - 4.4 Plan, implement and check requirements for application of bracing, tie-downs, tolerances, allowances, and fixing

- and installation of wall frame components for compliance with relevant Australian Standards, codes and manufacturer specifications.
- 4.5 Manage processes to ensure quality of the frame, whether factory pre-cut and pre-nailed, factory pre-cut and assembled on site, or cut and assembled on site.
 - 4.6 Identify and implement allowances for services to be installed.
 - 4.7 Check compliance of installation of windows and doors with building and construction standards and code and manufacturer's specifications.
- 5 Plan, coordinate and manage the building of structural roof systems.
- 5.1 Identify type of structural roof system and components and determine compliance with Performance Requirements of NCC.
 - 5.2 Plan, implement and check erection of structural roof, roof trusses or hand cut roof members comply with building and construction standards and codes and accepted industry construction practices.
 - 5.3 Plan, implement and check installation of roof sarking and cladding, skylights, roof ventilators and service penetrations comply with building standards, codes and manufacturer specifications.
 - 5.4 Manage processes to ensure roof systems' quality finish.
- 6 Plan, coordinate and manage wall cladding.
- 6.1 Assess structural performance of cladding to be used for bracing in the frame construction for compliance with building and construction standards, codes and manufacturer specifications.
 - 6.2 Determine cladding, vapour permeable sarking or waterproof membrane and components meet the Performance Requirements of NCC.
 - 6.3 Supervise and check installation of specified cladding complies with building and construction standards, codes and industry-accepted industry practices.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is not equivalent to CPCBC4010B Apply structural principles to residential low rise constructions.

Supersedes and is not equivalent to CPCBC4011B Apply structural principles to commercial low rise constructions.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCBC4010 Apply structural principles to residential and commercial constructions

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Correction to mapping.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes but is not equivalent to CPCCBC4010B Apply structural principles to residential low rise constructions.

Combines CPCCBC4010B Apply structural principles to residential low rise constructions and CPCCBC4011B Apply structural principles to commercial low rise constructions.

Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by applying structural principles to the construction of one building project.

In doing this, the candidate must:

- assess the structural integrity of the construction project
- apply technical construction principles and concepts to the appropriate selection, integration and building of construction elements and components
- coordinate, plan, implement and check the construction of the structure
- plan and document the structural principles of the construction of a building.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- government building and construction legislation and regulations
- industry building and construction standards and codes
- the NCC
- classes of buildings described in the NCC
- standards and codes for timber framing
- structural principles:
 - behaviour of structural materials

- dead, live and wind loads
- performance of beams
- performance of columns
- performance of roof trusses
- section properties
- solution of force systems
- wind bracing
- project documentation:
 - approval project plans and specifications
 - structural designs and specifications
 - engineer's footing design and specifications
 - registered plans
 - contour site plan
 - geotechnical report
 - underpinning, rock anchors and shoring design and specifications
 - retaining wall and tanking design and specifications
 - structural, floor, wall and roof systems
- organisational quality documentation:
 - policies and procedures
 - workplace procedures, workplace safety and environmental requirements
 - various construction contracts
- footing systems:
 - bored pier footings
 - columns or stumps
 - concrete slab floors
 - reinforced piers and beams
 - drilled and driven piles
 - mass concrete piers
 - screw piles
 - waffle pod slabs
 - brick bases
- floor system and components:
 - suspended and slab on ground concrete floors
 - suspended timber, metal and steel floor frames
 - engineered floor joists
 - platform floor construction
 - fitted (cut-in) floors
 - compressed sheet wet area flooring
 - sheet flooring
 - tongue and groove flooring

- autoclaved aerated concrete (AAC) panel systems
- structural wall systems:
 - composite walls featuring tilt-up slab, engineered timber products and lightweight AAC
 - framed walls incorporating timber, engineered timber products and lightweight section steel
 - masonry walls incorporating cavity brick, single-leaf masonry and AAC
- wall cladding:
 - weather boards
 - coatings over base materials
 - corrugated metal sheeting
 - fibre cement and compressed wood panelling
 - tilt-up slab
 - unfired and fired AAC masonry
- structural roof systems:
 - timber and metal pre-fabricated trusses
 - hand cut timber
- roof types:
 - box gable
 - dual pitch
 - Dutch gable and Dutch hip
 - gable end
 - hip and valley
 - north light
 - skillion
 - rafter and purlin
- roof cladding:
 - concrete, clay and metal tiles
 - shakes and shingles
 - short and long run, various profile and metal sheeting
- AAC floor and wall systems
- causes and implications of structural defects related to failure of applying structural principles to residential and commercial buildings
- extent of remedial work required for various defects cause by inadequate design and application of structural principles.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- relevant government building and construction legislation
- current building and construction codes and standards
- the NCC
- material manufacturer's specifications
- construction drawings and specifications and other quality documentation required to undertake the performance criteria and assessment requirements
- digital devices, applications and software to obtain and research information electronically and exchange information with other stakeholders.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCBC4012 Read and interpret plans and specifications

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4012B Read and interpret plans and specifications. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to read and interpret plans and specifications applicable to residential and commercial projects. It includes identifying site characteristics, features of the proposed building and details of the construction.

It applies to National Construction Code (NCC) classifications:

- Residential - Class 1 and 10 buildings, maximum two storeys
- Commercial - Class 2 to 9, Type C only constructions.

The unit of competency applies to site managers, forepersons, estimators, builders, managers and other building and construction industry personnel who read and interpret plans and specifications for quantity surveying, costing and tendering and construction of building and construction projects.

This unit is suitable for people with specialised knowledge, completing routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|------------------------------------|--|
| 1 Identify types of plans. | 1.1 Confirm plans, specifications and amendments are the current version. |
| | 1.2 Identify types of plans and aspects of the drawings specific for the intended purpose. |
| | 1.3 Confirm details on plans comply with the specifications. |
| 2 Read and interpret the plan. | 2.1 Distinguish key features on the plans. |
| | 2.2 Identify building location from site plan. |
| | 2.3 Identify building layout, spaces and dimensions from floor plan. |
| | 2.4 Examine detail drawings to determine sizes, thickness and methods of construction. |
| | 2.5 Identify internal linings, external cladding and roof materials from plans and specifications. |
| 3 Identify structural details. | 3.1 Identify concrete footing and slab sizes and position and type of reinforcing. |
| | 3.2 Identify load bearing points of the building. |
| | 3.3 Identify wind bracing and tie-down requirements. |
| 4 Identify non-structural details. | 4.1 Identify provisional sum (PS) and prime cost (PC) items. |
| | 4.2 Locate installation and connection points of services to the building. |
| | 4.3 Identify location of fixtures from plans and details of finishes from specifications. |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCBC4012B Read and interpret plans and specifications

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC4012 Read and interpret plans and specifications

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4012B Read and interpret plans and specifications. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by identifying and interpreting building and construction information from a set of plans and specifications.

In doing this, the candidate must:

- identify orientation of structures, site contours, datum and reduced levels, and site features to be removed or retained
- identify structural load bearing information of the building and compare information from specification
- check wind bracing materials and tie-down methods for accuracy against the wind bracing table
- interpret essential elements from two-dimensional to three-dimensional format, and apply to estimation, planning and supervisory tasks.

Knowledge Evidence

To be competent in this unit, a person must demonstrate knowledge of:

- types of plans:
 - concept drawing/sketches
 - architectural
 - structural
 - civil
 - mechanical
 - electrical
 - plumbing and draining
- parts of a plan:
 - site plan
 - floor plan

- elevations
- sections
- details
- drawing conventions:
 - datum and reduced levels (RL)
 - title block
 - scale
 - dimensions
 - abbreviations
- utilities and services plans and specifications
- isometric drawings, oblique drawings, perspective drawings and orthographic drawings
- computer-aided design (CAD) drawings
- building and construction regulations, standards and codes
- classes of buildings
- the NCC
- building information modelling (BIM)
- building and construction methods and terminology
- workplace processes, workplace safety and environmental requirements.

Assessment Conditions

Assessors must satisfy the requirements for assessors listed in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- plans and specifications and other quality documentation required to undertake the performance criteria and assessment requirements
- relevant government building and construction and contract legislation
- current building and construction codes and standards
- National Construction Code
- computers, applications and software to access CAD.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCBC4026 Arrange building applications and approvals

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4026A Arrange building applications and approvals. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to prepare and submit building applications to appropriate authorities for approval and manage the submission through to its final approval. It includes communicating effectively with clients, building professionals and planning officers.

The unit of competency applies to builders, project managers and related construction industry professionals responsible for coordinating and managing the building approval process for residential and/or commercial projects.

This unit of competency is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems relating to building application approvals.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the Performance criteria describe what needs to be done to

essential outcomes.	demonstrate achievement of the element.
1 Plan the application process.	<ul style="list-style-type: none">1.1 Identify project stages requiring approvals and develop a submission plan.1.2 Determine level and type of information and documentation needed for each stage of approval.1.3 Consult with external specialists to facilitate document certification.1.4 Review submission plan to ensure client needs are addressed and met.
2 Prepare and lodge application.	<ul style="list-style-type: none">2.1 Prepare documentation and supporting information for compliance with the requirements of the building approval authority.2.2 Adopt strategies to minimise impact on stakeholders and maintain their support for the application.2.3 Lodge application and supporting documentation with approval authority.2.4 Notify relevant person for payment of fees within the due dates and terms.
3 Manage application process.	<ul style="list-style-type: none">3.1 Seek confirmation of application status at appropriate intervals to ensure continuing progress.3.2 Assess building approval progress and inform stakeholders.3.3 Evaluate minor amendments to determine impact on project.3.4 Analyse course of action to maintain project continuity pending rejected submissions, resubmissions or appeals.

Foundation Skills

As well as the foundation skills explicit in the performance criteria of this unit, candidates require:

- communication skills to:
 - liaise with clients, stakeholders, specialists and approval authorities to negotiate amendments, confirm requirements and share information
- technology skills to:
 - use digital tools and devices to communicate and collaborate effectively with others
 - use equipment and programs to access and extract information and develop relevant documentation.
-

Unit Mapping Information

Supersedes and is equivalent to CPCBC4026A Arrange building applications and approvals

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC4026 Arrange building applications and approvals

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCBC4026A Arrange building applications and approvals. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by preparing, submitting and managing one residential and one commercial building and construction application for approval.

In doing this, the candidate must:

- develop a submission plan, which includes:
 - stages and dates for submission of applications
 - forms, documents and supporting evidence required to be submitted
 - application fees, charges and costs.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- relevant government building legislation, codes and standards
- plans, specifications and contracts
- local authority building application processes:
 - full approval
 - staged approval
 - development applications
 - sustainability requirements
 - fees and levies
 - complaints and appeals
- documentation requirements of building approval submissions:
 - design briefs
 - specialist's reports
 - working drawings, plans, details and specifications
- organisational quality assurance processes and practices:

- authorities and approval delegations
- document control
- specialist services for certification of documentation:
 - building surveyors, quantity surveyors and site surveyors
 - geotechnical and environmental specialists
 - structural, mechanical and electrical engineers.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must be provided with:

- relevant government regulations, codes and standards
- current project plans, specifications and manufacturer's product information
- organisational quality assurance documents
- local authority building approval processes and application forms
- sufficient materials and equipment to facilitate arrange building applications and approvals.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCBC4053 Apply building codes and standards to the construction process for Class 2 to 9 Type C buildings

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is not equivalent to CPCBC4001A Apply building codes and standards to the construction process for low rise building projects.

CPCBC4001A Apply building codes and standards to the construction process for low rise buildings has been split into two units, one for residential low-rise buildings and one for commercial low-rise buildings.

Attainment of both CPCBC4001 and CPCBC4053 is equivalent to CPCBC4001A.

Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to access, interpret and apply relevant building codes and standards applicable to National Construction Code (NCC) Class 2 to 9 Type C building projects. It includes knowledge of the structure of the NCC, as well as the ability to access relevant information from the code as applicable to various building projects.

It applies to builders, site managers and related construction industry professionals responsible for ensuring compliance with building codes and standards related to Class 2 to 9 Type C construction projects.

This unit of competency is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Licensing, regulatory or registration requirements apply to this unit of competency in some jurisdictions. Relevant state and territory regulatory authorities should be consulted to confirm these requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|--|---|
| 1 Classify buildings. | 1.1 Determine nature of building, its use and arrangement from construction plans and specifications. |
| | 1.2 Access, read and interpret relevant Australian Standards for commercial building and construction projects. |
| | 1.3 Define classification of building from NCC. |
| | 1.4 Identify and interpret multiple classifications from NCC. |
| 2 Determine construction compliance requirements from NCC. | 2.1 Identify NCC Performance Requirements relevant to Class 2 to 9 Type C building projects. |
| | 2.2 Determine range of criteria to ensure that construction methods comply with NCC Performance Requirements. |
| | 2.3 Identify and document non-conforming construction methods with NCC Performance Requirements. |
| | 2.4 Propose and discuss Performance Solution with design and building and construction professionals. |
| | 2.5 Analyse and apply Assessment Methods to determine compliance with Performance Solution or Deem-to-Satisfy Solution. |
| | 2.6 Meet the evidence of suitability requirements for building materials and products stated in the NCC. |
| | 2.7 Complete relevant documentation to meet NCC requirements. |

- | | |
|---|--|
| 3 Determine fire protection requirements. | 3.1 Identify NCC and other legislative requirements for passive and active fire control elements in buildings. |
| | 3.2 Determine level of fire resistance required for the construction of various buildings. |
| | 3.3 Check existing building for compliance with passive and active fire protection requirements. |

Foundation Skills

As well as the foundation skills explicit in the performance criteria of this unit, candidates require:

- technology skills to:
 - use digital tools and devices to communicate and collaborate effectively with others
 - use equipment and programs to access, extract information and develop relevant documentation.

Unit Mapping Information

Supersedes and is not equivalent to CPCBC4001A Apply building codes and standards to the construction process for low rise building projects.

CPCBC4001A Apply building codes and standards to the construction process for low rise buildings has been split into two units, one for residential low-rise buildings and one for commercial low-rise buildings.

Attainment of both CPCBC4001 and CPCBC4053 is equivalent to CPCBC4001A.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCBC4053 Apply building codes and standards to the construction process for Class 2 to 9 Type C buildings

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes but is not equivalent to CPCCBC4001A Apply building codes and standards to the construction process for low rise building projects.

Unit has been separated into two units for residential low rise and commercial low rise.

Attainment of both CPCCBC4053 and CPCCBC4001 is equivalent to CPCCBC4001A. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by applying codes and standards to the construction process of two Type C building projects:

- one Class 2, 3 or 9
- one Class 5 to 8.

In doing this, the candidate must:

- determine the type of construction and the use of the building from construction plans and specifications and class of building using National Construction Code (NCC) classifications
- identify current building and construction codes and Australian Standards relevant to the building project
- apply NCC Performance Requirements in relation to the design and construction of the building:
 - structure
 - fire protection
 - access and egress
 - services and equipment
 - health and amenities
 - ancillary provisions
 - energy efficiency
- apply Performance Solutions to ensure that construction complies with Performance Requirements

- identify faults and problems and propose actions to rectify
- inspect a building to determine fire protection compliance with NCC and other legislative requirements.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- government building legislation, codes and standards
- the NCC:
 - Performance Requirements and General Requirements
 - Performance Solutions and Assessment Methods
 - Deem-to-Satisfy Solution (DTS)
 - Performance Hierarchy
 - evidence of suitability for building materials and products
 - classes of building and types of construction
- Assessment Methods stated in the NCC:
 - comparison with DTS provisions
 - evidence of suitability
 - Expert Judgement
 - Verification Method
- below ground construction:
 - methods
 - structural sufficiency
 - water ingress
 - water proofing
 - work health and safety (WHS)
- organisational policies and procedures, quality systems and best practice approaches
- workplace safety requirements
- properties, characteristics and limitations of specified building materials and components
- processes, procedures and techniques for construction of wide span and complex designed buildings
- basic commercial building design principles and the behaviour of structures under stress, strain, compression, bending or combined actions
- causes and implications of building defects related to failure of applying building codes and standards to residential and commercial buildings
- extent of remedial work required for various defects caused by inadequate design and application of building codes and practices
- environmental requirements and sustainability principles and concepts
- project plans, specifications and structural details
- construction terminology.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- relevant government building and construction regulations
- current building and construction codes and standards
- NCC Volume 1
- construction drawings, site plans and specifications
- organisational policies and procedures and other quality documentation to undertake the performance criteria and assessment requirements
- digital technology devices, applications and software to source and document information.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCB2002 Use bricklaying and blocklaying tools and equipment

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCB2002A Use bricklaying and blocklaying tools and equipment. Updated to meet the Standards for Training Packages 2012.

Application

This unit specifies the skills and knowledge required to safely and effectively use bricklaying and blocklaying tools and equipment. It includes understanding the functional features and applying the operational requirements of tools and equipment.

The unit is suitable for people with basic skills and knowledge who undertake routine bricklaying and blocklaying tasks under the direction of more experienced workers on new or existing structures.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

CPCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Unit Sector

Bricklaying and Blocklaying

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- 1 Plan the work.
 - 1.1 Select, fit correctly and use personal protective equipment (PPE) appropriate for job.
 - 1.2 Read and interpret work plans and specifications.
 - 1.3 Follow requirements in workplace safety and environmental documentation and workplace procedures.
 - 1.4 Identify potential hazards and determine and implement control measures.
 - 1.5 Clarify job priorities and sequence tasks with others on site.

- 2 Prepare for work.
 - 2.1 Select plant, equipment and tools for the task.
 - 2.2 Identify any limitations of plant, equipment and tools from manufacturer's instructions.
 - 2.3 Check equipment and tools to ensure guards, guides, controls and switches are fitted and functional.
 - 2.4 Examine hoses for damage and check electrical leads and power tools are tagged.
 - 2.5 Inspect clamps, guides, and equipment used for holding and supporting materials during operation, for faults.
 - 2.6 Set aside, tag and report damaged equipment and tools.

- 3 Use plant, equipment and tools.
 - 3.1 Level and stabilise static equipment in appropriate location.
 - 3.2 Connect electrical tools to a residual current device (RCD).
 - 3.3 Use plant, equipment and tools safely and effectively and only for their intended purpose.
 - 3.4 Disconnect portable electrical equipment from source and place in a safe location when not in use.

- 4 Clean up.
 - 4.1 Clear the work area, and dispose of, reuse or recycle materials following workplace and environmental

requirements.

- 4.2 Clean tools and equipment, check for serviceability and report damage or faults.
- 4.3 Store and secure tools and equipment following workplace procedures.

Foundation Skills

Candidates require:

- technology skills to:
 - use digital tools and devices to source job information and communicate effectively with others.

Unit Mapping Information

Supersedes and is equivalent to CPCCB2002A Use bricklaying and blocklaying tools and equipment

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCL2002 Use bricklaying and blocklaying tools and equipment

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCL2002A Use bricklaying and blocklaying tools and equipment. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency in this unit, a candidate must meet the performance criteria of this unit by assisting in at least one bricklaying or blocklaying project.

In doing this, the candidate must:

- conduct a pre-operation check on equipment
- set up and safely use the following tools and equipment:
 - wheelbarrow
 - hand brick grab to load the job
 - cement mixer to mix consistent mortar for the project
 - wet cut brick saw to cut bricks and blocks accurately to varying sizes and shapes
 - hand and power assisted tools and equipment appropriate for the project
- use hand tools to achieve three different joint finishes
- wear appropriate personal protective equipment:
 - hearing protection
 - mask or appropriate respirator for the cutting task/s.

Knowledge Evidence

To be competent in this unit, a person must demonstrate knowledge of:

- terminology relating to bricklaying and blocklaying tools and equipment
- basic construction terminology
- features and purpose of plans and specifications
- manufacturer's specifications and instructions for tools and equipment:
 - safety requirements during operation
 - location and purpose of parts
 - uses and limitations

- cleanliness and maintenance
- troubleshooting problems
- functional and operational features of plant, equipment and hand and power tools:
 - wheel barrow
 - spirit, pocket and water level
 - automatic and laser level
 - trowels and jointing tools
 - corner blocks and string lines
 - tingle plate
 - profiles and straight edges
 - bolster chisels
 - mash hammer/lump hammer
 - builder square and sliding bevels
 - power drills
 - battery operated tools
 - pallet trolleys
 - materials hoist
 - brick buggies
 - elevators
 - small petrol or diesel engines, compressors or mixers
 - forklifts
- the characteristics and application of specified materials for bricklaying and blocklaying
- processes and techniques for:
 - manual handling
 - mechanical handling
- workplace safety:
 - job safety and environmental analysis (JSEA)
 - electrical safety
 - noise reduction
 - dust suppression
 - working at heights
 - exposure to silica
 - exposure to loud noise
- environmental requirements relating to workplace processes and waste disposal.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation reflecting workplace conditions and standards, materials, equipment, activities, responsibilities, procedures, safety requirements and environmental considerations.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCCA2002 Use carpentry tools and equipment

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Knowledge Evidence formatted for clarity.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCCA2002B Use carpentry tools and equipment. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to select and safely use and maintain carpentry tools and equipment, meeting all relevant requirements of national construction codes, Australian Standards, work health and safety (WHS), and Commonwealth and state or territory legislation.

The unit includes hand tools, power tools, pneumatic tools and equipment.

The unit is suitable for those with basic skills and knowledge undertaking routine work tasks under the direction of more experienced workers.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Unit Sector

Carpentry and Joinery

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|--|--|
| 1 Plan and prepare. | 1.1 Review work instructions to use tools and equipment. |
| | 1.2 Plan all work to comply with laws and regulations, national construction codes, Australian Standards, work health and safety (WHS) and environmental requirements, manufacturers' specifications and workplace requirements. |
| | 1.3 Select and use personal protective equipment (PPE) for each part of the task. |
| | 1.4 Inspect work site, locate services, assess hazards and apply risk controls, including required signage and barricades. |
| 2 Select, check and use tools and equipment. | 2.1 Select equipment and hand, power and pneumatic tools for the carpentry task, identify their functions and operations, check for serviceability and report any faults. |
| | 2.2 Use equipment and hand, power and pneumatic tools following WHS requirements and manufacturers' recommendations. |
| | 2.3 Sharpen and maintain tools. |
| 3 Clean up. | 3.1 Clean up, meeting all legislative and workplace requirements for safety, waste disposal and materials handling. |
| | 3.2 Check, maintain, store and secure tools and equipment and report any faults. |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCCA2002B Use carpentry tools and equipment.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCCA2002 Use carpentry tools and equipment

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Knowledge Evidence formatted for clarity.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCCA2002B Use carpentry tools and equipment. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency in this unit, a candidate must safely and effectively, across three different carpentry tasks, use and maintain all of the listed tools and equipment at least once:

- hand tools:
 - retractable tape measure
 - folding or steel ruler
 - combination square
 - string line
 - chalk line
 - hand saw
 - coping saw
 - carpenters hammer / claw hammer
 - wood chisel
 - hand plane
 - trimming knife
 - clamps
 - bevels
 - spirit level
 - tin snips
- power/battery/pneumatic tools and equipment:
 - circular saw
 - reciprocating saw
 - sliding compound saw

- jigsaw
- angle grinder
- planer
- laminate trimmer or router
- drill
- rotary hammer drill
- impact driver
- nail gun
- bench grinder
- extension lead
- portable residual current device
- air compressor and hoses.

The candidate must also:

- replace blades/cutters/grinding discs in:
 - a power saw
 - a powered planer
 - a router
 - grinder
- grind, sharpen and hone a hand plane blade
- grind, sharpen and hone a chisel.
-

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- workplace quality policies and standards for using carpentry tools and equipment
- safety requirements for using carpentry tools and equipment
- types of tools and equipment and their characteristics, uses and limitations:
 - hand tools including:
 - retractable tape measure
 - folding or steel ruler
 - combination square
 - spirit level
 - string line
 - chalk line
 - hand saw
 - coping saw
 - carpenters hammer/claw hammer
 - wood chisel
 - hand plane

- metal trimming knife
- clamp
- bevel
- tin snips
- power/battery/pneumatic tools and equipment:
 - bench grinder
 - circular saw
 - reciprocating saw
 - sliding compound saw
 - jigsaw
 - angle grinder
 - mobile plane
 - laminate trimmer or router
 - drill
 - rotary hammer drill
 - impact driver
 - nail gun
 - extension lead
 - portable residual current device
 - air compressor and hoses
- processes to safely grind, sharpen and hone a hand plane blade and a chisel.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation reflecting workplace conditions and standards, materials, equipment, activities, responsibilities, procedures, safety requirements and environmental considerations.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCCA3018 Construct, erect and dismantle formwork for stairs and ramps

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCCA3018A Construct, erect and dismantle formwork for stairs and ramps. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to construct, erect and dismantle formwork for stairs and ramps to provide access between floors and landings, meeting all relevant requirements of the National Construction Code (NCC), Australian Standards, work health and safety (WHS), and Commonwealth and state or territory legislation.

It includes:

- establishing required levels on site
- constructing timber, metal or prefabricated formwork to contain wet poured concrete until it is completely cured
- stripping the formwork
- preparing and storing formwork for re-use.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry.

Unit Sector

Carpentry and Joinery

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|---------------------|---|
| 1 Plan and prepare. | 1.1 Read and interpret work instructions and plan sequence of work. |
| | 1.2 Plan all work to comply with laws and regulations, the National Construction Code (NCC), Australian Standards, work health and safety (WHS) and environmental requirements, manufacturers' specifications, workplace requirements, drawings and specifications. |
| | 1.3 Select tools and equipment, check for serviceability and report any faults. |
| | 1.4 Select and use personal protective equipment (PPE) for each part of the task. |
| | 1.5 Inspect work site, locate services, assess hazards and apply risk controls, including required signage and barricades. |
| | 1.6 Select materials required for task, calculate quantities, handle safely and prepare and position ready for use. |
| 2 Set out formwork. | 2.1 Check formwork location for accuracy against plans and specifications. |
| | 2.2 Check design of stairs or ramp and method of joining formwork, and determine levels from drawings, specifications and site inspection. |
| | 2.3 Determine rise, going and pitch of stairs and ramp from drawings, specifications, site inspection, rise measurements, and requirements of the National Construction Code (NCC). |
| | 2.4 Calculate full size of stairs or ramp and set out. |
| | 2.5 Set out materials for formwork, including stringer form, to pitch of stairs with rises not exceeding specified space between treads. |

- | | |
|--------------------------------|---|
| 3 Assemble and erect formwork. | 3.1 Place, fix and brace landing bearers and joists. |
| | 3.2 Erect and brace stairs or ramp formwork soffit. |
| | 3.3 Cut, install and brace formwork for stringers. |
| | 3.4 Locate and fix formwork stringers for stairs and ramps. |
| | 3.5 Set out, cut square to length, and fix material for face of treads. |
| | 3.6 Brace risers at mid-span to prevent deflection under the load of wet concrete. |
| 4 Strip formwork. | 4.1 Strip formwork and bracing sequentially and safely. |
| | 4.2 Check formwork for reusability and dispose of damaged components. |
| | 4.3 Safely de-nail, clean, oil and store or stack reusable formwork components. |
| 5 Clean up. | 5.1 Clean up, meeting all legislative and workplace requirements for safety, waste disposal and materials handling. |
| | 5.2 Check, maintain and store tools and equipment and report any faults. |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCCA3018A Construct, erect and dismantle formwork for stairs and ramps.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCCA3018 Construct, erect and dismantle formwork for stairs and ramps

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCCA3018A Construct, erect and dismantle formwork for stairs and ramps. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by constructing, erecting, stripping and dismantling the formwork for:

- one flight of stairs, freestanding or against a wall with a minimum rise of 1800 mm
- one ramp with a minimum rise of 400 mm and 5.6 metres long.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- compliance requirements of the National Construction Code and Australian Standards relevant to constructing, erecting and dismantling formwork for stairs and ramps
- workplace quality policies and standards for constructing, erecting and dismantling formwork for stairs and ramps
- safety requirements for constructing, erecting and dismantling formwork for stairs and ramps
- line, level and plumb for constructing, erecting and dismantling formwork for stairs and ramps
- common formwork faults, problems and rectification methods
- materials used to construct and erect formwork
- fixings for formwork
- techniques to construct, erect and strip and dismantle formwork
- contents, terms and symbols used in plans, specifications and drawings for constructing, erecting and dismantling formwork for stairs and ramps
- types and uses of tools and equipment used to erect and strip and dismantle formwork
- processes for measuring and setting out formwork
- processes for calculating material requirements for constructing and erecting formwork for stairs and ramps
- regulations on stair and ramp construction for safe use, including disability access

- processes to construct stairs and ramps.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions and standards, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCCA3028 Erect and dismantle formwork for footings and slabs on ground

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Equivalency changed to non-equivalent.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCCA2003 Erect and dismantle formwork for footings and slabs on the ground. Updated to reflect current industry terminology, tools and equipment.

Application

This unit of competency specifies the skills and knowledge required to erect and dismantle formwork for slabs on ground, rebates to slabs on ground, and steps to strip footings, meeting all relevant requirements of the National Construction Code (NCC), Australian Standards, work health and safety (WHS), and Commonwealth and state or territory legislation.

The unit includes:

- establishing required levels on site and constructing formwork using boxing materials, including timber, metal, masonry, fibre cement sheeting or reconstituted timber products, and fixings to contain wet poured concrete until it is completely cured
- stripping the formwork and preparing and storing it for re-use.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Unit Sector

Carpentry and Joinery

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|---------------------|---|
| 1 Plan and prepare. | 1.1 Read and interpret work instructions and plan sequence of work. |
| | 1.2 Plan all work to comply with laws and regulations, the National Construction Code (NCC), Australian Standards, work health and safety (WHS) and environmental requirements, manufacturers' specifications, workplace requirements, drawings and specifications. |
| | 1.3 Select tools and equipment, check for serviceability and report any faults. |
| | 1.4 Select and use personal protective equipment (PPE) for each part of the task. |
| | 1.5 Inspect work site, locate services, assess hazards and apply risk controls, including required signage and barricades. |
| | 1.6 Select materials required for task, calculate quantities, handle safely and prepare and position ready for use. |
| 2 Erect formwork. | 2.1 Clear work area and prepare surface for safe erection of formwork. |
| | 2.2 Measure, set out and level formwork. |
| | 2.3 Apply fixing and fasteners to ensure stable formwork construction. |
| | 2.4 Construct and erect edge rebate. |
| | 2.5 Check and brace formwork for accuracy of square and dimension. |
| | 2.6 Install block-outs and cast-in services to specified locations. |

- 2.7 Apply release agent to formwork face following manufacturers' specifications.
- 3 Strip formwork and prepare for reuse.
 - 3.1 Strip edge boxing and bracing support sequentially and safely.
 - 3.2 Check formwork for re-usability and dispose of damaged components to meet safety and environmental requirements.
 - 3.3 Safely de-nail, clean, oil and store or stack reusable formwork components.
- 4 Clean up.
 - 4.1 Clean up, meeting all legislative and workplace requirements for safety, waste disposal and materials handling.
 - 4.2 Check, maintain and store tools and equipment and report any faults.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is not equivalent to CPCCCA2003 Erect and dismantle formwork for footings and slabs on the ground.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCCA3028 Erect and dismantle formwork for footings and slabs on ground

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Equivalency changed to non-equivalent.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCCA2003 Erect and dismantle formwork for footings and slabs on the ground. Updated to reflect current industry terminology, tools and equipment.

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by erecting and dismantling formwork for one slab on ground with:

- a minimum area of 30 square metres
- a minimum thickness of 100 millimetres
- an edge rebate and an internal corner.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- compliance requirements of the National Construction Code and Australian Standards relevant to erecting and dismantling formwork for footings and slabs on ground
- workplace quality policies and standards relating to formwork
- safety requirements for erecting and dismantling formwork for footings and slabs on ground
- environmental requirements for erecting and dismantling formwork for footings and slabs on ground
- types and uses of tools and equipment for erecting and dismantling formwork for footings and slabs on ground
- types, characteristics and applications of formwork materials
- formwork techniques
- types of plans, specifications and drawings relating to formwork
- symbols and notations used on plans, specifications and drawings for formwork
- processes for measuring and setting out formwork

- processes for calculating material requirements for erecting formwork for footings and slabs on ground
- requirements for line, level and plumb for erecting formwork for footings and slabs on ground.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation reflecting workplace conditions and standards, materials, equipment, activities, responsibilities, procedures, safety requirements and environmental considerations.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCCM2010B Work safely at heights

Modification History

Photovoltaic (solar) panels added to range statement

Equivalent to CPCCCM2010A

Unit Descriptor

This unit of competency specifies the outcomes required to work safely on construction sites where the work activity involves working above 1.5 metres from ground level and where fall protection measures are required.

Application of the Unit

Construction work is undertaken on domestic and commercial work sites within new construction, renovation or refurbishment, and maintenance.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | | |
|---|----------------------------------|-----|---|
| 1 | Identify work area requirements. | 1.1 | Site of proposed <i>work at heights</i> is identified from relevant <i>information</i> . |
| | | 1.2 | Method of accessing work area is identified. |
| | | 1.3 | Tasks to be completed are identified from work orders and supervisor instructions. |
| | | 1.4 | Fall protection equipment is identified if required by site job <i>workplace health and safety (WHS)</i> analysis and <i>statutory and regulatory</i> requirements. |
| | | 1.5 | Approved methods of moving tools and equipment to work area are identified to minimise potential of falling objects, removal of scaffold components, inappropriate carrying of materials on ladders, and excessive bending or twisting in pass-up situations. |
| 2 | Access work area. | 2.1 | Fall protection equipment where required is correctly fitted, adjusted and anchored. |
| | | 2.2 | Arrangements are made to appropriately install required equipment taking account of all potential <i>hazards</i> . |
| | | 2.3 | Appropriate methods are used to access work area for self, <i>tools and equipment</i> , and <i>materials</i> . |
| | | 2.4 | Tools and materials are placed to eliminate or at least minimise the risk of items being knocked down. |
| 3 | Conduct work tasks. | 3.1 | Work is conducted following workplace approved procedures. |
| | | 3.2 | Fall protection equipment is kept in place and adjusted appropriately to cater for movement during work. |
| | | 3.3 | Scaffold components and fall barriers are kept in place during work. |
| | | 3.4 | Egress from work area is completed following work site supervisor approved methods for self, tools, materials |

and *environmental requirements*.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
 - use a range of mobile technology
 - voice and hand signals to access and understand site-specific instructions.

Required knowledge

Required knowledge for this unit is:

- construction terminology
- job safety analysis (JSA) and safe work method statements
- material safety data sheets (MSDS)
- quality requirements
- types, characteristics, uses and limitation of plant, tools and equipment
- workplace and equipment safety requirements.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment

Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan, OHS regulations and state and territory legislation applicable to workplace operations
- safely and effectively use tools, plant and equipment
- communicate and work effectively and safely with others
- select and use appropriate height access and fall protection equipment and work methods, including inspecting fall protection equipment, scaffold and fall barriers for faults
- apply knowledge of industry products to identify:
 - manual handling risks
 - types of lifting and support structures approved for use
- modify work activities to cater for variations in work site procedures, contexts and environment and use appropriate behaviour for safe work at heights
- use safe handling requirements, based on information provided, for equipment, products and materials.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement

- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning

experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Work at heights includes:

- assessment of conditions and hazards
- determination of work requirements
- identification of equipment defects
- inspection of work sites.

Information includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- material safety data sheets (MSDS)
- memos
- signage
- verbal or written and graphical instructions
- work bulletins
- work schedules, plans and specifications.

Workplace health and safety is to be in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan

- emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation
- handling of materials
- hazard control

and may include:

- hazardous materials and substances
- safe operating procedures, including the conduct of operational risk assessment and treatments associated with:
 - earth leakage boxes
 - lighting
 - photovoltaic (solar) panels
 - power cables, including overhead service trays, cables and conduits
 - restricted access barriers
 - surrounding structures
 - traffic control
 - trip hazards
 - work site visitors and the public
 - working in confined spaces
 - working in proximity to others
 - working with dangerous materials
- organisational first aid
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- relevant OHS legislation applying in the jurisdiction where work is carried out, including:
 - AS6001 - 1999 Working platforms for domestic application
 - AS1576 - Scaffolding
 - AS/NZS4576 - 1995 Guidelines for scaffolding
- use of tools and equipment
- workplace environment and safety.

Statutory and regulatory authorities include:

- federal, state and local authorities administering applicable Acts, regulations and codes of practice.

Hazards include:

- air temperature
- construction activity involving other workers and contractors
- dust and vapours
- electrical equipment
- energy sources
- equipment and materials
- hazardous materials

- light
- manual handling
- moisture
- noise
- photovoltaic (solar) panels
- stationary and moving plant
- work at heights.

Tools and equipment include:

- air compressors and hoses
- hand and power tools
- nail guns
- power leads
- scaffolding.

Materials include:

- materials used on the construction work site.

Environmental requirements include:

- clean-up management
- noise and dust
- vibration
- waste management.

Unit Sector(s)

Functional area

Unit sector Construction

Custom Content Section

Not applicable.

CPCCCO2013 Carry out concreting to simple forms

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Knowledge Evidence formatted for clarity.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCCO2013A Carry out concreting to simple forms. Updated to meet the Standards for Training Packages.

Application

This unit of competency specifies the skills and knowledge required to safely install formwork, reinforcement and place and finish concrete for the construction of minor slabs, pathways and other minor works to a specified design finish, meeting all relevant requirements of the National Construction Code (NCC), Australian Standards, work health and safety (WHS), and Commonwealth and state or territory legislation.

The unit is suitable for those with basic skills and knowledge undertaking routine work tasks under the direction of more experienced workers.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry.

Unit Sector

Concreting

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|--------------------------------|--|
| 1 Plan and prepare. | <p>1.1 Read and interpret work instructions and plan sequence of work.</p> <p>1.2 Plan all work to comply with laws and regulations, the National Construction Code (NCC), Australian Standards, work health and safety (WHS) and environmental requirements, manufacturers' specifications, workplace requirements, drawings and specifications.</p> <p>1.3 Select tools and equipment, check for serviceability and report any faults.</p> <p>1.4 Select and use personal protective equipment (PPE) for each part of the task.</p> <p>1.5 Inspect work site, locate services, assess hazards and apply risk controls, including required signage and barricades.</p> <p>1.6 Select materials required for task, calculate quantities, handle safely and prepare and position ready for use.</p> |
| 2 Erect simple formwork. | <p>2.1 Prepare substrate.</p> <p>2.2 Review formwork design from drawings.</p> <p>2.3 Erect formwork.</p> <p>2.4 Install vapour barrier.</p> |
| 3 Place and tie reinforcement. | <p>3.1 Handle, cut and position reinforcing components.</p> <p>3.2 Position reinforcing bars and mesh.</p> <p>3.3 Position bar chairs and spacers with minimum edge cover.</p> |
| 4 Place concrete. | <p>4.1 Clean formwork or excavation of excess material and</p> |

- debris before concrete placement.
- 4.2 Transport concrete by wheelbarrow.
 - 4.3 Place concrete in formwork to specified depth.
 - 4.4 Screed concrete to the alignment of formwork and specified datums.
 - 4.5 Finish surface of concrete to specifications.
- 5 Strip simple formwork.
- 5.1 Denail timber components following stripping of formwork.
 - 5.2 Clean and stack components and store for reuse or bundle for removal.
 - 5.3 Remove formwork components from site.
- 6 Clean up.
- 6.1 Clean up, meeting all legislative and workplace requirements for safety, waste disposal, materials handling and protection of the environment.
 - 6.2 Check, maintain and store tools and equipment and report any faults.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCCO2013A Carry out concreting to simple forms.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCCO2013 Carry out concreting to simple forms

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Knowledge Evidence formatted for clarity.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCCO2013A Carry out concreting to simple forms. Updated to meet the Standards for Training Packages.

Performance Evidence

To demonstrate competency, a candidate must satisfy all the elements, performance criteria and foundation skills of this unit by carrying out concreting to a simple form slab of at least 1 square metre and 100 mm in depth by:

- preparing substrate
- erecting formwork
- cutting, placing and tying reinforcement
- placing and hand-screeding concrete to the required finished level and job specification.

All work must be planned and performed using appropriate tools and equipment to the standard required in the workplace and must comply with laws and regulations, the National Construction Code (NCC), Australian Standards, work health and safety (WHS) and environmental requirements, manufacturers' specifications, workplace requirements, drawings and specifications.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- compliance requirements of the National Construction Code and Australian Standards relevant to concreting to simple forms
- workplace quality policies and standards relevant to concreting to simple forms
- safety requirements for concreting to simple forms
- types and uses of tools and equipment required for concreting to simple forms
- uses of concreting materials, including:
 - bar chairs
 - bracing

- edge form and boards
- fabric sheet mesh
- pegs
- spacers
- reinforcing bars
- vapour barriers
- concreting techniques, including:
 - placing
 - screeding
 - finishing
 - floating
- simple forms of concrete, including:
 - beam thickeners
 - channels
 - garden edges
 - pathways
 - post holes
 - simple concrete aprons and slabs
- finishing, including:
 - broomed
 - trowelled
 - trowelling machine finish
 - wood-floated
- properties and use of concrete relevant to concreting to simple forms, including:
 - uses and limitations at differing strength levels
 - ingredients and proportions
 - maintaining design strength during placement
 - mixing techniques
 - curing techniques
 - vibrating and over-vibration
- levelling techniques for concreting to simple forms
- materials storage and environmentally friendly waste management
- plans, drawings and specifications for concreting to simple forms
- processes for the calculation of material requirements for concreting to simple forms, including volume of concrete
- quality requirements for concreting to simple forms
- simple formwork and reinforcing componentry.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions and standards, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCDDO3011A Perform dogging

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency specifies the outcomes required to undertake basic dogging work, both in sight and out of sight of the crane operator, for the purpose of shifting loads mechanically.

The unit includes selecting sling types and sizes and maintaining the stability of the load.

Application of the Unit

Application of the unit

This unit of competency supports the attainment of the understanding and skills to use dogging tools and equipment, which may include working with others and as a member of a team.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units

CPCCOHS2001A

Apply OHS requirements, policies and procedures in the construction industry

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare.	<p>1.1. Work instructions and operational details are obtained using relevant <i>information</i>, confirmed and applied for <i>planning and preparation</i> purposes.</p> <p>1.2. <i>Safety (OHS)</i> requirements are followed in accordance with safety plans and policies.</p> <p>1.3. Signage and barricade requirements are identified and implemented.</p> <p>1.4. <i>Tools and equipment</i> selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement.</p> <p>1.5. Materials quantity requirements are calculated in accordance with plans, specifications and <i>quality requirements</i>.</p> <p>1.6. Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.</p> <p>1.7. <i>Environmental requirements</i> are identified for the project in accordance with environmental plans and regulatory obligations and applied.</p>
2. Select dogging equipment.	<p>2.1. Resources, materials and equipment are selected and inspected for compliance with job specifications.</p> <p>2.2. Job sequencing schedule is communicated with team</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>members and others to ensure coordination.</p> <p>2.3. Load mass is <i>calculated</i> and confirmed using load charts and standard calculations.</p> <p>2.4. Loads in <i>slings</i> and equipment are calculated to suit job requirements.</p>
3. Sling loads.	<p>3.1. <i>Lifting devices</i> are assembled and erected for the movement of load.</p> <p>3.2. Using appropriate <i>load slinging method</i>, loads are slung to <i>crane</i> ready for lifting.</p>
4. Shift loads.	<p>4.1. Loads are shifted ensuring stability and in compliance with work method statement.</p> <p>4.2. Load is directed to landing position using communications in compliance with Australian standards and recognised work practices.</p> <p>4.3. Load is landed in required position on packing or bearers.</p>
5. Remove dogging equipment.	<p>5.1. Load shifting equipment is dismantled and inspected for wear.</p> <p>5.2. Logbook and site records are completed to company requirements.</p>
6. Clean up.	<p>6.1. Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.</p> <p>6.2. Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.</p> <p>6.3. Work completion procedures are applied and relevant personnel notified that work is finished.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

REQUIRED SKILLS AND KNOWLEDGE

- communication skills to:
 - determine requirements
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - read and interpret:
 - documentation from a variety of sources
 - drawings and specifications
 - report faults
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- evaluating own actions and making judgments about performance and necessary improvements
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- organisational skills, including the ability to plan and set out work
- recognising procedures, following instructions, responding to change and contributing to workplace responsibilities, such as current work site environmental and sustainability frameworks or management systems
- teamwork skills to coordinate own work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
 - use a range of mobile technology, such as two-way radio and mobile phones
 - voice and hand signals to access and understand site-specific instructions.

Required knowledge

Required knowledge for this unit is:

- crane operations and limitations
- designs and functions of lifting equipment
- dogging equipment
- dogging techniques
- elevated work platforms
- general construction terminology
- job safety analysis (JSA) and safe work method statements
- logbooks
- material safety data sheets (MSDS)
- materials storage and environmentally friendly waste management
- plans, drawings and specifications
- processes for the calculation of material requirements

REQUIRED SKILLS AND KNOWLEDGE

- quality requirements
- relevant Acts, regulations and codes of practice
- safe working at heights and fall arrest
- safe working load tags
- signalling methods and communications
- types, characteristics, uses and limitations of plant, tools and equipment
- weather and ground considerations
- workplace and equipment safety requirements.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations
- comply with organisational policies and procedures including quality requirements
- safely and effectively operate and use tools, plant and equipment
- communicate and work effectively and safely with others
- as a minimum, read tags, sling, load, direct and land loads in conjunction with a slewing

EVIDENCE GUIDE

mobile crane with a telescopic boom and a winch, out of sight for:

- rigid heavy loads to two thirds capacity of the crane
- luff movements, boom retract and boom extend, slew right and slew left, winch up and down in combination
- a flexible load with a minimum of three lifting points
- using hand signals and whistle from minimum radius to maximum radius.

Context of and specific resources for assessment This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of

EVIDENCE GUIDE

the Construction, Plumbing and Services Training Package

- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Information includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions, where specified
- MSDS
- memos
- regulatory and legislative requirements pertaining to performing dogging
- relevant Australian standards
- safe work procedures relating to performing dogging
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.
- assessment of conditions and hazards
- determination of work requirements and safety plans and policies
- equipment defect identification
- work site inspection.

Planning and preparation include:

Safety (OHS) is to be in accordance with state and territory legislation and regulations and project safety plan and may include:

- emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation
- handling activities that may require the assistance of others or the use of manual or mechanical lifting devices where size, weight or other issues, such as a disability are a factor
- hazard control
- hazardous materials and substances
- organisational first aid
- PPE prescribed under legislation, regulations and workplace policies and practices
- safe operating procedures, including the

RANGE STATEMENT

conduct of operational risk assessment and treatments associated with:

- earth leakage boxes
- lighting
- power cables, including overhead service trays, cables and conduits
- restricted access barriers
- surrounding structures
- traffic control
- trip hazards
- work site visitors and the public
- working at heights
- working in confined spaces
- working in proximity to others
- use of firefighting equipment
- use of tools and equipment
- workplace environmental requirements and safety.

Tools and equipment include:

- brick cages
- kibbles
- personnel cages
- rescue cages
- rubbish bins
- spreader bars and beams.

Quality requirements include:

- internal company quality policy and standards
- manufacturer specifications, where specified
- relevant regulations, including Australian standards
- workplace operations and procedures.

Environmental requirements include:

- clean-up management
- noise
- vibration
- waste management.

Calculations include:

- delivery dockets
- load charts
- load share
- pre-cast compliance charts
- safe working loads
- standard calculations.

RANGE STATEMENT

- Slings* include:
- chain
 - flexible steel wire rope
 - natural or synthetic fibre.
- Lifting devices*:
- include:
 - eye bolts
 - lifting clutches
 - shackles
 - snatch blocks
 - tags
 - may include:
 - collared eye bolts
 - equalizing sheaves
 - lifting lugs
 - rigging screws
 - turn buckles.
- Load slinging methods* include:
- straight sling
 - adjustable sling
 - reeved sling
 - inclined sling.
- Cranes* include:
- fixed cranes
 - hydraulic mobile cranes
 - lattice boom mobile cranes
 - slewing cranes
 - tower cranes.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Co-requisite units Nil

Functional area

Functional area

CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to carry out OHS requirements through safe work practices at any on or off-site construction workplace. It requires the performance of work in a safe manner through awareness of risks and work requirements, and the planning and performance of safe work practices with concern for personal safety and the safety of others.

Application of the Unit

Application of the unit This unit of competency covers fundamental OHS necessary to undertake work tasks within any sector in the construction industry. It includes the identification of hazardous materials, including asbestos, and compliance with legislated work safety practices. It does not cover removal of asbestos, which is a licensed activity.

The unit relates directly to the general induction training program specified by the *National Code of Practice for Induction for Construction Work* (ASCC 2007) required to enter a construction work site. Completion of unit CPCCOHS1001A covers this requirement.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|---|---|
| 1. Identify and assess risks. | 1.1. <i>Hazards</i> in the work area are identified, assessed and reported to <i>designated personnel</i> .
1.2. Safety risks in the work area are identified, assessed and reported to designated personnel.
1.3. <i>Safe work practices, duty of care</i> requirements and safe work instructions are followed for controlling risks.
1.4. OHS, hazard, accident or <i>incident</i> reports are contributed to according to workplace procedures and <i>Australian government and state or territory OHS legislation</i> and relevant <i>information</i> . |
| 2. Identify hazardous materials and other | 2.1. <i>Hazardous materials</i> on a work site are correctly identified and, if appropriate, handled and used |

ELEMENT

PERFORMANCE CRITERIA

hazards on work sites.	according to company and legislated procedures. 2.2. Measures for controlling risks and construction hazards are applied effectively and immediately. 2.3. Hazardous materials that have safety implications for self and other workers are secured immediately they are identified, using appropriate signs and symbols . 2.4. Asbestos-containing materials are identified on a work site and reported to designated personnel.
3. Plan and prepare for safe work practices.	3.1. Correct personal protective equipment and clothing for each area of construction work are identified, worn, correctly fitted, used and stored according to enterprise procedures. 3.2. Selection of tools, equipment and materials , and organisation of tasks are performed in conjunction with other personnel on site and in accordance with enterprise procedures. 3.3. Required barricades and signage are determined and erected at the appropriate site location. 3.4. Material safety data sheets (MSDS), and job safety analysis (JSA) and safe work method statements relevant to the work to be carried out are identified and applied.
4. Apply safe work practices.	4.1. Tasks are performed in a manner that is safe for operators, other personnel and the general community in accordance with legislative requirements, and enterprise policies and procedures. 4.2. Plant and equipment guards are used in accordance with manufacturer specifications, work site regulations and Australian standards where applicable. 4.3. Procedures and relevant authorities for reporting hazards, incidents and injuries are used. 4.4. Prohibited tools and equipment in areas with identified asbestos are recognised and not used. 4.5. Work site safety signs and symbols are identified and followed. 4.6. Work site area is cleared and maintained to prevent and protect self and others from incidents and accidents and to meet environmental requirements .
5. Follow emergency procedures.	5.1. Designated personnel are identified in the event of an emergency for communication purposes. 5.2. Safe workplace procedures for dealing with accidents,

ELEMENT

PERFORMANCE CRITERIA

various *types of fire* and other emergencies are followed, including identification or use, if appropriate, of *fire equipment* within scope of responsibilities.

5.3. *Emergency response and evacuation procedures* are known, practised and carried out effectively when required.

5.4. Emergency first aid treatment of minor injuries is carried out correctly and details of any treatment administered are reported accurately to designated personnel as soon as possible.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- ability to accurately recognise OHS hazards, including asbestos and take all opportunities to alleviate safety problems in a variety of construction work sites and environments
- capacity to deal calmly and effectively with any potential safety problems and work closely with other team members and supervisors to ensure safe working conditions are maintained
- communication skills to:
 - determine and report hazards and risks
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - read and interpret:
 - MSDS, JSA and safe work method statements
 - other relevant documentation
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
 - written skills to contribute to reports
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials

REQUIRED SKILLS AND KNOWLEDGE

- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
 - use a range of mobile technology, such as two-way radio and mobile phones
 - voice and hand signals to access and understand site-specific instructions.

Required knowledge

Required knowledge for this unit is:

- asbestos management code prevention of exposure
- basic first aid procedures
- common construction industry terminology
- common workplace safety hazards and risks and procedures for reporting these to designated personnel
- construction industry communications equipment and use
- construction industry health and safety signage
- emergency response and evacuation procedures
- JSA and safe work method statements
- MSDS
- OHS hierarchy of control and role of OHS committees and representatives
- relevant legislation, regulations and workplace requirements relating to OHS, including hazard reduction and personal safety, including duty of care responsibilities, workers' compensation and injury management requirements
- safe manual handling techniques
- safe work practices in normal working environment
- safety equipment, policies and requirements for working in confined spaces and at height, including on rooves
- tools and equipment prohibited for use near identified asbestos-containing materials (ACM)
- types of fires and basic firefighting equipment
- types, possible location and risks of ACM, including serpentine and amphibole groups, and their use in common building materials
- types, purpose and use of construction industry personal protective equipment and clothing
- workplace and equipment safety requirements.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- correctly locate, interpret and apply relevant information, standards and specifications
- comply with a site safety plan, organisational policies, OHS regulations and state and territory legislation applicable to workplace operations, including quality requirements
- correctly identify ACM and policies and procedures for reporting this to designated personnel
- effectively communicate and work safely with others
- apply general procedures for responding to incidents and reporting hazards and injuries
- select and use firefighting equipment to extinguish a simulated mechanical fire
- evacuate a site through simulated response to an emergency, complying with workplace procedures.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements

EVIDENCE GUIDE

- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct,

EVIDENCE GUIDE

indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Hazards include:

- chemical spills
- electrical safety work in confined spaces
- excavations, including trenches
- falling objects
- fires
- gases
- hazardous materials
- high or very low temperatures
- HIV and other infectious diseases
- liquids under pressure
- manual handling
- moving machinery and equipment
- noise, dust and vapours
- overhanging beams
- protrusions
- sharp equipment
- traffic
- ultraviolet (UV) radiation
- unplanned collapse

RANGE STATEMENT

Designated personnel to be contacted in case of an emergency, accident, fire or to report a risk such as identification of ACM are:

- working at heights.
- designated safety officers, determined by the enterprise, who have undertaken specific safety response training
- managers or other senior personnel
- personnel competent and/or licensed in the safe handling of asbestos
- supervisors.

Safe work practices:

- include:
 - day to day observation of OHS policies and procedures
 - emergency procedures
 - risk assessment
 - use of basic firefighting equipment
- relate to:
 - access to site amenities, such as drinking water and toilets
 - general requirements for safe use of plant and equipment
 - general requirements for use of personal protective equipment and clothing
 - housekeeping to ensure a clean, tidy and safer work area
 - no drugs and alcohol at work
 - preventing bullying and harassment
 - smoking in designated areas
 - storage and removal of debris.

Duty of care requirements:

- relate to:
 - legal responsibility under duty of care to do everything reasonably practicable to protect others from harm
 - relevant state and territory OHS requirements and include employers and self-employed persons, persons in control of the work site, construction supervisors, designers, manufacturers and suppliers, construction workers, subcontractors and inspectors
- may relate to:
 - own responsibilities to comply with safe work practices, including activities that

RANGE STATEMENT

require licences, tickets or certificates of competency.

Incidents include:

- accidents resulting in personal injury or damage to property
- near misses or dangerous occurrences that do not cause injury but may pose an immediate and significant risk to persons or property, and need to be reported so that action can be taken to prevent recurrence, for example:
 - breathing apparatus malfunctioning to the extent that the user's health is in danger
 - collapse of the floor, wall or ceiling of a building being used as a workplace
 - collapse or failure of an excavation more than 1.5 metres deep (including any shoring)
 - collapse or partial collapse of a building or structure
 - collapse, overturning or failure of the load bearing of any scaffolding, lift, crane, hoist or mine-winding equipment
 - damage to or malfunction of any other major plant
 - electric shock
 - electrical short circuit, malfunction or explosion
 - uncontrolled explosion, fire or escape of gas, hazardous substance or steam
 - any other unintended or uncontrolled incident or event arising from operations carried on at a workplace.

Australian government and state or territory OHS legislative requirements include:

- Australian standards
- construction industry OHS standards and guidelines
- duty of care
- health and safety representatives, committees and supervisors
- JSA and safe work method statements
- licences, tickets or certificates of competency
- National Code of Practice for Induction Training for Construction Work
- national safety standards

RANGE STATEMENT

Information includes:

- OHS and welfare Acts and regulations
- safety codes of practice.
- diagrams or sketches
- emergency situation contacts
- evacuation plans
- instructions issued by authorised organisational or external personnel
- labels
- manufacturer specifications and instructions
- memos
- MSDS
- organisation work specifications and requirements
- plans and specifications
- regulatory and legislative requirements, such as Acts, regulations and codes of practice
- relevant Australian standards
- reports of near misses or accidents
- safe work procedures or equivalent documentation
- safety meeting minutes
- signage
- verbal or written and graphical instructions
- work bulletins
- work schedules.

Hazardous materials include:

- ACM
- cleaning chemicals, including those in pressurised containers
- glues
- insulation materials
- solvents
- treated timber products.

Measures for controlling risk or minimising hazards in accordance with the hierarchy of control include:

- elimination
- substitution
- isolation
- engineering control
- administrative control
- personal protective equipment.

Signs and symbols include:

- emergency information signs (exits, equipment, first aid)
- fire signs (location of fire alarms and

RANGE STATEMENT

	<ul style="list-style-type: none">firefighting equipment)hazard identification, facility or location signsregulatory signs (e.g. prohibition, mandatory and limitation or restriction), such as hazard signs (danger and warning)safety tags and lockout (danger tags, out of service tags)site safety, directional, traffic and warning signs and symbols.
<i>Asbestos-containing materials are identified:</i>	<ul style="list-style-type: none">includes recognising common types of ACM that may be found in construction materials and buildingscovers asbestos rope/fabrics, asbestos cement sheeting, asbestos cement piping and lagging on pipes, bituminous waterproof membrane, fire doors, electrical switchboards, millboard, and sheeting under ceramic or vinyl floor tiles in wet areas.
Asbestos-containing materials are <i>reported</i> to:	<ul style="list-style-type: none">person in control of the workplace as set out in the relevant Asbestos Management Code.
<i>Personal protective equipment</i> is to include:	<ul style="list-style-type: none">apronsarm guardscapsdust mask/respiratorsear muffs/plugsgloveshard hatshigh visibility retro reflective vestsjacketsoverallssafety glasses/gogglessteel capped bootsUV protective clothing and sunscreen.
<i>Tools and equipment</i> include:	<ul style="list-style-type: none">firefighting equipmentfirst aid kitladders and work platformspersonal protective equipment.
<i>Materials</i> include:	<ul style="list-style-type: none">first aid materials suitable for emergency first aid treatment of minor injuries.
<i>Prohibited tools and equipment</i> that cannot be used near identified	<ul style="list-style-type: none">high-speed abrasive power and pneumatic tools, high pressure water cleaners, compressed

RANGE STATEMENT

ACM include:

air or abrasive blasting

- any vacuum cleaning equipment not specifically designed for safe work with asbestos.

Environmental requirements are to cover workplace quality management and include:

- clean-up protection
- stormwater protection
- waste management.

Types of fire includes:

- electrical, chemical, gas, mechanical, paper, wood or natural fire.

Fire equipment includes:

- breathing apparatus
- fire extinguishers
- fire hydrant and hoses
- fire reel
- fire truck
- manual firefighting instruments, such as fire blankets.

Emergency response and evacuation procedures include:

- emergencies, such as fire, toxic and/or flammable vapours emission, vehicle/mobile plant accident, structural collapse, chemical spill and injury to personnel
- extinguishing fires, organisational first aid requirements and evacuation.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCCOM2001 Read and interpret plans and specifications

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Knowledge Evidence formatted for clarity.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCCM2001 Read and interpret plans and specifications. Updated to reflect current industry terminology, tools and equipment

Application

This unit of competency specifies the skills and knowledge required to read and interpret plans and specifications relevant to construction operations at a basic level.

The unit is suitable for those with basic skills and knowledge undertaking routine work tasks under the direction of more experienced workers.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of unit CPCCWHS1001 Prepare *to work safely in the construction industry* meets this requirement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry.

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

1 Explain features and 1.1 Explain the key features and functions of each of the

- | | | |
|---|-----|--|
| functions of plans /drawings and specifications. | | main types of plans/drawings used in the construction industry. |
| | 1.2 | Locate and explain the purpose of the legend on <i>plans/drawings</i> used in the construction industry. |
| | 1.3 | Explain the meaning of construction symbols and abbreviations used on plans/drawings in the construction industry. |
| | 1.4 | Check title panels on plans/drawings and specifications to verify latest amendments are included, and report inconsistencies. |
| 2 Locate key features on a site from site plan/drawings. | 2.1 | Select and use personal protective equipment (PPE) required to enter a proposed construction site. |
| | 2.2 | Orientate the site plan with the site. |
| | 2.3 | Locate existing services, key features and boundaries of the site from the site plan and associated drawings. |
| 3 Identify project requirements from plans/drawings and specifications. | 3.1 | Identify construction types, project dimensions and nominated locations from project plans/drawings and specifications. |
| | 3.2 | Identify environmental requirements, controls and locations from environmental plans, project plans/drawings and specifications. |
| | 3.3 | Identify standards of work, finishes and tolerances from project plans/drawings and specifications. |
| | 3.4 | Identify required materials from project plans/drawings and specifications. |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCCM2001 Read and interpret plans and specifications

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCOM2001 Read and interpret plans and specifications

Modification History

Release 2 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.1.

Knowledge Evidence formatted for clarity.

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCCCM2001 Read and interpret plans and specifications. Updated to reflect current industry terminology, tools and equipment

Performance Evidence

To demonstrate competency, a candidate must satisfy all the elements, performance criteria and foundation skills of this unit by reading, interpreting and describing, at a basic level, the requirements for a proposed construction project from a set of plans/drawings and specifications.

All work must be performed to the standard required in the workplace and must comply with work health and safety (WHS) requirements.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- features and functions of different types of plans, drawings and specifications at a basic level, including:
 - construction plans
 - cross-sectional plans
 - dimensions and notes
 - illustrations
 - project specifications including structural detail and specification providing illustrations and dimensions
 - site plans
 - engineering plans
 - legends, symbols and abbreviations used on construction plans and drawings
 - title panels

- processes for:
 - checking amendments to plans, drawings and specifications at a basic level
 - orientating site plans to sites
 - determining information from site plans, drawings and specifications, including:
 - site locations
 - key features
 - construction types
 - project dimensions,
 - environmental requirements
 - materials types.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed while undertaking workplace tasks:

- in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques replicate construction workplace conditions, materials, activities, responsibilities and procedures
- using realistic tasks or simulated tasks, relevant specifications and work instructions, standard work practices, safety requirements and environmental constraints.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCON3041 Place concrete

Modification History

- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCCCO3041 Place concrete.

Application

This unit of competency specifies the skills and knowledge required to place concrete into prepared formwork or foundations. It includes receiving and checking concrete against specifications, calculating the required volume of concrete, moving concrete from the truck to the pour location, and placing and screeding concrete.

A person who has achieved this unit of competency would be expected to take responsibility for organising and completing these tasks with a high degree of self-direction.

Licensing, legislative, regulatory or certification requirements apply to this unit of competency in some states and territories. For further information, check with the relevant regulatory authority.

Completion of the general construction induction training program, specified in the Safe Work Australia model *Code of Practice: Construction Work*, is required by anyone carrying out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Pre-requisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Unit Sector

Concreting

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|---------------------------------------|---|
| 1 Plan and prepare to place concrete. | 1.1 Interpret specifications for concrete placement and clarify requirements with relevant persons. |
|---------------------------------------|---|

- 1.2 Assess work site to check scope of work against specifications.
 - 1.3 Plan work tasks to comply with relevant legislation, regulations, standards, codes, work health and safety (WHS), environmental and workplace requirements.
 - 1.4 Calculate required material quantities including volume of concrete to meet specifications.
 - 1.5 Estimate and record required time for concrete pour based on size of area to be concreted, volume of concrete, weather conditions and other relevant site factors.
 - 1.6 Select plant, tools and equipment, check for serviceability and rectify or report any faults.
 - 1.7 Select and fit required personal protective equipment (PPE).
- 2 Prepare location for concrete placement.
- 2.1 Inspect work site, assess hazards and apply risk controls including required signage and barricades around pour location.
 - 2.2 Determine location for concrete placement from specifications.
 - 2.3 Discuss implications for concrete placement near existing structures with relevant persons and define separation or connection requirements.
 - 2.4 Check that location for placement is free of debris and waste.
 - 2.5 Ensure site access is clear to allow concrete to be received.
- 3 Receive concrete.
- 3.1 Check concrete delivery docket for accuracy against order.
 - 3.2 Direct concrete delivery vehicle to location of discharge.
 - 3.3 Identify slump tolerance against specifications and relevant standards for minimum grade.

- 3.4 Monitor concrete discharged via chute into appropriate receptacle and communicate with relevant persons to maintain safety and quality in accordance with workplace requirements.
- 4 Carry out concrete placement activities.
 - 4.1 Use required plant, tools and equipment to place concrete in horizontal layers into location in accordance with indicated levels.
 - 4.2 Ensure vertical drop of concrete is less than two metres to avoid segregation of concrete materials.
 - 4.3 Consolidate poured concrete using required compaction or vibration method.
 - 4.4 Carry out measurements and calculations throughout pour to ensure sufficient concrete is delivered to fill placement area, and place order for any shortfall in accordance with workplace requirements.
 - 4.5 Check finished levels against datum using levelling device and rectify incorrect levels.
 - 4.6 Screed concrete to required levels and grades in accordance with specifications.
- 5 Clean up.
 - 5.1 Clear work area and dispose of, reuse or recycle materials in accordance with regulatory and workplace requirements.
 - 5.2 Clean, check, maintain and store plant, tools and equipment in accordance with manufacturer and workplace requirements.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCCO3041 Place concrete.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCON3041 Place concrete

Modification History

- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
- Supersedes and is equivalent to CPCCCO3041 Place concrete.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by placing concrete in either a non-precast work environment or a precast work environment:

- for the non-precast work environment, placing concrete at five different sites:
 - each site must measure at least 100 square metres
 - one site must include a fall of at least 25 millimetres over 1 metre in distance
- for the precast work environment, on five different occasions, placing concrete for a minimum of three panels involving more than one truck load of concrete.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- basic science of concrete involving cement chemical reaction (hydration) dependent on water content, temperature and time:
 - effect on plastic state performance:
 - benefits and non-benefits of admixture types and doses
 - plastic shrinkage cracking risk
 - effect on hardened state performance:
 - early age and later age strength development
 - drying shrinkage and cracking
- compliance requirements of legislation, regulations, codes and Australian Standards relevant to concrete placement tasks:
 - damp proofing
 - environmental protection and waste disposal
 - material specifications and placement tolerances
 - minimum and maximum temperature limits for pouring concrete
 - work health and safety (WHS)
- concrete placement techniques:
 - horizontal layering

- controlling vertical drop
- cold joints and how to manage them effectively
- consolidation
- concrete reinforcement
- levelling
- screeding
- correct positioning of reinforcement for different concrete products to ensure reinforcement is free from movement and has the correct cover within tolerance
- correct concrete compaction and vibration techniques and risks associated with improper vibration
- effects of temperature, wind and low humidity on the properties of concrete:
 - detrimental effect of water addition to concrete properties
 - precautions that should be taken to minimise any potential adverse effects when placing concrete
- health risks associated with silica dust exposure
- preparation requirements of concrete placement locations:
 - single slab
 - multi-level slab
 - set down and wet areas
 - temporary formwork
- processes for calculating material requirements at various times throughout a concrete pour
- processes for determining levels indicated by:
 - level pegs
 - lines
 - markers
- purpose and importance of slump testing and the impact to concrete strength and durability of adding water on site:
 - drying shrinkage
 - early age strength
 - density
 - cracking
 - discolouration
- specifications used to interpret concrete placement requirements:
 - methods for calculating concrete quantities
 - methods for checking minimum strength and mix specifications
 - types and applications of concrete materials
- types and purpose of concrete additives
- types, characteristics, uses and limitations of plant, tools, equipment and materials used when placing concrete
- workplace requirements for placing concrete:

- cleaning up the work area
- maintaining and storing plant, tools and equipment
- placing orders for shortfalls in materials
- quality
- reporting problems
- safety requirements including personal protective equipment (PPE).

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to documentation, specifications, work sites, materials, plant, tools and equipment required to achieve the performance evidence.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCON3042 Finish concrete

Modification History

- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCCCO3042 Finish concrete.

Application

This unit of competency specifies the skills and knowledge required to finish placed and screeded concrete surfaces to specification. It requires using manual and mechanical finishing techniques including edge finishing.

A person who has achieved this unit of competency would be expected to take responsibility for organising and completing these tasks with a high degree of self-direction.

Licensing, legislative, regulatory or certification requirements apply to this unit of competency in some states and territories. For further information, check with the relevant regulatory authority.

Completion of the general construction induction training program, specified in the Safe Work Australia model *Code of Practice: Construction Work*, is required by anyone carrying out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Pre-requisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Unit Sector

Concreting

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|--|---|
| 1 Plan and prepare to finish concrete. | 1.1 Interpret specifications for concrete finishing and clarify requirements with relevant persons. |
|--|---|

- 1.2 Plan work tasks to comply with relevant legislation, regulations, standards, codes, work health and safety (WHS), environmental and workplace requirements.
 - 1.3 Select and fit required personal protective equipment (PPE).
 - 1.4 Inspect work site, assess hazards and apply risk controls, including required signage and barricades.
 - 1.5 Select plant, tools and equipment, check for serviceability and rectify or report any faults.
- 2 Apply concrete finishing techniques.
- 2.1 Leave concrete untouched until bleed water has come to the surface and evaporated.
 - 2.2 Assess concrete surface during curing process and maintain level surface to allow manual and mechanical trowelling to be applied.
 - 2.3 Assess strength of setting concrete using basic thumb test to ensure weight of mechanical trowel and operator can be accommodated.
 - 2.4 Apply mechanical trowelling in multiple overlapping lines to consolidate and densify the setting concrete surface.
 - 2.5 Install jointing system, finish edges, and trowel concrete to specifications.
 - 2.6 Finish concrete and check compliance with specifications and workplace requirements.
- 3 Clean up.
- 3.1 Clear work area and dispose of, reuse or recycle materials in accordance with regulatory and workplace requirements.
 - 3.2 Clean, check, maintain and store tools and equipment in accordance with manufacturer and workplace requirements.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCCO3042 Finish concrete.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCON3042 Finish concrete

Modification History

- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
- Supersedes and is equivalent to CPCCCO3042 Finish concrete.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by finishing concrete in either a non-precast work environment or a precast work environment:

- for the non-precast work environment, finishing five different concrete surfaces with each surface measuring at least 100 square metres
- for the precast work environment, on five different occasions, finishing a minimum of three concrete panels involving more than one truck load of concrete.

Finishing techniques must include textured or non-slip and one other technique selected from the list below:

- edging and jointing system
- steel trowel.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- compliance requirements of legislation, regulations, codes and Australian Standards relevant to concrete finishing tasks:
 - environmental protection and waste disposal
 - work health and safety (WHS)
- concrete finishing techniques:
 - edging and jointing systems
 - steel trowel
 - textured or non-slip
- effects of temperature, wind and low humidity on the properties of concrete:
 - detrimental effect of water addition to concrete properties
 - precautions that should be taken to minimise any potential adverse effects when finishing concrete
- health risks associated with silica dust exposure
- methods for assessing the strength of setting concrete using the basic thumb test

- properties of concrete to be able to correctly identify when finishing techniques should be applied to minimise waste, delay and faults in finished concrete
- purpose and importance of construction, contraction, control and expansion joints:
 - doweling systems
 - installation methods
 - role in the long-term serviceability of concrete pavements
- types, characteristics, uses and limitations of plant, tools and equipment used to finish concrete
- types of drawings and specifications used to interpret concrete finishing requirements
- workplace requirements for finishing concrete:
 - cleaning up the work area
 - maintaining and storing plant, tools and equipment
 - reporting problems
 - quality
 - safety requirements including personal protective equipment (PPE).

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to documentation, specifications, concrete surfaces, plant, tools and equipment required to achieve the performance evidence.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCON3043 Cure concrete

Modification History

- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCCCO3043 Cure concrete

Application

This unit of competency specifies the skills and knowledge required to carry out the initial curing process to poured concrete in order to control moisture evaporation from finished concrete. It includes using curing agents and techniques in accordance with engineering specifications.

A person who has achieved this unit of competency would be expected to take responsibility for organising and completing these tasks with a high degree of self-direction.

Licensing, legislative, regulatory or certification requirements apply to this unit of competency in some states and territories. For further information, check with the relevant regulatory authority.

Completion of the general construction induction training program, specified in the Safe Work Australia model *Code of Practice: Construction Work*, is required by anyone carrying out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

Pre-requisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Unit Sector

Concreting

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | |
|--------------------------------------|---|
| 1 Plan and prepare to cure concrete. | 1.1 Interpret specifications to confirm concrete curing methods and clarify requirements with relevant persons. |
|--------------------------------------|---|

- 1.2 Plan work tasks to comply with relevant legislation, regulations, standards, codes, work health and safety (WHS), environmental and workplace requirements.
 - 1.3 Identify necessary preventative barriers to comply with regulatory and workplace requirements.
 - 1.4 Select and fit required personal protective equipment (PPE).
 - 1.5 Inspect work site, assess hazards and apply risk controls, including required signage and barricades.
 - 1.6 Select tools and equipment, check for serviceability and rectify or report any faults.
 - 1.7 Calculate and acquire required material quantities for specified curing methods and safely locate materials ready for use.
- 2 Carry out concrete curing activities.
- 2.1 Install and maintain preventative barriers to stop curing agents from affecting the surrounding environment.
 - 2.2 Assess weather and climatic conditions, calculate curing duration and make any adjustments necessary to achieve required curing outcome.
 - 2.3 Apply and maintain curing method on concrete surface in accordance with manufacturer and workplace requirements.
 - 2.4 Protect concrete during curing process in accordance with workplace requirements.
- 3 Clean up.
- 3.1 Clear work area and dispose of, reuse or recycle materials in accordance with regulatory and workplace requirements.
 - 3.2 Clean, check, maintain and store materials, tools and equipment in accordance with manufacturer, regulatory and workplace requirements.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCCO3043 Cure concrete

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCON3043 Cure concrete

Modification History

- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
Supersedes and is equivalent to CPCCCO3043 Cure concrete

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by curing concrete in either a non-precast work environment or a precast work environment:

- for the non-precast work environment, curing concrete at five different sites, each measuring at least 100 square metres
- for the precast work environment, curing a minimum of three panels on five different occasions.

A total of two curing techniques must be used:

- curing compound
- another technique selected from the following:
 - covering
 - flooding or ponding
 - fogging
 - steaming.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- basic science of concrete involving cement chemical reaction (hydration) dependent on water content, temperature and time:
 - effect on plastic state performance
 - benefits and non-benefits of admixture types and doses
 - plastic shrinkage cracking risk
 - effect on hardened state performance:
 - early age and later age strength development
 - drying shrinkage and cracking
- compatibilities of curing compounds with different floor finishes including vinyl, timber and natural stone products

- compliance requirements of legislation, regulations, codes and Australian Standards relevant to concrete curing tasks:
 - environmental protection and waste disposal
 - work health and safety (WHS)
- concrete curing techniques:
 - covering
 - curing compound
 - flooding or ponding
 - fogging
 - steaming
- effects of temperature, wind and low humidity on the properties of concrete:
 - detrimental effect of water addition to concrete properties
 - precautions that should be taken to minimise any potential adverse effects when curing concrete
- health risks associated with silica dust exposure
- methods for calculating curing duration
- specifications used to interpret material quantities and concrete curing requirements
- types and applications of materials and compounds used when curing concrete
- types, characteristics, uses and limitations of tools and equipment used when curing concrete
- ways to minimise moisture loss during curing using different curing methods
- workplace requirements for curing concrete:
 - cleaning up the work area
 - maintaining and storing materials, tools and equipment
 - quality
 - reporting problems
 - safety requirements including personal protective equipment (PPE).

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to documentation, specifications, materials, tools and equipment required to achieve the performance evidence.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCST2001 Prepare for stonemasonry construction process

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCST2001A Prepare for the stonemasonry construction process. Updated to meet the Standards for Training Packages 2012.

Application

This unit specifies the skills and knowledge required to undertake the preparation processes required to support the laying or placement of stone. It includes assisting in stonemasonry work by preparing materials and using a range of tools and equipment.

The unit is suitable for people with basic skills and knowledge who undertake routine stonemasonry work tasks under the direction of more experienced workers.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Unit Sector

Stonemasonry

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

1 Plan the work.

1.1 Read, interpret and apply stonemasonry construction requirements from current plans, specifications, standards and codes and confirm information with

- relevant person.
- 1.2 Source information and communicate with others using digital technology.
 - 1.3 Follow requirements in workplace safety and environmental documentation and workplace procedures.
 - 1.4 Clarify job priorities and sequence job tasks in consultation with others on site.
 - 1.5 Identify potential hazards and determine and implement control measures.
 - 1.6 Use measurements and apply formulas to calculate material quantities.
- 2 Prepare the work.
- 2.1 Select, fit correctly and use personal protective equipment (PPE) appropriate for job.
 - 2.2 Check conformity of materials against the job requirements.
 - 2.3 Select and blend stone colours as instructed and position materials ready for use.
 - 2.4 Select and check condition of equipment and tools required for the job and report damage or faults to supervisor.
 - 2.5 Prepare equipment and materials for mixing of mortar or adhesives.
 - 2.6 Set up cement mixer, locate mortar boards and clear pathways for supply of mortar.
- 3 Assist with stonemasonry work.
- 3.1 Maintain a supply of mortar to boards and stone to stacks.
 - 3.2 Use hand and power tools to clean, cut and prepare stone for laying.
 - 3.3 Assist in the set out, erection and stabilising of the scaffold.
 - 3.4 Clean finished stonework prior to mortar drying.

- 4 Clean up.
 - 4.1 Clear the work area, and dispose of, reuse or recycle materials following workplace and environmental requirements.
 - 4.2 Clean tools and equipment, check for serviceability and report damage or faults.
 - 4.3 Store and secure tools and equipment following workplace procedures.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCST2001A Prepare for stonemasonry construction process

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCST2001 Prepare for stonemasonry construction process

Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCST2001A Prepare for the stonemasonry construction process. Updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency in this unit, a candidate must meet the performance criteria of this unit by assisting with two stone masonry laying project on two different sites.

In doing this, the candidate must:

- clear the work area, position masonry materials ready for laying
- mix mortar or adhesive to job specifications and maintain sufficient quantities on mortar boards
- maintain a clean and safe workplace.

Knowledge Evidence

To be competent in this unit, a person must demonstrate knowledge of:

- characteristics, applications and limitations of specified materials for stonemasonry construction
- igneous, metamorphic and sedimentary rocks and the appropriate tools to work on these type of rocks
- construction terminology relating to stonemasonry construction
- mortar and adhesive ingredients and consistency
- functional and operational features of equipment and hand and power tools:
 - angle grinders
 - masonry saws
 - hand tools
 - wheelbarrows
- types and safe use of stone lifting equipment
- workplace practices relating to stonemasonry
- workplace safety:
 - job safety and environmental analysis (JSEA)

- exposure to silica dust
- exposure to loud noise
- hazardous manual tasks
- processes and techniques for:
 - material protection and storage
 - stonemasonry construction work
 - locating and loading mortar boards
 - work area preparation
 - laying stone
- environmental requirements for workplace processes and waste disposal.
- key features of plans and specifications
- stonemasonry regulations, standards and codes.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation reflecting workplace conditions and standards, materials, equipment, activities, responsibilities, procedures, safety requirements and environmental considerations.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCWHS1001 Prepare to work safely in the construction industry

Modification History

Release Comment

Version 1 Replaces superseded equivalent CPCCOHS1001A Work safely in the construction industry.

Application

This unit of competency specifies the mandatory work health and safety training required prior to undertaking construction work. The unit requires the person to demonstrate personal awareness and knowledge of health and safety legislative requirements in order to work safely and prevent injury or harm to self and others. It covers identifying and orally reporting common construction hazards, understanding basic risk control measures, and identifying procedures for responding to potential incidents and emergencies. It also covers correctly selecting and fitting common personal protective equipment (PPE) used for construction work.

This unit meets the general construction induction training requirements of:

- Part 1.1 Definitions and Part 6.5 of the Model Work Health and Safety Regulations;
- Division 11 of Part 3 of the Occupational Safety and Health Regulations 1996 for Western Australia; and
- Division 3 of Part 5.1 of the Occupational Health and Safety Regulations 2007 for Victoria.

It is expected that site-specific induction training will be conducted prior to conducting construction work.

Licensing, legislative, regulatory or certification requirements apply to this unit. Relevant work health and safety state and territory regulatory authorities should be consulted to confirm jurisdictional requirements.

Pre-requisite Unit

Nil

Unit Sector

Construction

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.
1. Identify health and safety legislative requirements of construction work.	1.1. Basic roles, responsibilities and rights of duty holders are identified and explained according to <i>jurisdictional health and safety legislative requirements</i> . 1.2. Duty of care requirements are identified. 1.3. Construction safe work practices are identified and explained.
2. Identify construction hazards and risk control measures.	2.1. Basic principles of risk management are identified. 2.2. Construction hazards are identified and discussed. 2.3. Purpose and use of PPE are identified and demonstrated. 2.4. Measures for controlling hazards are identified.
3. Identify health and safety communication and reporting processes.	3.1. Health and safety documents are identified and discussed. 3.2. Roles of designated health and safety personnel are identified and explained. 3.3. Safety signs and symbols are identified and explained. 3.4. Procedures for reporting hazards, incidents and injuries are identified.
4. Identify incident and emergency response	4.1. Procedures for responding to incidents and emergencies are identified and explained. 4.2. Procedures for accessing first aid are identified.

procedures.

- 4.3. Types and purpose of fire safety equipment are identified and discussed.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
Numeracy skills to:	<ul style="list-style-type: none"> • locate and recognise numbers commonly used in safety signs.
Oral communication skills to:	<ul style="list-style-type: none"> • ask questions to clarify instructions • listen to instructions to identify key safety information • tell another person about a construction problem or hazard.
Reading skills to:	<ul style="list-style-type: none"> • follow simple pictorial safety instructions • follow simple safety instructions that are written in English.
Problem-solving skills to:	<ul style="list-style-type: none"> • select risk control measures.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Jurisdictional health and safety legislative requirements</i> must include at least one of the following state and territory Acts or their equivalent:	<ul style="list-style-type: none"> • Australian Capital Territory: Work Health and Safety Act 2011 • New South Wales: Work Health and Safety Act 2011 • Northern Territory: Work Health and Safety (National Uniform Legislation) Act 2011 • Queensland: Work Health and Safety Act 2011 • South Australia: Work Health and Safety Act 2012 • Tasmania: Work Health and Safety Act 2012 • Victoria: Occupational Health and Safety Act 2004 • Western Australia: Occupational Safety and Health Act 1984.
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Unit Mapping Information

Supersedes and is equivalent to CPCCOHS1001A Work safely in the construction industry

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCWHS1001 Prepare to work safely in the construction industry

Modification History

Release Comment

Version 1 Replaces superseded equivalent CPCCOHS1001A Work safely in the construction industry.

Performance Evidence

A person demonstrating competency in this unit must satisfy the requirements of the elements, performance criteria, foundation skills, and range of conditions of this unit, in addition to the specific performance and knowledge evidence described below.

The person must:

- identify and orally report two construction hazards
- orally explain how risk could be reduced or removed in relation to those two hazards
- select appropriate personal protective equipment (PPE) to control the risk
- orally explain basic procedures for responding to incidents and emergencies, including types and purpose of the following fire safety equipment:
 - fire blankets
 - fire extinguishers, including water, carbon dioxide, powder and foam
 - hose reels and mains
- identify and orally explain the meaning of required safety signs and symbols
- orally explain the purpose of job safety analyses (JSAs), safe work method statements (SWMS) and safety data sheets (SDS)
- orally explain the roles of the following designated health and safety personnel:
 - first aid officers
 - work health and safety representatives
 - work health and safety committee members
 - supervisors.

The person must also demonstrate correctly fitting to themselves the PPE listed below:

- eye protection
- hearing protection
- hard hat

- high visibility retro reflective vest.

Knowledge Evidence

A person must demonstrate knowledge of:

- basic duty of care, and the roles, rights and responsibilities of business owners and workers in relation to working safely while undertaking construction work
- basic meaning of the terms 'hazard' and 'risk'
- basic principles of risk management, including the following five steps in order:
 - identify hazard
 - assess risk
 - consult and report
 - control hazard
 - review
- basic procedures for accessing first aid
- construction hazards, including those relating to:
 - asbestos
 - confined spaces
 - electrical: power lines, cords and equipment
 - excavations and trenches, including underground services
 - dust
 - falling objects
 - hazardous substances and dangerous goods
 - hot and cold work environments
 - manual handling
 - noise
 - plant and equipment operation
 - traffic and mobile plant
 - unplanned collapse
 - ultraviolet radiation
 - working at heights, including scaffolding
- construction work that requires a high risk work licence
- types, purpose and use of PPE used in construction, as specified in the performance evidence, and including safety footwear, harnesses and respiratory protection, and ultraviolet (UV) protective clothing and sunscreen
- construction emergencies, including:
 - chemical spill
 - fire
 - injury to personnel
 - structural collapse
 - toxic or flammable vapour emission

- vehicle or mobile plant accident
- construction incidents, including:
 - incidents resulting in personal injury or damage to property
 - near misses or dangerous occurrences that do not cause injury but may pose an immediate and significant risk to persons or property, and need to be reported so that action can be taken to prevent recurrence
- safe work practices that should be followed in construction work, including:
 - accessing and using site amenities for drinking water, hand washing and toilets
 - following safety procedures when performing work tasks and using equipment
 - identifying and reporting hazards, incidents and injuries in the workplace
 - keeping the work area clean, tidy and free from debris
 - not using or being affected by drugs and/or alcohol while at work
 - preventing bullying and harassment in the workplace
 - selecting and using required PPE
 - smoking only in designated areas
 - storing and removing waste and debris in designated areas
- meanings and symbols associated with construction safety signs, symbols and tags, including:
 - emergency information signs: exits, emergency equipment and first aid
 - fire signs: location of fire alarms and firefighting equipment
 - hazard signs and symbols: danger and warning
 - regulatory signs and symbols: prohibition, mandatory and limitation or restriction
 - safety and lockout tags: danger and out-of-service tags.

Assessment Conditions

The following must be present and available to learners during assessment activities:

- equipment:
 - all of the PPE listed in the performance evidence
- specifications:
 - state or territory Act relevant to the location of the learner, as specified in the range of conditions.

The assessment of performance evidence must be done by direct observation of the learner by an assessor, either by an assessor observing the learner physically and/or by an assessor observing the learner via audio and visual media in real time.

Assessor requirements

As a minimum, assessors must satisfy the assessor requirements in the Standards for Registered Training Organisations (RTOs) current at the time of assessment.

Assessors must hold the unit *CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry*, or its successor.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Modification History

Release 1.

Supersedes and equivalent to CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry.

The unit of competency was updated to the Standards for Training Packages 2012.

This version first released with CPC Construction, Plumbing and Services Training Package Version 4.0.

Application

This unit specifies the outcomes required to carry out work health and safety (WHS) requirements through safe work practices in all on- or off-site construction workplaces.

It requires the performance of work in a safe manner through awareness of risks and work requirements, and the planning and performance of safe work practices with concern for personal safety and the safety of others.

The unit covers fundamental WHS requirements necessary to undertake work tasks within any sector in the construction industry. It includes the identification of hazardous materials, including asbestos, and compliance with legislated work safety practices. It does not cover removal of asbestos, which is a licensed activity.

It applies to workers in the construction industry.

This unit also relates directly to the general construction induction training requirements of the Model Work Health and Safety Regulations 2011 and relevant occupational health and safety regulations for Victoria and for Western Australia. Achievement of *CPCCWHS1001 Prepare to work safely in the construction industry* covers these induction training requirements.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe what needs to be done to demonstrate achievement of the element.
1. Identify and assess risks.	<p>1.1 Identify, assess and report hazards in the work area to designated personnel.</p> <p>1.2 Report safety risks in the work area based on identified hazards, to designated personnel.</p> <p>1.3 Follow safe work practices, duty of care requirements and safe work instructions for controlling risks.</p> <p>1.4 Contribute to WHS, hazard, accident or incident reports in accordance with workplace procedures, Australian government and state or territory WHS legislation, and relevant information.</p>
2. Identify hazardous materials and other hazards on work sites.	<p>2.1 Correctly identify and, if appropriate, handle and use hazardous materials on a work site in accordance with legislative requirements, and workplace policies and procedures.</p> <p>2.2 Apply measures for controlling risks and construction hazards effectively and immediately.</p> <p>2.3 Use appropriate signs and symbols to secure hazardous materials that have safety implications for self and other workers, immediately they are identified.</p> <p>2.4 Identify asbestos-containing materials on a work site and report to designated personnel.</p>
3. Plan and prepare for safe work practices.	<p>3.1 Identify, wear, correctly fit, use and store correct personal protective equipment and clothing for each area of construction work in accordance with workplace procedures</p> <p>3.2 Select tools, equipment and materials, and organise tasks in conjunction with other personnel on site and in accordance with workplace procedures.</p> <p>3.3 Determine required barricades and signage, and erect at the appropriate site location.</p> <p>3.4 Apply material safety data sheets (MSDSs), job safety analyses (JSAs) and safe work method statements (SWMSs) relevant to the work to be performed.</p>
4. Apply safe work practices.	<p>4.1 Carry out tasks in a manner that is safe for operators, other personnel and the general community, in accordance with legislative requirements, and workplace policies and procedures.</p> <p>4.2 Use plant and equipment guards in accordance with manufacturers' specifications, work site regulations and Australian Standards.</p> <p>4.3 Follow procedures and report hazards, incidents and injuries</p>

	<p>to relevant authorities.</p> <p>4.4 Recognise and do not use prohibited tools and equipment in areas containing identified asbestos.</p> <p>4.5 Identify and follow requirements of work site safety signs and symbols.</p> <p>4.6 Clear and maintain work site area to prevent and protect self and others from incidents and accidents, and to meet environmental requirements.</p>
5. Follow emergency procedures.	<p>5.1 Identify designated personnel in the event of an emergency for communication purposes.</p> <p>5.2 Follow safe workplace procedures for dealing with accidents, fire and other emergencies, including identification and use, if appropriate, of fire equipment within scope of own responsibilities.</p> <p>5.3 Describe, practice and effectively carry out emergency response and evacuation procedures when required.</p> <p>5.4 Carry out emergency first aid treatment of minor injuries and, as soon as possible, accurately report treatment details to designated personnel.</p>

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Modification History

Release 1.

Supersedes and equivalent to CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry.

The unit of competency was updated to the Standards for Training Packages 2012.

This version first released with CPC Construction, Plumbing and Services Training Package Version 4.0.

Performance Evidence

To demonstrate competency in this unit, a person must apply WHS requirements, policies and procedures on three separate and different occasions in the construction industry.

In doing this, the person must meet the performance criteria for this unit.

Knowledge Evidence

To be competent in this unit, a person must demonstrate knowledge of:

- jurisdictional work health and safety (WHS) and environmental legislation and regulations
- workplace requirements for undertaking all aspects of applying WHS requirements, policies and procedures in the construction industry including interpreting work orders and reporting problems
- procedures and policies for identifying and reporting hazards, safety risks and hazardous materials, including asbestos, in the workplace
- procedures for following safe practices when dealing with hazards and hazardous materials, and controlling risks associated with them
- use of appropriate protective equipment and clothing, choice of tools, use of barricades and signage, and the necessity of following relevant safety procedures as indicated
- methods of safely performing tasks in accordance with legislative requirements and workplace policies and procedures
- procedures for reporting hazards, incidents and injuries
- necessity for keeping work site clear of risks to prevent accidents and to meet environmental requirements
- policies and procedures to be followed in an accident, fire or other type of emergency.

Assessment Conditions

Assessors must satisfy the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment of performance must be undertaken in the workplace or in a simulated workplace environment. Tasks are to be performed to the level of proficiency and within the time limits expected in a workplace.

Assessors are responsible for ensuring that the person demonstrating competency has access to:

- appropriate documents, materials, tools, equipment and personal protective equipment currently used in industry
- requirements of appropriate sections of legislation and regulations
- relevant workplace policies and procedures.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPCPCM2040A Read plans and calculate plumbing quantities

Modification History

Changes to performance criteria, required skills and knowledge, range statement and critical aspects

Not equivalent to CPCPCM2004A

Unit Descriptor

This unit of competency specifies the outcomes required to use and interpret plans and specifications associated with construction work, and accurately complete measurements and calculations to establish quantities of materials for the plumbing and services industry.

The unit requires the interpretation of plans, drawings and specifications to interpret requirements, and making measurements and calculations to determine quantities of plumbing materials.

Application of the Unit

This unit of competency supports skills to read and interpret plans for a variety of plumbing and services applications.

Site location for work application may be either domestic or commercial and may be a new work site or an existing structure being renovated, extended, restored or maintained. It may be a customer's premises or employer's workplace, either on or off-site.

Licensing/Regulatory Information

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised

unit of competency. text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | | |
|---|---|-----|---|
| 1 | Prepare for work. | 1.1 | Plans, drawings, specifications and standards are obtained and required calculations are identified. |
| | | 1.2 | Work health and safety (WHS) requirements associated with reading plans, calculating plumbing requirements and the workplace environment are adhered to throughout the work. |
| | | 1.3 | Quality assurance requirements are identified and adhered to according to workplace requirements. |
| | | 1.4 | Work area and materials are prepared to support the efficient reading of plans and the calculation of plumbing requirements. |
| 2 | Identify types of plans and drawings and their functions. | 2.1 | Plans and drawings used in the plumbing industry are identified. |
| | | 2.2 | Key functions of each type of drawing are identified. |
| | | 2.3 | Key users of drawings are identified. |
| 3 | Identify commonly used scales, symbols and abbreviations. | 3.1 | Commonly used scales, symbols and abbreviations are used. |
| | | 3.2 | Function of legend is understood and identified. |
| 4 | Locate and identify key features on a services plan. | 4.1 | Key features and dimensions of sectional details and elevations on a plan are identified and located. |
| | | 4.2 | Location and types of services are identified. |
| | | 4.3 | General and structural features and major horizontal and |

- vertical measurements are located.
- 5 Read and interpret job specifications.
- 5.1 Purpose of job specification is identified.
 - 5.2 Details in job specification are obtained.
 - 5.3 Job specifications are read in conjunction with plans.
- 6 Obtain measurements and perform calculations
- 6.1 Work *measurements* are obtained.
 - 6.2 Quality assurance requirements associated with calculations are applied.
 - 6.3 Measurements and dimensions are obtained from plans.
 - 6.4 Simple *calculations* are carried out.
- 7 Calculate material quantities.
- 7.1 *Material* quantities are calculated and recorded from plans and specifications according to workplace procedure.
 - 7.2 *Information* from plans, *specifications* and work area are obtained from job instructions.
 - 7.3 Measurements are identified and recorded.
- 8 Clean up.
- 8.1 Work area is cleared and materials disposed of, reused or recycled according to legislation, regulations, codes of practice, and job specification.
 - 8.2 *Tools and equipment* are cleaned, checked, maintained and stored according to manufacturer recommendations and workplace procedures.
 - 8.3 Information is accessed and documentation completed according to workplace requirements.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - request relevant documentation and information
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- literacy skills to:
 - complete relevant workplace documentation
 - read and interpret:
 - documentation from a variety of sources
 - plans and specifications
 - record calculations, measurements and material quantities
- numeracy skills to apply measurements and calculations
- plan-reading skills, including:
 - boundaries
 - easements (sewer, stormwater, etc.)
 - existing services
 - orientation
 - pedestrian and vehicular access
 - preservation orders
 - set backs
 - site features
 - site geography, including levels
 - surrounding buildings and fences
- planning and organising skills to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities

Required knowledge

- job safety analysis (JSA) and safe work method statements (SWMS)
- measurements, calculations and quantities
- range of plans and specifications relevant to the plumbing and services industry
- relevant Acts, regulations and codes of practice
- simple industry calculations

- symbols, dimensions, terminology and key features of plans
- tools, equipment and materials relative to plans, drawings and specifications
- work schedules, work plans, charts, work bulletins and memos
- workplace safety requirements

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of:

- locating, interpreting and applying relevant information, standards and specifications for reading plans and calculating plumbing quantities
- applying safety requirements throughout the work sequence, including electrical safety requirements and the use of personal protective clothing and equipment
- given the plans and specifications for a project, completing the following in respect of interpreting the plans and determining quantities:
 - apply sustainability principles and concepts
 - identify type and purpose of the plan and drawing
 - identify its dimensions, symbols, abbreviations, key features, title and reference date (as current version)
- identify material types from the specifications, measurements and calculations, indicating items of plumbing material required, ensuring:
 - correct selection and use of appropriate processes, tools and equipment
 - completion of all work to specification

- compliance with regulations, standards and organisational quality procedures and processes.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the minimum task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry-related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be

transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Work health and safety is to be according to commonwealth, state and territory legislation and regulations and may include:

- handling of materials
- hazard control, including of electrical hazards
- hazardous materials and substances
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- use of firefighting equipment
- use of first aid equipment

- use of tools and equipment
- workplace environment and safety.

Quality assurance requirements may include:

- Australian standards
- environmental policy
- Environment Protection Authority (EPA)
- internal company quality assurance policy and risk management strategy
- International Standards Organisation
- site safety plan
- workplace operations and procedures.

Types of **drawings** may include:

- drainage plans
- elevations and sections
- floor plans
- hydraulic plans
- mechanical services and drainage plans
- sanitary plans
- sewerage plans
- site plans
- specifications.

Key features of detailed **elevations and plans** may include:

- boundaries
- building lines
- cross-sections of construction details
- easements
- layout of rooms
- location of works relative to other buildings
- orientation
- service locations
- shape of building and structure
- type of construction
- type of structure, including structural members
- vertical and horizontal measurements.

Measurements may include:

- all dimensions used in plumbing
- laser or similar technology
- SI units of measurement
- the use of:

- calipers
- dividers
- rulers
- squares
- tape measures.

Calculations:

- are to be performed manually or with the aid of a calculator
- require numeracy skills to apply the basic arithmetic calculations of addition, subtraction, multiplication and division in order to estimate simple projects and determine consumables required for a task, and may include:
 - area
 - circumference
 - diameter
 - gradient
 - length
 - mass
 - perimeter
 - pressure
 - ratios (e.g. ingredients, elements and triangulation)
 - scales
 - volume.

Materials for reading plans and calculating plumbing quantities may include:

- drawings
- plans
- specifications.

Information may include:

- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions
- organisation work specifications and requirements
- recognised formulas or tables accepted by the regulatory authority
- regulatory and legislative requirements, particularly those pertaining to:
 - building codes
 - WHS and environmental requirements

- plumbing and gasfitting authority regulations
- relevant Australian standards
- safe work procedures relating to reading plans and calculating plumbing requirements
- verbal, written and graphical instructions, including:
 - charts and hand drawings
 - plans and sketches
 - job drawings
 - material safety data sheets (MSDS)
 - memos
 - plans and specifications
 - signage
 - work bulletins
 - work schedules.

Key features of *specifications* may include:

- material details
- preferred suppliers
- quality of finishes
- quantities
- specific skill requirements.

Tools and equipment may include:

- calculators
- laser measuring devices
- rulers, dividers, tape measures or squares.

Unit Sector(s)

Functional area

Unit sector Plumbing and services

Custom Content Section

Not applicable.

CPCPCM2043A Carry out WHS requirements

Modification History

Changes to application, elements and performance criteria, required skills and knowledge, range statement and critical aspects

Not equivalent to CPCPCM2023A

Unit Descriptor

This unit of competency specifies the outcomes required to carry out work health and safety (WHS) requirements through safe work practices in a plumbing and services work environment.

The unit requires the performance of work in a safe manner through awareness of risks, work requirements and the planning and performance of safe work practices with concern for personal safety and the safety of others.

It includes the initial response to workplace emergencies; the safe use of electricity; the identification of hazardous materials, including asbestos; and compliance with legislated work safety practices.

Application of the Unit

This unit of competency supports safe work practices for the plumbing and services industry.

Site location for work application may be either domestic or commercial and may be a new work site or an existing structure or fitting being renovated, extended, restored or maintained. It could also be conducted in an on or off-site workshop or at a customer's premises.

The unit does not cover the removal of asbestos, which is a licensed activity.

Licensing/Regulatory Information

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | |
|---|--|---|
| 1 | Participate in workplace induction. | <p>1.1 <i>Workplace induction</i> is received.</p> <p>1.2 Location of emergency equipment is identified.</p> <p>1.3 Current workplace emergency and evacuation procedures are identified.</p> <p>1.4 Identify safe working conditions with employer.</p> <p>1.5 Identify employee and employer rights and responsibilities regarding safe working conditions.</p> |
| 2 | Assess risks. | <p>2.1 Hazards in the work area are identified, assessed and reported to designated personnel.</p> <p>2.2 WHS issues and risks in the work area are identified, assessed and reported to designated personnel.</p> <p>2.3 <i>Safe work practices</i>, procedures and instructions are followed.</p> <p>2.4 WHS, hazard, accident or incident reports are completed according to workplace procedures and <i>statutory and regulatory authorities</i> and legislation.</p> |
| 3 | Identify hazards and hazardous materials on work site. | <p>3.1 Hazardous materials on a work site are identified, secured and tagged using appropriate signs and symbols; and if appropriate, handled and used according to company and legislated procedures.</p> <p>3.2 Measures for controlling risks and construction hazards</p> |

- are applied effectively and immediately.
- 3.3 ***Asbestos-containing materials (ACM) are identified*** on a work site ***and reported*** to designated personnel.
- 4 Plan and prepare for safe work practices.
- 4.1 Quality assurance requirements of company operations and safe work practices are identified and adhered to.
- 4.2 Personal protective equipment (PPE) is selected, correctly fitted and used according to the requirements of the job.
- 4.3 Tools and equipment are selected consistent with safe work practice requirements, checked for serviceability, and any faults are reported to supervisor.
- 4.4 Required barricades, hoardings and signage are determined and erected at job location.
- 4.5 Material safety data sheets (MSDS) are identified and applied.
- 4.6 ***Sustainability principles and concepts*** are observed when preparing for and undertaking work process.
- 5 Use safe work practices to carry out work.
- 5.1 Work is carried out safely and according to state or territory statutory requirements and company policy.
- 5.2 ***Safety hazards*** and common workplace accidents and incidents are identified in the course of work and reported according to policy.
- 5.3 Industry, site and personal safety rights and responsibilities are applied.
- 5.4 Prohibited tools and equipment in areas with identified asbestos are identified and isolated.
- 5.5 Firefighting equipment is selected and used according to type of fire and correct operating procedures.
- 5.6 Current site emergency and first aid procedures are followed.

- | | | |
|---|-------------------------------------|---|
| 6 | Maintain safety of self and others. | 6.1 Safety signs, identified in terms of colour and shape, symbols and alarms, are adhered to. |
| | | 6.2 Hazardous chemicals and materials are identified, handled and stored, maintaining the safety to self, others and the environment. |
| | | 6.3 Incidents are reported according to legislative requirements and workplace procedures. |
| | | 6.4 Common causes of accidents in the industry are identified and prevention measures implemented in line with site induction. |
| | | 6.5 Site area is maintained to prevent incidents and accidents and protect self and others |
| 7 | Use electricity safely. | 7.1 Safest supply and route for electrical supply are determined. |
| | | 7.2 Leads are supported and placed according to regulations. |
| | | 7.3 Power board visual check is conducted. |
| | | 7.4 Leads and equipment are checked for tags and visual damage. |
| | | 7.5 Electrical hazards are identified and reported. |
| 8 | Apply emergency response. | 8.1 Emergencies are identified. |
| | | 8.2 Emergency response is provided according to company procedures and requirements. |
| | | 8.3 Details of actions taken are reported according to company procedures and requirements using appropriate communications. |
| 9 | Clean up work site area. | 9.1 Work area is cleared and materials disposed of, reused or recycled according to legislation, regulations, codes of practice and job specifications. |
| | | 9.2 Tools and equipment are cleaned, checked, maintained and stored according to manufacturer recommendations |

and standard work practices.

- 9.3 Information is accessed and documentation completed according to workplace requirements.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - complete written reports and other relevant documentation
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- initiative and enterprise skills to:
 - evaluate safety issues in the workplace and determine appropriate action
 - recognise WHS hazards, including asbestos, and take all opportunities to alleviate safety problems in a variety of construction work sites and environments
- initiative and enterprise skills to identify and report to appropriate personnel any faults in tools or materials
- literacy skills to read and interpret:
 - documentation from a variety of sources
 - MSDS
 - work safety procedures and instructions
- self-management skills to deal calmly and effectively with any potential safety problems and work closely with other team members and supervisors to ensure safe working conditions are maintained
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technology skills to:
 - access and understand site-specific instructions in a variety of media
 - use mobile communication technology

Required knowledge

- asbestos management code relating to prevention of exposure
- job safety analysis (JSA) and safe work method statements (SWMS)

- manual handling techniques
- MSDS
- relevant legislation, regulations and workplace requirements relating to WHS, including hazard reduction and personal safety
- requirements for working in confined spaces and at height, including on rooves
- tools and equipment prohibited from being used near identified ACM
- risk assessment
- safe work practices in normal working environment
- types, possible location and risks of ACM, including serpentine and amphibole groups and their use in common building materials
- workplace and equipment safety requirements
- workplace hazards and their precautions and reduction
- workplace response to emergencies

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications for applying safe work practices in the workplace
- apply safety requirements throughout the performance of work sequences, including electrical requirements and personal protective clothing and equipment
- apply sustainability principles and concepts
- undertake site and workplace induction
- correctly identify the location of ACM
- understand and apply policies and procedures for reporting presence of ACM to designated personnel
- assess workplace risks and interpret and apply safe work practices

- understand workplace requirements for emergency response, including evacuation procedures
- correctly locate and identify workplace firefighting and other safety equipment and appliances
- correctly select and use appropriate processes, tools and equipment
- safely complete all work to specification
- comply with regulations, standards and workplace instructions, procedures and processes, including reporting and documentation
- communicate and work effectively and safely with others.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the minimum task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry-related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or

simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application

- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Workplace induction may include:

- first aid officers and kits

- personnel competent and/or licensed in the safe handling of asbestos
- site induction work site locations
- specific site WHS issues
- specific site requirements.

Safe work practices are to be according to state and territory legislation and regulations and may include:

- handling of materials
- hazard control procedures and procedures for handling hazardous materials and substances
- PPE prescribed under legislation, regulations and workplace policies and practices
- use of firefighting equipment
- use of first aid equipment
- use of tools and equipment
- workplace environment and safety.

Statutory and regulatory authorities include:

- commonwealth, state or territory, and local authorities administering applicable Acts, regulations and codes of practice.

Identifying and reporting asbestos-containing materials:

- includes recognising common types of ACM that may be found in construction materials and buildings
- covers asbestos rope/fabrics, asbestos cement sheeting, asbestos cement piping and lagging on pipes, bituminous waterproof membrane, millboard, asbestos flues, sheeting under ceramic or vinyl floor or wall tiles in wet areas
- involves reporting ACM to person in control of the workplace as set out in the relevant Asbestos Management Code.

Sustainability principles and concepts:

- cover the social, economic and environmental use of resources to meet current and future needs
- may include:
 - selecting appropriate components and material
 - choosing efficient products
 - using material efficiently
 - storing and disposing of hazardous material to ensure minimal environmental impact.

Safety hazards may include:

- hazards and risks associated with tools and equipment
- inflammable materials and fire hazards
- lifting practices
- lighting, gases, electricity and water
- spillage, waste and debris
- toxic and hazardous substances
- working at heights
- working in confined spaces.

Emergencies may include:

- accidents
- fires
- injuries
- sudden illness.

Emergency response may include:

- common site signs
- equipment tags
- facility or location signs
- safety barricades and warning signs
- site direction
- traffic signs
- workplace evacuation involving staff and customers.

Unit Sector(s)

Functional area

Unit sector Plumbing and services

Custom Content Section

Not applicable.

CPCPCM2047A Carry out levelling

Modification History

Prerequisite unit updated

Changes to performance criteria, required skills and knowledge, range statement and critical aspects

Not equivalent to CPCPCM2027A

Unit Descriptor

This unit of competency specifies the outcomes required to plan and use levelling equipment to establish, record and apply those levels to the plumbing and services industry.

Application of the Unit

This unit of competency supports skills to undertake levelling operations for application in the plumbing and services industry.

Site location for work application may be either domestic or commercial and may be a new work site or an existing structure being renovated, extended, restored or maintained.

Licensing/Regulatory Information

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Pre-Requisites

CPCPCM2043A Carry out WHS requirements

Employability Skills Information

This unit contains employability skills..

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | | |
|---|--------------------|-----|--|
| 1 | Prepare for work. | 1.1 | Requirements of the job are determined and various levels are obtained. |
| | | 1.2 | Work health and safety (WHS) and environmental requirements associated with levelling activities are adhered to throughout the work. |
| | | 1.3 | Quality assurance requirements are identified and adhered to according to workplace requirements. |
| | | 1.4 | Tools and equipment , including personal protective equipment, are selected and checked for serviceability. |
| 2 | Perform levelling. | 2.1 | Height to be transferred is identified from drawings, plans or instructions. |
| | | 2.2 | Levelling equipment is set up and operated according to manufacturer instructions, workplace procedures and relevant Australian standards. |
| | | 2.3 | Levels are taken, recorded and marked according to job requirements and workplace procedures within the required tolerance and specifications. |
| | | 2.4 | Sustainability principles and concepts are observed when preparing for and undertaking work process. |
| 3 | Clean up. | 3.1 | Work area is cleared and materials are disposed of, reused or recycled according to legislation, regulations, codes of practice and job specification. |
| | | 3.2 | Tools and equipment are cleaned, checked, maintained and stored according to manufacturer recommendations and workplace procedures. |
| | | 3.3 | Information is accessed and documentation completed according to workplace requirements. |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - determine requirements, follow instructions and access information
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- initiative and enterprise skills to identify and report to appropriate personnel any faults in tools, equipment or materials
- literacy skills to:
 - complete workplace documentation
 - read and interpret:
 - plans and specifications
 - documentation from a variety of sources
- numeracy skills to apply measurements and calculations
- planning and organising skills to plan and set out work
- technical skills to operate levelling equipment to read, record, establish and check:
 - levels: horizontal, vertical and at gradient used for the placement of plumbing and services
 - recording levels at specific points along a set out
 - recording and checking levels in drainage and sanitary excavations and plumbing services
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technology skills to:
 - access and understand site-specific instructions in a variety of media
 - use mobile communication technology

Required knowledge

- different types of levelling equipment, their applications and their method of operation
- how to access relevant information, including codes and technical standards
- job safety analysis (JSA) and safe work method statements (SWMS)
- process of establishing, recording and checking levels and alignment

- relevant statutory requirements related to establishing, recording and checking levels
- simple calculations relating to carrying out levelling
- SI system of measurements
- workplace and equipment safety requirements

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit A person who demonstrates competency in this unit must be able to provide evidence of:

- locating, interpreting and applying relevant information, standards and specifications for the establishment, recording and checking of levels
- applying safety requirements throughout the work sequence, including electrical safety requirements and the use of personal protective clothing and equipment
- using either a pipe laser, rotary laser or automatic level and either boning rods or string line
- grading a pipe (or equivalent) over 10 metres on a grade to a tolerance of + or - 5mm, ensuring:
 - applying sustainability principles and concepts
 - correctly identifying, recording and checking level
 - correctly selecting and using appropriate processes, tools and equipment
 - completing all work to specification
 - complying with regulations, standards and organisational quality procedures and processes
 - communicating and working effectively and safely with others.

Context of and specific This competency is to be assessed using standard and authorised work practices, safety requirements and environmental

resources for assessment constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the minimum task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry-related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has

complete confidence in the person's demonstrated ability and applied knowledge

- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Work health and safety is to be according to commonwealth, state and territory legislation and regulations and may include:

- handling of materials
- hazard control, including of electrical hazards
- hazardous materials and substances
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- use of firefighting equipment
- use of first aid equipment
- use of tools and equipment
- workplace environment and safety.

Quality assurance requirements may include:

- environmental policy
- Environment Protection Authority (EPA)
- internal company quality assurance policy and risk management strategy
- International Standards Organisation
- relevant Australian standards
- site safety plan
- workplace operations and procedures.

- Tools and equipment*** may include:
- hand tools
 - measuring equipment
 - string line.
- Levelling equipment*** may include:
- boning rods
 - rotating laser level
 - pipe laser level
 - spirit level
 - water level.
- Sustainability principles and concepts***
- cover the social, economic and environmental use of resources to meet current and future needs
 - may include:
 - efficient use and recycling of tools and equipment
 - disposing of waste material to ensure minimal environmental impact
 - energy efficiency
 - water efficiency.
- Information*** may include:
- building codes
 - charts and hand drawings
 - instructions issued by authorised organisational or external personnel
 - job drawings
 - manufacturer specifications and instructions
 - material safety data sheets (MSDS)
 - memos
 - WHS and environmental requirements
 - organisation work specifications and requirements
 - plans and sketches
 - regulatory and legislative requirements, particularly those pertaining to plumbing and gasfitting authority regulations
 - relevant Australian standards
 - safe work procedures relating to handling and storing levelling equipment
 - signage
 - verbal, written and graphical instructions
 - work bulletins
 - work schedules, plans and specifications.

Unit Sector(s)

Functional area

Unit sector Plumbing and services

Custom Content Section

Not applicable.

CPCPPS5027A Design irrigation systems

Modification History

Changes to unit descriptor, application, performance criteria, required skills and knowledge, range statement and critical aspects

Not equivalent to CPCPPS5007A

Unit Descriptor

This unit of competency specifies the outcomes required to design irrigation systems to relevant Australian standards, codes, the National Construction Code (NCC) and other relevant legislative requirements to meet occupier needs and industry standards.

Application of the Unit

This unit of competency supports development of skills and knowledge required for competent workplace performance in a consultancy or supervisory capacity in relation to the design of irrigation systems for residential, commercial, industrial, sporting and agricultural properties with or without connection to reticulated supply.

Licensing/Regulatory Information

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | |
|---|------|--|
| 1 Evaluate design parameters. | 1.1 | <i>Scope of work</i> for irrigation systems is established. |
| | 1.2 | <i>Design requirements</i> are determined from relevant Australian standards, codes, plans, specifications and client brief. |
| | 1.3 | <i>Cost-benefit analysis</i> is conducted comparing a range of pipe materials and system designs. |
| | 1.4 | <i>Statutory and regulatory requirements and relevant Australian standards and codes</i> for the design of irrigation systems are interpreted, analysed and applied. |
| | 1.5 | <i>Manufacturer requirements</i> and trade and technical manuals are interpreted. |
| | 1.6 | Additional research, including a <i>desktop study</i> , is conducted to outline design parameters. |
| | 1.7 | <i>Flow and pressure tests</i> are conducted. |
| | 1.8 | <i>Water sources, volumes and areas to be irrigated</i> are established. |
| | 1.9 | <i>Soil types</i> are analysed and categorised, and impacts on irrigation systems are documented. |
| | 1.10 | Factors that contribute to quality, safety and time efficiency are determined. |
| | 1.11 | <i>Performance requirements</i> are established, considering safety of system users or building occupants. |
| 2 Plan and detail system components. | 2.1 | <i>Layout of pipework systems</i> and type and location of <i>fittings, valves and controls</i> are planned. |
| | 2.2 | Type, location and requirements for <i>backflow prevention devices</i> are detailed. |
| | 2.3 | Pipe sizes, velocities, flows and pressures are calculated for a range of applications. |

- 2.4 Approved *materials* and *jointing methods* for irrigation systems are specified.
 - 2.5 *Sections and components of the irrigation system* are detailed.
 - 2.6 *Pipe supports* are designed for a range of applications.
 - 2.7 *Pump enclosure and control requirements* are sized and detailed.
 - 2.8 *Installation requirements* are specified for irrigation management system.
 - 2.9 Water storage requirements are determined.
 - 2.10 Allowance for pipe movement is made.
- 3 Design and size systems.**
- 3.1 Irrigation systems are designed for a range of residential, commercial, industrial, sporting and agricultural *applications*.
 - 3.2 Range of *delivery systems and layout* are designed.
 - 3.3 Irrigation systems are designed and sized using calculations and computer software packages.
 - 3.4 Required water application is determined to establish and maintain plant life.
 - 3.5 *Sustainability principles and concepts* are applied throughout the design process.
- 4 Prepare documentation.**
- 4.1 Client brief of the desired design is prepared.
 - 4.2 *Plans and specifications* are prepared for a range of irrigation systems.
 - 4.3 *Testing and commissioning schedule* is prepared.
 - 4.4 *Operation and maintenance manual* is produced.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - communicate with others to ensure safe and effective work practices
 - confirm job specifications and client requirements
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- literacy skills to:
 - prepare written documentation, including:
 - operation and maintenance manual
 - plans, specifications and schedules
 - read and interpret:
 - plans, specifications, drawings and design briefs
 - standards and manufacturer requirements and manuals
 - statutory and regulatory requirements
- initiative and enterprise skills to develop creative and responsive approaches
- numeracy skills to apply measurements and calculations
- planning and organising skills to:
 - research, collect, organise and understand information relating to the design of irrigation systems
 - take initiative and make decisions
- problem-solving skills to analyse requirements, consider options and design an appropriate system
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technical skills to design irrigation systems to National Construction Code, relevant Australian standards, and other relevant legislative requirements
- technology skills to:
 - access and understand site-specific instructions in a variety of media
 - use mobile communication technology

Required knowledge

- application of National Construction Code or relevant Australian standards and codes, manufacturer specifications, and operating procedures relevant to the sector
- common terminology and definitions used in the design of irrigation systems
- nature of materials used and effects of performance under various conditions

- principles of technology used in design of irrigation systems for a range of applications
- work health and safety (WHS) requirements, including relevant statutory regulations, codes and standards

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to, as a minimum, provide evidence of the ability to:

- design, size and document layout details of an irrigation system, including a specification for a:
 - sports oval incorporating stormwater collection and use, with a mains pressure drinking water top-up and with chemical additives
 - a landscaped area for a mixed development site connected to a main pressure recycled (non-drinking) water main
- evaluate and document design parameters to relevant Australian standards and codes, and regulatory, client and manufacturer requirements.
- plan and detail system components that include:
 - backflow prevention devices
 - irrigation management-control system
 - pumping requirements
 - water delivery outlets
 - piping requirements
- design and size two irrigation systems, using appropriate calculations and computer software for specific applications

- prepare testing and commissioning schedules
- prepare operation and maintenance manuals
- apply sustainability principles and concepts throughout the design
- communicate with others to ensure safe and effective work site operations.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the minimum task requirements
- relevant specifications and work instructions, including design brief drawings, specifications, codes, design concepts and construction schedules
- tools and equipment appropriate to applying safe work practices, including computers, software and calculators
- workplace instructions relating to safe working practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry-related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to

confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application

- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Scope of work:

- must include:
 - interpretation of plans and specifications
 - sizing and documenting layout irrigation systems and documenting layout irrigation systems for applications, including residential, sporting and agricultural properties
- may be for new projects or an existing structure being renovated, extended, restored or maintained.

Design requirements must include:

- architectural plans
- backflow requirements
- interpretation and application of irrigation services, drawings and symbols
- irrigation management system
- owner requirements
- precipitation and evaporation rates
- pumping requirements
- required water application to establish and maintain plant life
- source of irrigation water
- sprinkler head spacings
- system requirements
- water storage requirements.

Cost-benefit analysis:

- compares the range of suitable materials and system choices available to enable cost-effective choices to be made without compromising integrity of project
- may include:
 - design styles
 - expected design life
 - labour costs
 - material costs
 - required water application to establish and maintain plant life
 - safety factors
 - speed of installation
 - suitability of materials
 - system choices
 - use of recycled or alternative water.

Statutory and regulatory requirements and relevant Australian standards and codes may include:

- Acts, regulations and commonwealth, state or territory, and local government requirements
- AS/NZS3500 National plumbing and drainage
- AS2200 Design charts for water supply and sewerage
- National Construction Code
- state or territory health department requirements
- other relevant Australian standards or codes.

Manufacturer requirements may include:

- irrigation management system
- material specifications
- pump tables
- sprinkler head performance
- sub-surface irrigation
- technical and trade manuals.

Desktop study may include collection and interpretation of data for design purposes in:

- architectural and building plans
- site layout plans, which may include:
 - sports ovals
 - golf courses
 - residential, commercial, industrial and agricultural properties
 - local government parks
- manufacturer data
- documents, which may include:
 - applications
 - brochures
 - forms
 - policies
 - other reports as available.

Flow and pressure tests may include:

- interpretation of flow and pressure tests
- on-site measurement of flows (l/s), velocity (m/s) and pressure (kPa).

Water sources, volumes and areas to be irrigated may include:

- sources:
 - drinking water
 - non-drinking (recycled) water
 - rain water

- grey water
- creeks
- dams
- lakes
- rivers
- streams
- tanks
- other approved water sources
- volumes and areas:
 - amount and duration of water supply
 - areas to be irrigated
 - number of control stations required
 - total amount and flow rate required for each control station.

Soil types may include:

- gravels
- light, medium and heavy clays
- loams
- rock
- sands.

Performance requirements may include:

- flow, velocity, pressure and discharge requirements, established using relevant Australian standards, codes and manufacturer information
- required water application to establish and maintain plant life.

Layout of pipework systems:

- may include:
 - distribution
 - dual feed systems
 - range pipes
 - ring main
 - single pipe
 - control stations
- should not unduly affect aesthetic appeal and building integrity
- should have principles of economy, serviceability, durability and fit for use applied.

Fittings, valves and controls may include:

- fittings:
 - bends
 - elbows
 - sprinkler heads
 - tees
 - unions
- valves:
 - backflow prevention
 - excess pressure
 - isolating
 - pressure limiting
 - pressure reduction
 - strainers
- controls:
 - irrigation management system
 - control stations
 - control wiring
 - nodes.

Backflow prevention devices may include:

- double-check valve assembly (DCV)
- dual-check valve with intermediate vent (DuCV)
- pressure type vacuum breaker (PVB)
- reduced pressure zone device (RPZD)
- registered air gap (RAG)
- registered break tank (RBT)
- reduced pressure detector assembly (RPDA)
- reduced pressure zone device (RPZD)
- other approved backflow prevention devices
- may be located as:
 - individual protection
 - zone protection
 - containment protection.

Materials may include:

- composite pipework
- copper (Cu)
- cross-linked polyethylene (PE-X)
- polypropylene (PP)
- polybutylene (PB)
- polyvinyl chloride (PVC)

- other relevant materials.

Jointing methods include:

- brazing
- compression
- electrofusion welding
- flaring
- mechanical joints
- rubber ring joints
- screwing
- soldering
- other approved jointing methods.

Sections and components of the irrigation system must include:

- irrigation stations:
 - number, size, area, volume of water required, delivery requirements, operation and activation of stations, sprinkler patterns, location and distribution of sprinkler heads, obstacle avoidance, water minimisation, waste minimisation and timing
- manifold systems:
 - manifolds to stations, headers, branches, timers, isolators, servo valves, electronics, power supplies and manual activation
- sensors:
 - moisture sensors, soil sensors, temperature sensors, humidity sensors, weather stations and computer automation
- automatic controls:
 - station controllers, servo valves, isolating valves, water tractors and timers
- sprinklers, drippers and irrigators:
 - sprinkler heads, sprinkler flows, impact sprinklers, gear-driven sprinklers, water tractors, water cannons, tape drippers, individual drippers, flow controlled drippers, in-ground irrigation tapes and root inhibitor systems
- sprinkler patterns:
 - head to head, square, triangular, circular, quarter overlap, half overlap, full overlap, double overlap and other overlap patterns.

- Pipe supports*** may include:
- thrust blocks
 - bedding
 - bracket spacing
 - corrosion protection
 - cover
 - manufacturer-recommended specific fixings
 - material requirements
 - provision for pipe movement.

- Pump enclosure and control requirements*** may include:
- acoustic performance
 - automatic change-over
 - automatic controls
 - dual-pump provision
 - impeller sizing
 - inlet and outlet design requirements
 - installation and mounting requirements
 - irrigation management control system
 - pressure gauges
 - pump controls
 - pump selection
 - pump sizing
 - pump housing
 - space requirements
 - valve requirements
 - variable speed control.

- Installation requirements*** may include:
- pipe connection:
 - bedding and backfilling
 - corrosion
 - cover
 - ground stability
 - impact
 - level of workmanship
 - manufacturer recommendations
 - pipe support
 - provision for pipe movement
 - serviceability and access.

- Applications:***
- may include:

- agricultural crops
- garden irrigation
- golf courses
- greenhouses
- lawn watering
- local government parks
- nurseries
- sports ovals
- should also cover:
 - individual crop water requirements
 - types of plants and their respective crop factors.

Delivery systems and layout may include:

- main delivery
- number and design of control stations
- design includes:
 - avoiding obstacles
 - irregular shapes
 - minimising water wastage
 - range of irrigation applications
- range pipes
- ring mains
- size and water delivery of sprinklers
- sprinkler head patterns and placement.

Sustainability principles and concepts:

- cover the current and future social, economic and environmental use of resources
- may include:
 - selecting appropriate material to ensure minimal environmental impact
 - efficient use of material
 - efficient energy usage/capital outlay comparison
 - water efficiency
 - reuse of water, such as rainwater, grey water and recycled non-drinking water
 - consideration of the Green Building Council of Australia rating scheme.

Plans:

- may include:
 - axonometrics

- cross-sections
- details
- elevations
- isometrics
- schematics
- sections
- may be produced using:
 - computer generation
 - drawing equipment.

Specification may include:

- bedding
- flow requirements
- irrigation management control system
- jointing
- manufacturer requirements
- materials
- pumps
- residual pressures
- safety (WHS)
- specialised components
- sprinkler head selection
- storage tanks
- support
- testing
- valve selection
- water treatment
- workmanship.

Testing may include:

- defect inspection
- hydrostatic
- mains pressure
- performance
- quality assurance (QA) audit.

Commissioning schedule may include:

- system certification
- flow test
- leak check
- pressure test
- system purge
- system defect

- system functions as per design
- valve and system operation.

Operation and maintenance manual includes:

- as installed drawings
- results of commissioning test
- certification documentation
- maintenance schedules
- manufacturer brochures and technical information
- operational procedures
- valve function.

Unit Sector(s)

Functional area

Unit sector Plumbing and services

Custom Content Section

Not applicable.

CPCPWT3027A Connect irrigation systems from drinking water supply

Modification History

Prerequisite unit changed

Minor changes throughout the unit

Not equivalent to CPCPWT3017A

Unit Descriptor

This unit of competency specifies the outcomes required to connect irrigation and watering systems from a drinking water supply. It does not include the commissioning of backflow prevention devices or arrangements.

Application of the Unit

Site location for work application may be either domestic or commercial, and may be a new work site or an existing structure being renovated, extended, restored or maintained.

Licensing/Regulatory Information

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Pre-Requisites

CPCPCM2043A Carry out WHS requirements

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent

with the evidence guide.

Elements and Performance Criteria

- | | | |
|----------|--|--|
| 1 | Prepare for work. | <p>1.1 Plans and specifications are obtained.</p> <p>1.2 Work health and safety (WHS) and environmental requirements associated with connecting irrigation systems from a drinking water supply are adhered to throughout the work.</p> <p>1.3 Quality assurance requirements are identified and adhered to according to workplace requirements.</p> <p>1.4 Tasks are planned and sequenced in conjunction with others involved in or affected by the work and statutory and regulatory authorities' requirements.</p> <p>1.5 Tools and equipment for connecting irrigation systems, including personal protective equipment, are selected and checked for serviceability.</p> <p>1.6 Work area is prepared to support efficient connection of irrigation systems from a drinking water supply.</p> |
| 2 | Identify installation requirements. | <p>2.1 Connection size and hazard rating are determined from plans, specification, relevant Australian standards and/or site inspection using relevant information.</p> <p>2.2 Valve is sized according to plans and specification.</p> <p>2.3 Back flow prevention devices are confirmed as being according to hazard rating.</p> <p>2.4 Materials and equipment are identified, ordered and collected according to workplace procedures.</p> <p>2.5 Materials and equipment are checked for compliance with relevant Australian standards, docket and order form, and for acceptable condition.</p> <p>2.6 Sustainability principles and concepts are observed when preparing for and undertaking work process.</p> |

- 3 Connect and test system.**
- 3.1 Excavation is set out and made according to plans and specifications and undertaken with consideration given to existing structures and services.
 - 3.2 Service pipe is isolated and cut to accommodate take off branch according to authorities' requirements.
 - 3.3 Back flow prevention device is fitted according to relevant Australian standards and manufacturer specifications.
 - 3.4 System is connected and flushed to required standard.
 - 3.5 Water supply is restored and system tested according to relevant Australian standards.
 - 3.6 Ground surface is restored.
- 4 Clean up.**
- 4.1 Work area is cleared and materials disposed of, reused or recycled according to legislation, regulations, codes of practice and job specification.
 - 4.2 Tools and equipment are cleaned, checked, maintained and stored according to manufacturer recommendations and workplace procedures.
 - 4.3 Documentation is completed according to workplace requirements.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - access information
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - identify requirements

- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication, such as hand signals
- initiative and enterprise skills to identify and accurately report to appropriate personnel any faults in tools, equipment or materials
- literacy skills to:
 - complete workplace documentation
 - read and interpret:
 - documentation from a variety of sources
 - plans and specifications
- numeracy skills to apply measurements and calculations
- planning and organising skills to:
 - plan and sequence tasks with others
 - plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technical skills to cut into a water supply and install a take-off branch and fitting valves and backflow prevention devices for an irrigation or watering system
- technology skills to:
 - access and understand site-specific instructions in a variety of media
 - use mobile communication technology

Required knowledge

- characteristics and application of different pipes and fittings, including fixing and joining techniques and methods
- drinking water supplies and protection measures
- implications of cross connections and air gaps
- job safety analysis (JSA) and safe work method statements (SWMS)
- process of connecting irrigation systems from a drinking water supply
- processes for accessing information and for calculating material requirements
- properties of water, including pressure and flow rates
- relevant statutory requirements related to connecting irrigation systems from a drinking water supply
- SI system of measurement
- Australian standards applicable to the connection
- use of test equipment and procedures
- various types of irrigation systems and types of materials used
- workplace and equipment safety requirements

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment providing that simulated or project-based assessment techniques fully replicate plumbing and services workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of:

- locating, interpreting and applying relevant information, relevant Australian standards and specifications to connect an irrigation system from a drinking water supply
- applying safety requirements throughout the work sequence, including electrical safety requirements and the use of personal protective clothing and equipment
- given the plans and specifications, connecting an irrigation system to a drinking water supply, ensuring:
 - application of sustainability principles and concepts
 - correct identification of location, design and details of proposed installations
 - correct selection and use of appropriate processes, tools and equipment
 - completing all work to specification
 - compliance with regulations, relevant Australian standards and organisational quality procedures and processes
 - communicating and working effectively and safely with others.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will

usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the minimum task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe working practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry-related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a

number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge

- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Work health and safety is to be according to commonwealth, state and territory legislation and regulations and may include:

- handling of materials
- hazard control
- identifying and testing for electrical hazards
- personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
- safe operating procedures, including recognising and preventing hazards associated with:
 - hazardous materials and substances
 - other machines
 - surrounding structure and facilities
 - trees
 - trip hazards
 - underground services
 - uneven and unstable terrain

- use of tools and equipment
- work site visitors and the public
- working at heights
- working in confined spaces
- working in proximity to others
- use of firefighting equipment
- use of first aid equipment
- workplace environment and safety.

Environmental requirements cover water quality management and may include:

- clean-up protection
- waste management.

Quality assurance requirements may include:

- environment policy
- Environment Protection Authority (EPA)
- internal company quality assurance policy and risk management strategy
- International Standards Organisation
- site safety plan
- workplace operations and procedures.

Statutory and regulatory authorities include:

- commonwealth, state or territory, and local authorities administering applicable Acts, regulations and codes of practice.

Tools and equipment may include:

- chain blocks
- electrical bonding and bridging strap
- elevated work platforms
- forklifts
- hand and power tools
- hand excavation equipment
- hand trolleys
- hoists and jacks
- lifting and load shifting equipment
- measuring equipment
- mechanical excavation equipment
- rollers
- scaffolding
- silver solder and brazing equipment
- trench shoring equipment.

Information may include:

- charts and hand drawings
- instructions issued by authorised organisational or external personnel
- job drawings
- manufacturer specifications and instructions
- material safety data sheets (MSDS)
- memos
- organisation work specifications and requirements
- plans and sketches
- regulatory and legislative requirements, particularly those pertaining to:
 - building codes
 - WHS and environmental requirements
 - plumbing regulations
- relevant Australian standards
- safe work procedures relating to connecting irrigation systems from a drinking water supply
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.

Materials may include:

- backflow prevention devices
- copper tube
- fittings and connections
- joints
- polymer pipes
- valves.

Sustainability principles and concepts:

- cover the current and future social, economic and environmental use of resources
- may include:
 - selecting appropriate material to ensure minimal environmental impact
 - efficient energy and water use
 - efficient use and recycling of material
 - disposing of waste material to ensure minimal environmental impact.

Unit Sector(s)

Functional area

Unit sector Plumbing and services

Custom Content Section

Not applicable.

CPPFES2005 Demonstrate first attack firefighting equipment

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 13.0.

Supersedes and is equivalent to CPPFES2005A Demonstrate first attack firefighting equipment. Unit updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to demonstrate first attack firefighting equipment. It includes demonstrating and explaining to clients how to correctly and safely use portable fire extinguishers, fire hose reels and fire blankets in emergency situations.

The unit is suitable for those with basic skills and knowledge undertaking routine work tasks under the direction of more experienced workers.

Licensing, legislative, regulatory or certification requirements apply to this unit of competency in some states and territories. For further information, check with the relevant regulatory authority.

Pre-requisite Unit

Nil.

Unit Sector

Fire Protection Inspection and Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

1 Demonstrate and explain correct use of portable fire extinguisher to extinguish simulated	1.1 Explain purpose and use of different types of fire extinguishers to relevant persons.
	1.2 Identify fire type and classification.
	1.3 Select fire extinguisher according to fire type and

fire.		classification.
	1.4	Demonstrate safe and correct use of fire extinguisher to attack fire according to manufacturer requirements.
2 Demonstrate and explain correct use of fire hose reel.	2.1	Explain purpose and use of fire hose reel to relevant persons.
	2.2	Unroll fire hose reel according to manufacturers' instructions.
	2.3	Operate fire hose reel nozzle to direct water stream at selected target.
	2.4	Turn off water in approved sequence and check hose reel for leaks according to manufacturers' instructions.
	2.5	Rewind fire hose reel after use according to manufacturer requirements.
3 Demonstrate and explain use of fire blanket.	3.1	Explain purpose and use of fire blanket to relevant persons.
	3.2	Demonstrate safe and correct use of fire blanket to attack fire according to manufacturer requirements.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPPFES2005A Demonstrate first attack firefighting equipment.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPPFES2005 Demonstrate first attack firefighting equipment

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 13.0.

Supersedes and is equivalent to CPPFES2005A Demonstrate first attack firefighting equipment. Unit updated to meet the Standards for Training Packages 2012.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by demonstrating and explaining the correct and safe use of first attack firefighting equipment, including:

- selecting an appropriate extinguisher and demonstrating correct extinguishment methods for the following simulated fires:
 - one class A, C or F type fire involving two different types of equipment or materials
 - one class A, C or F type fire involving potentially energised electrical equipment
 - one class B type fire
 - one class D type fire
- attacking a fire using a fire hose reel where the fire is located more than 10 metres from the installed location of the hose reel
- attacking a fire using a fire blanket.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- basic methods of locating a fire
- correct use of fire extinguishers and hose reels on different classes of fire and implications of incorrect use
- how fire can be spread by conduction, convection, radiation and direct burning
- how water pressure influences the discharge distance for hose reels
- key actions in a fire emergency, commonly known by the acronym RACE:
 - rescue
 - activate alarm
 - confine fire
 - evacuate or extinguish

- meaning of secondary damage
- reasons why cooking oil and fat fires require special attention
- theory of fire, including the triangle of combustion
- types and operation of fire protection equipment classified as first attack equipment.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit of competency could be assessed by practical demonstration, using simulated fire situations. Due to safety and cost factors, methods of extinguishing class D, E and F fires are confined to oral explanations and role play or simulations only.

All practical demonstrations involving the use of simulated fires must adhere to the safety and environmental regulations relevant to each state or territory.

Candidates must have access to documentation, first attack firefighting equipment and simulated fire situations required to achieve the performance evidence.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

CPPSIS2012 Assist in collecting basic spatial data

Modification History

Release 1.

Replaces superseded non-equivalent CPPSIS2012A Assist in the collection of spatial data.

This version first released with CPP Property Services Training Package Version 3.

Application

This unit of competency specifies the outcomes required to assist team members to collect basic spatial data in the field using surveying methods. Basic spatial data refers to measurements of distances, angles and height difference. The unit covers preparing for data collection by clarifying tasks and equipment to be used, and checking equipment for safe working order. The unit also covers participating in spatial data gathering activities, including recording data in the correct format and using equipment in a safe manner. It covers finalising work tasks by checking and storing equipment and reporting faults or problems, and completing and storing data and documentation. The unit requires the ability to follow instructions and communicate with team members, and to apply mathematical concepts used for basic surveying methods.

The unit supports those who work under direct supervision in a surveying team, in positions relating to field data collection and administration.

No licensing, legislative, regulatory, or certification requirements apply to this unit of competency at the time of endorsement.

Pre-requisite Unit

Nil

Unit Sector

Surveying and spatial information services

Elements and Performance Criteria

Elements describe the Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised

- essential outcomes. text is used, further information is detailed in the range of conditions.
1. Prepare to collect basic spatial data.
 - 1.1. Task requirements are clarified with *appropriate persons*.
 - 1.2. Equipment is selected to meet task requirements in consultation with appropriate persons.
 - 1.3. Equipment is checked to ensure it is in safe working order according to organisational requirements.

 2. Collect basic spatial data.
 - 2.1. Data is collected and recorded in correct format in line with task and organisational requirements.
 - 2.2. Data is checked for accuracy and problems are reported to appropriate persons.
 - 2.3. Equipment is used according to task and safety requirements and manufacturer specifications, and problems are reported to appropriate persons.

 3. Finalise spatial data collection tasks.
 - 3.1. Equipment is checked and stored safely according to organisational requirements and manufacturer specifications.
 - 3.2. Unsafe or faulty equipment is reported according to organisational requirements.
 - 3.3. Data and documentation are completed and stored according to organisational requirements.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill

Performance feature

- Numeracy skills to:
- use mathematical concepts in surveying methods relating to distance and angles.

- Oral communication skills to:
- ask questions to clarify task requirements and equipment selection.
- Reading skills to:
- locate specific information in standard operating procedures
 - understand forms required for recording collected data.
- Writing skills to:
- record clear and accurate measurements that can be interpreted by a third party.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

- Appropriate persons*** must include at least one of the following:
- experienced colleague
 - site personnel
 - supervisor or line manager.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSIS2012 Assist in collecting basic spatial data

Modification History

Release 1.

Replaces superseded non-equivalent CPPSIS2012A Assist in the collection of spatial data.

This version first released with CPP Property Services Training Package Version 3.

Performance Evidence

A person demonstrating competency in this unit must satisfy the requirements of the elements, performance criteria, foundation skills and range of conditions of this unit. The person must also collect basic spatial data for two field projects according to organisational procedures and instructions, and using surveying methods. For each project, the person must use safety equipment, including personal protective equipment (PPE), and a communication device.

During the above projects, the person must collect the basic spatial data using four of the following tools and equipment:

- clinometer or device to measure vertical angles
- compass
- data recording equipment
- digital or hard copy map
- distance measuring tape
- distance measuring wheel
- level
- scientific calculator
- simple global positioning system (GPS) device to determine position
- simple laser measuring device.

While assisting in collecting the above basic spatial data, the person must:

- communicate clearly with others to clarify work tasks and equipment use
- comply with organisational requirements and manufacturer specifications
- report problems and seek assistance with work tasks
- use organisational proformas to record accurate measurements and data.

Knowledge Evidence

A person demonstrating competency in this unit must demonstrate knowledge of:

- industry-accepted standards for recording surveying measurements and data
- organisational policies and procedures relating to:
 - accessing manufacturer specifications
 - collecting spatial data
 - formats for records and documentation
 - reporting problems
 - selecting and using the tools and equipment specified in the performance evidence
 - using communications equipment
 - working safely when using surveying equipment and working in the field.

Assessment Conditions

The following must be present and available to learners during assessment activities:

- equipment:
 - as specified in the performance evidence
 - PPE
- specifications:
 - equipment operating manuals and manufacturer specifications
 - standard operating procedures and documentation relating to work tasks
- relationships with team members and supervisor:
 - access to supervisor and other appropriate persons for assistance with work tasks.

Timeframe:

- as specified by task and organisational requirements.

Assessor requirements

As a minimum, assessors must satisfy the assessor requirements in the Standards for Registered Training Organisations (RTOs) current at the time of assessment.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

CPPSIS5035 Obtain and validate spatial data

Modification History

Release 1.

Replaces superseded equivalent CPPSIS5035A Obtain and validate spatial data.

This version first released with CPP Property Services Training Package Version 3.

Application

This unit of competency specifies the outcomes required to obtain and validate spatial data to meet client specifications. The unit covers analysing project requirements and agreements and determining appropriate data acquisition options. It also covers applying industry-accepted validation methodologies to assess the validity and integrity of data and resolve problems. The unit requires the ability to use technology to access, manipulate, archive and retrieve a range of spatial data. It also requires the ability to record metadata and complete documentation and written communications.

The unit supports those who work in a lead role in a surveying or spatial information services team in areas such as surveying, cartography, town planning, mapping or geographic information systems (GIS).

No licensing, legislative, regulatory, or certification requirements apply to this unit of competency at the time of endorsement.

Pre-requisite Unit

Nil

Unit Sector

Surveying and spatial information services

Elements and Performance Criteria

Elements describe the essential outcomes. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of

conditions.

1. Prepare for spatial data acquisition.
 - 1.1. Project specifications, client instructions and agreements are determined and analysed according to organisational requirements.
 - 1.2. Data requirements are confirmed with *appropriate persons* and resources are allocated to project tasks according to organisational requirements.
 - 1.3. Protocols for communicating with spatial data providers are followed according to organisational requirements.
 - 1.4. Viability of provider's service agreement is assessed based on advice from appropriate persons.
 - 1.5. Data acquisition options are determined according to project specifications and organisational requirements.
 - 1.6. Data is received and processed according to project specifications and organisational requirements.

2. Validate spatial data.
 - 2.1. Data is assessed for validity and integrity according to project specifications.
 - 2.2. Omissions and gaps in spatial data are identified and resolved in consultation with appropriate persons.
 - 2.3. *Metadata* is recorded according to organisational requirements.
 - 2.4. Documentation is completed and stored according to organisational requirements.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill

Planning and organising skills to:

Performance feature

- delegate project tasks to staff.

- Numeracy skills to:
- interpret and analyse statistics.
- Oral communication skills to:
- negotiate data requirements with clients and service providers.
- Reading skills to:
- interpret contractual obligations detailed in legal documents, such as contracts, agreements, memorandums of understanding, and licences
 - analyse detailed technical descriptions of spatial data and their qualifiers.
- Writing skills to:
- communicate with clients and data providers using email
 - record measurements with accuracy and precision.
- Technology skills to:
- use a computer and software to access, manipulate, archive and retrieve a range of spatial data.
- Problem-solving skills to:
- apply contingency measures to resolve identified errors
 - verify authenticity of data against specifications.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

- Appropriate persons*** must include at least two of the following:
- client
 - end user
 - financial or legal specialist
 - manager
 - qualified surveyor
 - spatial data provider
 - supplier
 - town planner.

- Metadata* must include at least three of the following:
- availability
 - conditions of use
 - coordinate system
 - currency
 - custodian
 - data accuracy
 - data description
 - date of acquisition
 - licence
 - quality
 - source
 - spatial data acquisition methodologies
 - version control.

Unit Mapping Information

CPPSIS5035A Obtain and validate spatial data

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSIS5035 Obtain and validate spatial data

Modification History

Release 1.

Replaces superseded equivalent CPPSIS5035A Obtain and validate spatial data.

This version first released with CPP Property Services Training Package Version 3.

Performance Evidence

A person demonstrating competency in this unit must satisfy the requirements of the elements, performance criteria, foundation skills and range of conditions of this unit. The person must also obtain and validate spatial data that meets client specifications for two different projects.

While obtaining and validating the above spatial data, the person must:

- apply contingency measures when solving problems relating to data
- comply with organisational requirements and manufacturer specifications when using the equipment specified in the assessment conditions
- comply with organisational requirements for:
 - allocating resources, delegating duties and working within budgetary constraints
 - communicating with clients and spatial data providers
 - recording metadata and completing documentation
 - working safely when using screen-based equipment
- comply with legal requirements relating to client service provision, and accessing and managing spatial data
- exercise precision when archiving, retrieving, managing and manipulating spatial data
- use industry-accepted methods for assessing the validity and integrity of spatial data and resolving errors.

Knowledge Evidence

A person demonstrating competency in this unit must demonstrate knowledge of:

- industry-accepted standards relating to obtaining and validating spatial data
- legal requirements for accessing, storing, retrieving and archiving digital and hard copy spatial data, including data privacy and information copyright
- methods for assessing and validating spatial datasets and dataset sources

- organisational requirements relating to:
 - work health and safety
 - client services
 - human resource management
 - completing documentation
- spatial data capture methodologies
- spatial data formats and structures
- key features of spatial reference systems.

Assessment Conditions

The following must be present and available to learners during assessment activities:

- equipment:
 - computer with software appropriate for spatial data management and electronic communication
 - printer
- specifications:
 - organisational policies and procedures relating to:
 - work health and safety
 - data privacy and information copyright
 - project budget and resources
- physical conditions:
 - access to equipped work station
- relationships with team members and supervisor:
 - working in a team.

Timeframe:

- as specified by client and project requirements.

Assessor requirements

As a minimum, assessors must satisfy the assessor requirements in the Standards for Registered Training Organisations (RTOs) current at the time of assessment.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

CPPSIS5064 Coordinate GIS data manipulation and analysis

Modification History

Release 1.

Replaces superseded equivalent CPPSIS5064A Manipulate and analyse GIS data.

This version first released with CPP Property Services Training Package Version 3.

Application

This unit of competency specifies the outcomes required to coordinate geographic information system (GIS) data manipulation and analysis to meet client specifications. The unit covers analysing client needs and GIS data format requirements and developing procedures; assessing the applicability of existing tools, models, theories and applications; and developing models to achieve the required outcome, including feasible parameters, equations and assumptions. The unit also covers verifying data source integrity and manipulating and analysing data for presentation. The unit requires the ability to use computers and GIS software as well as querying and programming languages to capture geographic information, obtain information from databases, and create layers on maps. It also requires the ability to comply with organisational and legal requirements relating to client consultation and data ownership.

The unit supports those who work in a lead role in a surveying or spatial information services team in areas such as surveying, town planning, cartography, mapping and GIS.

No licensing, legislative, regulatory, or certification requirements apply to this unit of competency at the time of endorsement.

Pre-requisite Unit

Nil

Unit Sector

Surveying and spatial information services

Elements and Performance Criteria

Elements describe the Performance criteria describe the performance needed to

- essential outcomes. demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.
1. Prepare to meet client GIS data needs.
 - 1.1. Client requirements and project specifications for GIS data format are determined in consultation with *appropriate persons*.
 - 1.2. Parameters for data manipulation and analysis are specified according to project specifications.
 - 1.3. New procedures for manipulating and analysing data to meet project specifications are documented.
 2. Establish GIS data models.
 - 2.1. Applicability of existing tools, models, theories, applications and solutions is reviewed against project specifications.
 - 2.2. Feasible parameters, equations and assumptions are developed according to project specifications.
 - 2.3. Models are established to meet project specifications according to organisational requirements.
 3. Manipulate and analyse GIS data.
 - 3.1. Processes for data manipulation and analysis are determined and used to meet project specifications.
 - 3.2. Source data limitations and other restricting factors are analysed to ensure data integrity, and problems are identified and resolved or contingencies are managed.
 - 3.3. Data is isolated and retrieved from source, and interrogated to ensure reliability according to project specifications.
 - 3.4. Data is manipulated and prepared for presentation media, and project is finalised according to organisational requirements.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to

performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
Initiative and enterprise skills to:	<ul style="list-style-type: none"> • translate client requirements into model design.
Numeracy skills to:	<ul style="list-style-type: none"> • perform data reductions.
Oral communication skills to:	<ul style="list-style-type: none"> • negotiate data solutions with clients.
Reading skills to:	<ul style="list-style-type: none"> • interpret graphical information in maps • interpret technical information obtained from external datasets.
Writing skills to:	<ul style="list-style-type: none"> • record details of quality improvements.
Technology skills to:	<ul style="list-style-type: none"> • use querying commands to obtain information from databases • use a computer and software to create layers on maps.
Problem-solving skills to:	<ul style="list-style-type: none"> • identify deficiencies in existing procedures and models.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Appropriate persons</i> must include at least one of the following:	<ul style="list-style-type: none"> • client • colleague • end user • manager • spatial data supplier.
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Unit Mapping Information

CPPSIS5064A Manipulate and analyse GIS data

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSIS5064 Coordinate GIS data manipulation and analysis

Modification History

Release 1.

Replaces superseded equivalent CPPSIS5064A Manipulate and analyse GIS data.

This version first released with CPP Property Services Training Package Version 3.

Performance Evidence

A person demonstrating competency in this unit must satisfy the requirements of the elements, performance criteria, foundation skills and range of conditions of this unit. The person must also coordinate geographic information system (GIS) data manipulation and analysis to meet client needs for two different projects.

While coordinating the above GIS data manipulation and analysis projects, the person must:

- negotiate with clients regarding data format requirements
- conduct research to source geographic information
- develop parameters, equations and assumptions to meet task requirements
- develop procedures and establish models for data analysis that meet established client specifications for data format
- analyse data sources to verify data integrity to ensure:
 - accuracy
 - completeness
 - confidence limits
 - currency
 - quality
 - resolution
 - scale
- build up elements of a database
- capture geographic information
- manipulate and analyse datasets using general query and programming languages, scripts and command lines
- use GIS software to manipulate and analyse data for display on a map
- comply with organisational and legal requirements for:
 - client consultation

- data ownership, including accessing and using spatial data, including copyright, intellectual property, data privacy and trade practices
- comply with organisational requirements for recording data and completing documentation, and using screen-based equipment.

Knowledge Evidence

A person demonstrating competency in this unit must demonstrate knowledge of:

- data reduction and manipulation techniques
- database structures and spatial features of databases
- line instructions and programming languages to capture geographic information
- methods for creating layers on maps
- querying and browsing techniques for obtaining information from databases
- types of spatial data formats
- organisational and legal requirements for accessing and using spatial data, including copyright, intellectual property, and trade practices
- organisational policies and procedures relating to:
 - accessing, recording and storing spatial data
 - communicating with clients and end users
 - completing records and documentation
 - custodianship of data
 - using computer systems and software to manipulate GIS data.

Assessment Conditions

The following must be present and available to learners during assessment activities:

- equipment:
 - computer and software appropriate for manipulating GIS data
- specifications:
 - organisational policies, procedures and documentation relating to data privacy and information copyright
- physical conditions:
 - access to equipped work station
- relationships with team members and supervisor:
 - working in a team.
- relationships with clients:
 - client consultation required.

Timeframe:

- as specified by task and organisational requirements.

Assessor requirements

As a minimum, assessors must satisfy the assessor requirements in the Standards for Registered Training Organisations (RTOs) current at the time of assessment.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

CPPSSI2012 Assist in collecting basic spatial data

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 12.0.

Supersedes and is equivalent to CPPSIS2012 Assist in collecting basic spatial data.

Application

This unit specifies the skills and knowledge required to assist surveying and spatial information services team members to collect basic spatial data in the field. Basic spatial data refers to measurements of distances, angles and heights. It includes participating in spatial data gathering activities, recording data in the correct format, using equipment in a safe manner, and completing and storing data and documentation.

This unit is suitable for individuals who are operating under supervision and preparing to enter the workforce. They use basic mathematical, cognitive, technical and communication skills to follow instructions and apply appropriate methods, tools, materials and information to undertake defined activities in a restricted range of contexts.

All work must be carried out to comply with workplace procedures, in accordance with relevant state/territory regulations that govern surveying work, as well as work health and safety (WHS) legislation and regulations that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Surveying and Spatial Information Services

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

1 Prepare to collect basic 1.1 Clarify task requirements with supervisor.

- spatial data.
- 1.2 Select tools and equipment to meet task requirements as instructed.
 - 1.3 Identify requirements for safe use of equipment.
 - 1.4 Select appropriate safe work methods and personal protective equipment (PPE) for the task.
- 2 Collect basic spatial data in specified format.
- 2.1 Use equipment according to task and safety requirements and manufacturer specifications.
 - 2.2 Record clear and accurate measurements that can be interpreted by a third party.
 - 2.3 Use mathematical knowledge to check that data collected is reasonable and measures what is required.
 - 2.4 Seek assistance from supervisor or appropriate person as required.
 - 2.5 Communicate with colleagues using a communication device.
- 3 Finalise spatial data collection tasks.
- 3.1 Check and store equipment safely according to organisational requirements and manufacturer specifications.
 - 3.2 Report unsafe or faulty equipment according to organisational requirements.
 - 3.3 Use organisational proformas to accurately record measurements and data.
 - 3.4 Store data and documentation according to organisational requirements.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPPSIS2012 Assist in collecting basic spatial data.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSSI2012 Assist in collecting basic spatial data

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 12.0.

Supersedes and is equivalent to CPPSIS2012 Assist in collecting basic spatial data.

Performance Evidence

To demonstrate competency a candidate must meet the elements and performance criteria of this unit by collecting basic spatial data, under supervision, for two surveying field projects.

For each project, a total station and one item from the following list must be used:

- clinometer or device to measure vertical angles
- compass
- data recording equipment
- digital or hard copy map
- distance measuring tape
- distance measuring wheel
- level
- scientific calculator
- simple global positioning system (GPS) device to determine position
- simple laser measuring device
- communications device.

Knowledge Evidence

To be competent in this unit a candidate must demonstrate knowledge of:

- types and application of spatial data collection equipment
- industry-accepted standards for recording surveying measurements and data
- organisational procedures and requirements relating to:
 - accessing manufacturer instructions
 - collecting spatial data
 - formats for records and documentation
 - reporting problems
 - types and uses of communications equipment.

Assessment Conditions

Assessors must satisfy the requirements for assessors contained in the Standards for Registered Training Organisations.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting where these skills and knowledge would be performed.

Candidates must have access to:

- equipment for data collection
- equipment operating manuals and manufacturer instructions
- documentation relating to work tasks
- supervisor and other appropriate persons for assistance with work tasks.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

CPPSSI2013 Store and retrieve basic spatial data

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 12.0.

Supersedes and is equivalent to CPPSIS2013 Store and retrieve basic spatial data.

Application

This unit specifies the skills and knowledge required to assist surveying and spatial information services team members to store and retrieve basic spatial data. Basic spatial data refers to recorded surveying measurements or datasets of objects with coordinates. It includes following instructions to record, maintain and retrieve spatial data from paper or digital sources.

This unit is suitable for individuals who are operating under supervision and preparing to enter the workforce. They use basic mathematical, cognitive, technical and communication skills to follow instructions and apply appropriate methods, tools, materials and information to undertake defined activities in a restricted range of contexts.

All work must be carried out to comply with workplace procedures, in accordance with relevant state/territory regulations that govern surveying work, as well as work health and safety (WHS) legislation and regulations that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Surveying and Spatial Information Services

Elements and Performance Criteria

Elements describe the essential outcomes. Performance criteria describe what needs to be done to demonstrate achievement of the element.

1 Store basic spatial data 1.1 Clarify task requirements with supervisor.

- as instructed.
- 1.2 Identify data privacy and licensing requirements relating to data storage.
 - 1.3 Prepare and check computer and software to meet task requirements.
 - 1.4 Comply with organisational requirements for safe screen-based work.
 - 1.5 Follow organisational procedures to record data in index.
 - 1.6 Report problems to appropriate persons.
- 2 Retrieve basic spatial data as instructed.
- 2.1 Access and retrieve specified spatial data source according to task and organisational requirements.
 - 2.2 Identify data privacy and licensing requirements relating to data retrieval.
 - 2.3 Extract and compare spatial data.
 - 2.4 Report problems to appropriate persons.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPPSIS2013 Store and retrieve basic spatial data.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSSI2013 Store and retrieve basic spatial data

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 12.0.

Supersedes and is equivalent to CPPSIS2013 Store and retrieve basic spatial data.

Performance Evidence

To demonstrate competency a candidate must meet the elements and performance criteria of this unit by storing and retrieving basic spatial data, under supervision, for two different surveying field projects.

Knowledge Evidence

To be competent in this unit a candidate must demonstrate knowledge of:

- organisational procedures and requirements relating to:
 - data privacy and licensing requirements
 - preparing and using computers and software
 - reporting problems with spatial data availability and formats
 - working safely when using screen-based equipment.

Assessment Conditions

Assessors must satisfy the requirements for assessors contained in the Standards for Registered Training Organisations.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting where these skills and knowledge would be performed.

Candidates must have access to:

- computer and software required to collect basic spatial data
- documentation of organisational procedures and documentation relating to data privacy and licensing
- supervisor and other appropriate persons for assistance with work tasks.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

CPPSSI3011 Produce basic maps

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 12.0.

This unit supersedes and is equivalent to CPPSIS3011 Produce basic maps.

Application

This unit specifies the skills and knowledge required to use mapping software, such as geographic information system (GIS) functionality, to produce a basic map. It includes activities to prepare and process basic spatial data and produce a basic map that includes simple marginal information and content.

This unit is suitable for surveying or spatial information services assistants working under supervision. They use cognitive, technical and communication skills to select and apply a range of methods, tools, materials and information to complete routine activities and provide solutions to predictable and sometimes unpredictable problems.

All work must be carried out to comply with workplace procedures, in accordance with relevant state/territory regulations that govern surveying work, as well as work health and safety (WHS) legislation and regulations that apply to the workplace.

Cadastral surveying must be undertaken under the supervision of a registered surveyor. Users must check with the relevant regulatory state/territory authority before delivery.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Surveying and Spatial Information Services

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

1 Prepare to create basic 1.1 Clarify task requirements with appropriate persons.

- map.
- 1.2 Select appropriate software for the task.
 - 1.3 Determine the required purpose and format of the map.
 - 1.4 Identify and retrieve the data required for the map.
- 2 Assemble map content.
- 2.1 Interpret and manipulate spatial data for display according to task requirements.
 - 2.2 Label marginal information and content according to task requirements and industry practice.
- 3 Finalise basic map production.
- 3.1 Check map content and format against task requirements.
 - 3.2 Confirm final map with appropriate persons.
 - 3.3 Complete map in required format and with required content, and document according to organisational requirements.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPPSIS3011 Produce basic maps.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSSI3011 Produce basic maps

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 12.0.

This unit supersedes and is equivalent to CPPSIS3011 Produce basic maps.

Performance Evidence

To demonstrate competency a candidate must meet the elements and performance criteria of this unit by using suitable software and spatial data retrieved from internal sources to produce two basic maps, each containing:

- two artificial features and two natural features with appropriate symbology
- at least one dataset containing points, lines and polygons
- simple marginal information, including:
 - data sources
 - coordinate reference system
 - legend
 - north point
 - scale.

While producing the above basic maps, the candidate must:

- set scale
- change symbology
- use simple point, line and polygon data
- label features
- symbolise features by attributes.

Knowledge Evidence

To be competent in this unit a candidate must demonstrate knowledge of:

- different types of maps, including topographical maps, thematic maps, and survey maps
- use of points, lines and polygons to portray different geographic features
- typical scales, spatial referencing systems and symbology used on different types of maps
- functions of mapping software used for making basic maps
- work health and safety (WHS) for using screen-based equipment.

Assessment Conditions

Assessors must satisfy the requirements for assessors contained in the Standards for Registered Training Organisations.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting where these skills and knowledge would be performed.

Candidates must have access to:

- computers and software relevant to basic map production.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

CPPSSI4035 Apply GIS software to spatial problems

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 12.0.

This unit supersedes and is equivalent to CPPSIS4035 Apply GIS software to solve spatial data problems.

Application

This unit specifies the skills and knowledge required to use geographic information system (GIS) software applications to show spatial patterns and relationships for identified issues. It includes integrating various sources of spatial information using spatial overlay techniques and analysis of data.

The unit also includes using univariate statistics to explore datasets, and spatial and attribute queries to generate results and reports.

This unit is suitable for entry-level technicians who use a broad range of cognitive, technical and communication skills to select and apply a range of methods, tools, materials and information to complete routine and non-routine activities and provide and transmit solutions to a variety of predictable and sometimes unpredictable problems.

Surveying and spatial information skills are applied in a range of industry contexts, including town planning, civil construction, mining, engineering, health, agriculture and defence.

All work must be carried out to comply with workplace procedures, in accordance with relevant state/territory regulations that govern surveying work, as well as work health and safety (WHS) legislation and regulations that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Surveying and Spatial Information Services

Elements and Performance Criteria

Elements describe the Performance criteria describe what needs to be done to

- essential outcomes. demonstrate achievement of the element.
- 1 Prepare for spatial analysis.
 - 1.1 Clarify task requirements to address the issue under consideration with appropriate persons.
 - 1.2 Apply appropriate work practices for safe screen-based work.
 - 1.3 Access, interpret and manipulate spatial datasets to confirm they are in acceptable format to meet task requirements.
 - 1.4 Identify and resolve routine spatial data problems or irregularities with geometry and attributes and resolve with appropriate persons.
 - 1.5 Use spatial and attribute queries to select features from vector and aspatial text databases.
 - 1.6 Determine accuracy of query results on vector and raster datasets by cross-referencing in tabular and cartographic view.
 - 1.7 Generate and use univariate statistics to explore the dataset.
 - 2 Undertake spatial analysis.
 - 2.1 Manipulate existing data and integrate new data according to task requirements.
 - 2.2 Use vector and raster geoprocessing techniques to generate results relating to spatial task.
 - 2.3 Check that outputs of analysis are correct and applicable.
 - 3 Produce reports.
 - 3.1 Compile information on the limitations and assumptions of the datasets and the geoprocessing techniques used according to task and organisational requirements.
 - 3.2 Present summary statistics and results using tabular, cartographic and graphic methods according to task requirements.
 - 3.3 Incorporate results for all sources into reports according to organisational requirements.
 - 3.4 Comply with legislative and ethical requirements for

producing reports based on spatial data analysis.

- 4 Finalise data analysis.
 - 4.1 Check output spatial data for completeness and manipulate where necessary according to organisational requirements.
 - 4.2 Create metadata according to organisational requirements.
 - 4.3 Store spatial data in a secure location and record details according to organisational requirements.
 - 4.4 Comply with organisational requirements for documentation and storage relating to audit trails, naming standards, templates and version control.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPPSIS4035 Apply GIS software to solve spatial data problems.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSSI4035 Apply GIS software to spatial problems

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 12.0.

This unit supersedes and is equivalent to CPPSIS4035 Apply GIS software to solve spatial data problems.

Performance Evidence

To demonstrate competency a candidate must meet the elements and performance criteria of this unit by using geographic information system (GIS) software applications to integrate data and show spatial patterns and relationships for identified issues for two different projects.

The candidate must manage and manipulate the following, presenting the results accurately and meaningfully using maps, tables and graphs:

- thematic and continuous raster datasets
- aerial and satellite imagery
- point, line and polygon vector datasets
- aspatial text datasets.

Knowledge Evidence

To be competent in this unit a candidate must demonstrate knowledge of:

- key features of spatial reference systems
- metadata fields relating to accuracy, currency, extent, availability and datasets
- legislative requirements for accessing, manipulating, reporting and archiving spatial data, including data privacy, copyright and licensing
- querying and browsing techniques for obtaining information from datasets
- calculation and interpretation of univariate statistics:
 - average, median and mode
 - maximum and minimum
 - range
 - standard deviation
 - variance
- graphical methods for representing distributions
- vector and raster data models
- raster geoprocessing techniques:

- reclassifying
- resampling
- combining raster datasets
- extracting from raster datasets
- vector geoprocessing techniques:
 - buffer
 - clip
 - dissolve
 - intersect
 - merge
 - union
 - erase
 - reproject
- file formats for map production
- spatial data storage technology.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting where these skills and knowledge would be performed.

Candidates must have access to:

- computer with access to GIS software applications
- printer and other hardware necessary for work tasks.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

CPPWMT3004 Comply with environmental protection requirements when transporting waste

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 10.0.

Supersedes and is equivalent to CPPWMT3042A Follow environmental policies and procedures when transporting waste.

Application

This unit specifies the skills and knowledge required to comply with environmental protection requirements when transporting waste using vehicles and equipment. It includes minimising the effects of pollution caused when operating and maintaining waste vehicles and equipment and following routes and workplace instructions to safely transport environmentally hazardous waste. It also includes understanding the impact of waste loads on the environment and identifying ways to improve work processes to protect the environment when transporting waste.

A person who achieves this unit of competency is expected to take responsibility for completing these tasks with a high degree of self-direction.

Candidates must hold a current, nationally recognised licence to operate the vehicle or equipment being used to transport waste. For further information, check with the relevant regulatory authority.

Pre-requisite Unit

Nil.

Unit Sector

Waste management

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

1 Identify and apply environmental

1.1 Identify legislative and regulatory compliance requirements for protecting the environment when

- | | | |
|--|-----|--|
| protection requirements. | | transporting waste. |
| | 1.2 | Identify hazards and risks associated with transporting waste and apply required controls according to workplace and regulatory requirements. |
| | 1.3 | Review job schedule and workplace procedures for transporting waste and confirm arrangements. |
| | 1.4 | Apply methods to reduce environmental impact when transporting waste. |
| 2 Minimise effects of pollution caused by waste vehicle and equipment. | 2.1 | Inspect waste vehicle and equipment and take required precautions to ensure fuel, lubricants and chemicals do not pollute the environment. |
| | 2.2 | Contain waste load securely according to workplace and regulatory requirements to ensure the surrounding environment is not contaminated or littered. |
| | 2.3 | Monitor telematics and fuel usage and operate waste vehicle and equipment efficiently to minimise air pollution. |
| | 2.4 | Clean waste vehicle and equipment according to workplace and site-specific requirements. |
| 3 Safely transport environmentally hazardous waste. | 3.1 | Follow planned route for waste vehicle and equipment carrying environmentally hazardous load to minimise risk to the environment in the event of accident or spillage. |
| | 3.2 | Review and follow workplace instructions to transport environmentally hazardous waste. |
| | 3.3 | Complete documentation recording waste transport details according to workplace and regulatory requirements. |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPPWMT3042A Follow environmental policies and procedures when transporting waste.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPWMT3004 Comply with environmental protection requirements when transporting waste

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 10.0.

Supersedes and is equivalent to CPPWMT3042A Follow environmental policies and procedures when transporting waste.

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by:

- minimising effects of pollution caused by waste vehicle and equipment by:
 - transporting waste and monitoring average fuel use per kilometre on two occasions using similar vehicles and waste weights
 - identifying efficiencies gained by comparing average fuel use on each trip
- following specific site procedures to clean the waste vehicle at two different sites:
 - a site associated with the workplace
 - an external site
- reviewing and assessing potential hazards/risks for two routes planned for transporting hazardous materials.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- areas to avoid when transporting regulated or prescribed and environmentally hazardous waste
- legislative and procedural requirements applicable to waste transportation and relevant to the workplace:
 - commonwealth, state and territory legislation and regulations, including work health and safety (WHS)
 - chain of responsibility requirements
 - classifications of dangerous goods and hazardous substances
 - duty of care
 - environmental protection
 - load restraint requirements
 - licensing requirements for transporting waste using vehicles, plant and equipment
- driving techniques that minimise pollution

- impact of waste on the environment
- impact on the environment of waste vehicles and equipment and techniques and methods for minimising pollution
- methods for securing waste vehicle loads
- types of precautions that can be taken to protect the environment when operating and cleaning waste vehicles and equipment
- types of vehicles and equipment used to transport waste
- workplace and site-specific requirements for cleaning waste vehicles and equipment
- workplace policies and procedures for waste transportation and environmental protection:
 - documentation and reporting
 - waste vehicle and equipment operation and maintenance
 - WHS:
 - hazard identification, risk assessment and control using the hierarchy of control
 - injury, dangerous occurrence and incident response
 - personal protective equipment
 - signalling techniques.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or in a simulated workplace environment using realistic workplace conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to workplace policies and procedures, job schedules, documentation, vehicle, equipment and waste required to achieve the performance evidence.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

CPPWMT4005 Implement waste management site safety plans

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 10.0.

Supersedes but is not equivalent to CPPWMT5045A Develop site safety plans.

Application

This unit specifies the skills and knowledge required to implement waste management site safety plans. It includes allocating and organising resources to implement work health and safety (WHS) procedures, monitoring implementation activities to ensure regulatory compliance, and reviewing and improving plans.

A person who achieves this unit of competency is able to use specialised knowledge to complete routine and non-routine tasks and deal with predictable and sometimes unpredictable problems.

No licensing, legislative or certification requirements apply to this unit of competency at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Waste management

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

- | | | |
|---|-----|---|
| 1 Organise and allocate resources to implement waste management site safety plan. | 1.1 | Review waste management site safety plan to clarify WHS objectives and resources required for implementation. |
| | 1.2 | Review workplace policies and procedures, legislation and regulations and apply requirements to WHS activities. |

- 1.3 Organise equipment and personnel required to implement waste management site safety plan according to workplace requirements.
 - 1.4 Manage waste management hazards and risks according to risk management strategy detailed in waste management site safety plan.
 - 1.5 Plan and schedule specified activities to implement waste management site safety plan.
- 2 **Oversee waste management site safety objectives and activities.**
 - 2.1 Supervise WHS activities to ensure compliance with waste management site safety plan and apply contingency measures to respond to changing circumstances.
 - 2.2 Consult with relevant persons to discuss WHS roles and responsibilities and share information to support hazard identification and risk management.
 - 2.3 Supervise WHS induction processes to check compliance with waste management site safety plan.
 - 2.4 Review WHS documentation to monitor compliance with waste management site safety plan and take action required to address non-compliance.
- 3 **Monitor implementation of waste management site safety plan.**
 - 3.1 Review effectiveness of waste management site safety plan in meeting WHS objectives.
 - 3.2 Seek feedback from relevant persons on effectiveness of waste management site safety plan and identify improvements.
 - 3.3 Provide recommendations for updating waste management site safety plan to relevant persons.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes but is not equivalent to CPPWMT5045A Develop site safety plans.

Links

Companion volumes to this training package are available at the VETNet website -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPWMT4005 Implement waste management site safety plans

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 10.0.

Supersedes but is not equivalent to CPPWMT5045A Develop site safety plans.

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by:

- assessing waste management site to confirm the layout and location of:
 - waste types
 - first aid and emergency facilities
 - evacuation plan
 - general access and restricted areas
 - traffic management plan
- implementing waste management site safety plan over a defined period and making two recommendations to improve current plan.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- features of waste management site safety plans
- identification signage used for regulated waste, including hazardous class, HAZCHEM codes and dangerous goods classification
- legislative and procedural requirements applicable to implementing waste management site safety plans and relevant to workplace operations:
 - commonwealth, state and territory legislation, regulations, codes of practice and standards, including work health and safety (WHS)
 - classifications of dangerous goods and hazardous substances
 - duty of care
 - incident notification
 - licensing for waste management site including licence for storing dangerous goods
 - record-keeping
- methods for implementing waste management site safety plans:
 - personnel with designated WHS roles
 - reviewing WHS procedures

- risk management
- site contract requirements
- WHS induction
- techniques for reviewing waste management site safety plans to identify improvements
- typical hazards in a waste management workplace and the harm they may cause to people, property and the environment
- waste types
- WHS issues identified in site safety plan
- workplace policies and procedures associated with site safety plans:
 - allocating equipment and personnel
 - documentation and reporting
 - hazard identification, risk assessment and control using the hierarchy of control
 - injury, dangerous occurrence and incident response and reporting
 - personal protective equipment.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or in a simulated workplace environment using realistic workplace conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to workplace policies and procedures, site safety plan and associated documentation, technologies and waste management workplace required to achieve the performance evidence.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

CPPWMT5043A Develop and implement an environmental management strategy

Modification History

Revised unit

Unit updated and equivalent to PRMWM43A Develop an environmental management strategy

Unit Descriptor

This unit of competency specifies the outcomes required to develop and implement an environmental management strategy. It requires the ability to analyse practices and develop environmental management strategies by working effectively with stakeholders.

Application of the Unit

This unit of competency supports individuals with supervisory responsibilities for developing waste management strategies. It includes contributing to the development of strategies, systems and plans, as well as recognising the need for expert advice.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of

performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | | |
|---|--|-----|---|
| 1 | Define scope of environmental management strategy. | 1.1 | Needs and expectations for development of <i>environmental management strategy</i> are identified. |
| | | 1.2 | <i>Constraints</i> under which environmental strategy can be developed are identified. |
| | | 1.3 | Clear and concise statement of environmental objectives is prepared and <i>feasibility of environmental management options</i> is evaluated. |
| 2 | Determine environmental management strategy development process. | 2.1 | <i>Process models</i> applicable to scope of environmental management strategy are identified. |
| | | 2.2 | Process models are assessed and a suitable model for achieving the strategy's objectives is selected. |
| | | 2.3 | Principal <i>stakeholders</i> are identified to maximise their participation in development process. |
| | | 2.4 | Stakeholders are consulted regarding acceptance of proposed strategy development process. |
| 3 | Identify resources required for environmental management strategy. | 3.1 | Resource requirements of the strategy are determined in an accurate and comprehensive manner. |
| | | 3.2 | Financial budget required for management strategy is prepared. |
| | | 3.3 | <i>Human resource</i> and skill requirements for strategy are identified. |
| | | 3.4 | Facility and equipment needs for strategy are identified to ensure all requirements can be met on time. |
| 4 | Identify and prioritise | 4.1 | Existing <i>data</i> is collated in a comprehensive manner relevant to the scope and strategy. |

- environmental assets, problems and opportunities.
- 4.2 Existing data is evaluated to identify need for further data collection.
- 4.3 Additional data is obtained to ensure a comprehensive database for effective analysis.
- 4.4 Available data is assessed against scientifically established criteria and community expectations within ***applicable legislation and codes***.
- 4.5 Common problems and opportunities are grouped to formulate environmental issues that can be actioned by stakeholders.
- 4.6 ***Criteria to prioritise*** environmental issues are established.
- 5 Prepare environmental management strategy.
- 5.1 Practical actions that enable a resolution of environmental issues in line with strategy objectives are determined.
- 5.2 Clear and concise draft documentation is prepared for the strategy to obtain feedback from stakeholders.
- 5.3 Feedback is evaluated and a response is formed.
- 5.4 Local approval of the environmental management strategy is obtained.
- 6 Prepare implementation plan for environmental management strategy.
- 6.1 Actions are prioritised to provide the most effective resolution of issues within available resources.
- 6.2 Resources are allocated to match action priorities.
- 6.3 Processes are monitored and modified as required to ensure the strategy is achieving objectives.
- 6.4 Responsible parties with the capacity to carry out strategy actions are identified.
- 6.5 Achievable timelines, schedules and targets that enable strategy objectives to be met within required timeframes are established.
- 6.6 ***Supervisory processes*** and checks and measures are implemented to ensure work is completed within ***time***

available.

7	Monitor and review effectiveness of environmental management strategy.	7.1	Regular data to provide accurate measures of performance are collected and analysed.
		7.2	Outcomes of strategy objectives are compared to assess respective effectiveness.
		7.3	Changes are made to strategy as required in a timely manner to ensure outcomes are achieved.
		7.4	Information obtained during monitoring and review is used to develop new strategies based on accumulated knowledge and experience.

Required Skills and Knowledge

- This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to:
 - determine appropriate waste management service
 - review operations
 - conduct feasibility tests
- interpersonal skills to:
 - manage consultation processes
 - present strategy
- management skills to:
 - apply change management techniques
 - conduct budgeting
 - organise work practices safely and efficiently
 - conduct strategic problem solving
 - plan work practices
 - identify and minimise hazards and risks
 - organise work methodically
 - monitor performance
 - apply quality assurance practices
 - use information technology to complete tasks
- oral communication skills to:

- ask questions
- listen actively
- consult
- give instructions
- provide strategic information
- reading skills to interpret:
 - plans
 - complex documentation
- written communication skills to:
 - write reports
 - prepare complex strategic documentation

Required knowledge

- environmental issues relating to:
 - life cycle of products: re-new, re-use and recycle
 - environmental regulations
 - renewable energy
- features required for an environmental management strategy, including:
 - site contract requirements
 - reclamation
 - training outline
 - waste minimisation
 - waste prevention
 - work procedures
 - environmental education
 - past and future reviews and audits relating to environmental management
 - recycling requirements
 - internal and external audits
 - monitoring personnel performance following training
 - quality control checks relating to environmental management
 - review of effectiveness of new procedures and processes
 - targets, such as:
 - carbon emissions reduction
 - cleaner production
 - lean management
 - recycling rates
 - waste minimisation
- identification and strategic knowledge of:
 - waste types, streams and characteristics
 - waste non-conformances

- unanticipated waste
- waste non-conformance procedures
- waste containment
- waste disposal and recovery routes
- occupational health and safety (OHS) requirements relating to:
 - dangerous goods and hazardous substances
 - OHS hierarchy of control
- resource recovery options relating to:
 - valuable resources within materials
 - potential resources to be recovered
- waste assessment to identify:
 - resource needs
 - hazards and risks
- waste audit, including:
 - analysing waste practices
 - analysing previous audit plans and audit processes
 - outlining possible benefits and outcomes from conducting a waste assessment
 - types of client waste management surveys and their uses
 - sampling techniques
- waste management provision, including:
 - organisational requirements and structure, including workplace communication channels and procedures
 - legislation, regulations and codes of practice applicable to specific waste management functions
 - waste management options
 - nature and significance of waste minimisation hierarchy life cycle assessment
 - organisational pricing schedules
 - duty of care

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	This unit of competency could be assessed by observation of practical demonstration of the development and implementation of an environmental management strategy.
Critical aspects for	A person who demonstrates competency in this unit must be able to

assessment and evidence required to demonstrate competency in this unit	<p>provide evidence of the required skills and knowledge specified in this unit.</p> <p>In particular the person should demonstrate the ability to:</p> <ul style="list-style-type: none"> • identify environmental management objectives • consult stakeholders consulted in development strategy • prioritise environmental issues by level of importance and impact • amalgamate issues in order to develop environmental management strategy.
Context of and specific resources for assessment	<p>Assessment of essential underpinning knowledge may be conducted in an off-site context. It is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> • work plans and approved specifications • forms and procedures manuals.
Method of assessment	<p>The process of developing an environmental management strategy must comply with the objectives of the client as well as with industry expectations in the particular client environment. If the environment is narrowly defined or is not representative of industry needs, it may be necessary to refer to portfolio case studies to assess competency in the development of environmental management strategy.</p> <p>Assessment methods must:</p> <ul style="list-style-type: none"> • satisfy the endorsed Assessment Guidelines of the Property Services Training Package • include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application • reinforce the integration of employability skills with workplace tasks and job roles • confirm that competency is verified and able to be transferred to other circumstances and environments.
Guidance information for assessment	<p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p> <p>Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.</p> <p>This unit could be assessed on its own or in combination with other</p>

	<p>units of competency relevant to the job function, for example:</p> <ul style="list-style-type: none"> • CPPCMN4001B Develop workplace policies and procedures for sustainability • CPPWMT5004A Develop waste management strategies.
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Environmental management strategy</i> may include:	<ul style="list-style-type: none"> • air and water pollution • biodiversity protection and protection of natural resources • carbon emission • ecosystem management • wildlife and endangered species.
<i>Constraints</i> may include:	<ul style="list-style-type: none"> • budgets • knowledge • resources • time.
<i>Feasibility of environmental management options</i> must include:	<ul style="list-style-type: none"> • commitment to environmental management strategies • compliance with legislation • cost-benefit analysis • costs • lead time • process constraints • resource requirements, including equipment and personnel • resources available.
<i>Process models</i> may include:	<ul style="list-style-type: none"> • implementation strategies, including: <ul style="list-style-type: none"> • material safety data sheets (MSDS) • measurement and recording • OHS procedures • personal protective equipment (PPE) • legislation and codes • site contract requirements • work procedures • objectives pertaining to: <ul style="list-style-type: none"> • changes to processes and procedures

	<ul style="list-style-type: none"> • environmental issues • education and training • past and future reviews and audits • recycling requirements • reduction of waste • review strategies, including: <ul style="list-style-type: none"> • internal and external audits • monitoring statistics • monitoring personnel performance following training • undertaking quality control checks • reviewing effectiveness of new procedures and processes • formalising review strategies via re-planning • sampling • counting waste • targets, such as: <ul style="list-style-type: none"> • carbon emissions reduction • lean management • recycling rates • waste minimisation.
<p>Stakeholders may include:</p>	<ul style="list-style-type: none"> • business • community • council • funding bodies • government • industry • interest groups • land management agencies • local authorities • statutory authorities.
<p>Human resource may include:</p>	<ul style="list-style-type: none"> • community experts • consultants • government agencies • internal staff • project officers • volunteers.
<p>Data may include:</p>	<ul style="list-style-type: none"> • existing reports or programs • questionnaires • references • stakeholder input • surveys.

<p><i>Applicable legislation and codes</i> may include:</p>	<ul style="list-style-type: none"> • codes, including: <ul style="list-style-type: none"> • Australian Code for the Transport of Dangerous Goods by Road and Rail • industry • commonwealth, state and territory legislation, including: <ul style="list-style-type: none"> • anti-discrimination • environmental protection • equal employment opportunity • freedom of information • industrial • OHS • trade practices • road laws.
<p><i>Criteria to prioritise</i> may include:</p>	<ul style="list-style-type: none"> • benefit • budget constraints • business objectives • community preferences • environmental issues: <ul style="list-style-type: none"> • impact • legislative provisions • resources • timeframes.
<p><i>Supervisory processes</i> may include:</p>	<ul style="list-style-type: none"> • delegating • implementing • monitoring • overseeing • planning • reviewing • targeting practices to meet deadlines.
<p><i>Time available</i> may include considering:</p>	<ul style="list-style-type: none"> • client instructions • contingencies • past experiences • skills and experience of operatives • location of project • methods to be employed • resources and equipment to be used.

Unit Sector(s)

Waste management

Custom Content Section

Not applicable.

CPPWMT5045A Develop site safety plans

Modification History

Revised unit

Unit updated and equivalent to PRMWM45B Develop site safety plan

Unit Descriptor

This unit of competency specifies the outcomes required to develop an on-site safety plan for a waste management environment. It requires the ability to plan activity for safe work practices.

Application of the Unit

This unit of competency supports individuals responsible for developing on-site safety plans. It includes contributing to the development of operational procedures, in addition to safety principles.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | | |
|---|---|-----|---|
| 1 | Review site safety requirements. | 1.1 | <i>Details of site and site requirements</i> are obtained and reviewed to determine specific safety requirements. |
| | | 1.2 | <i>Organisational requirements</i> , occupational health and safety (OHS) regulations and <i>legislation and codes</i> are identified. |
| | | 1.3 | <i>Site safety requirements</i> are identified according to organisational requirements. |
| 2 | Determine site safety requirements. | 2.1 | Safety information necessary to ensure safety of personnel and general public is included in the on-site safety plan. |
| | | 2.2 | <i>Site areas</i> are identified and classified in safety plan. |
| | | 2.3 | Exact locations of <i>first aid and emergency facilities</i> are identified in on-site safety plan. |
| | | 2.4 | <i>Wastes on site</i> are clearly identified in on-site safety plan by location and type. |
| | | 2.5 | <i>Emergency and personal protective equipment (PPE)</i> requirements and <i>potential hazards and risks</i> are identified for specific site areas in on-site safety plan. |
| | | 2.6 | <i>Emergency response action or procedures</i> are identified according to on-site safety plan. |
| | | 2.7 | On-site safety plan is reviewed following feedback from stakeholders. |
| 3 | Communicate on-site safety plan to personnel. | 3.1 | On-site safety plan is communicated promptly and clearly to relevant personnel according to organisational requirements, OHS regulations and legislation and codes. |
| | | 3.2 | Personnel's understanding of all aspects of on-site safety plan is confirmed through questioning and observation. |
| | | 3.3 | Feedback from personnel is obtained and integrated into on-site safety plan. |

- 3.4 On-site safety plan is kept in an accessible place, according to organisational requirements, OHS regulations and legislation and codes.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to:
 - determine site safety options
 - review operations
- basic illustration skills for drawing simple site maps
- interpersonal skills to:
 - manage consultation processes
 - present safety plan
- management skills to:
 - apply change management techniques
 - conduct strategic problem solving
 - plan work practices
 - identify and minimise hazards and risks
 - organise work methodically
 - apply quality assurance practices
 - use information technology to complete tasks
 - use emergency and personal protective equipment
- reading skills to interpret:
 - work or material requirements
 - materials safety data sheets (MSDS)
- written communication skills to:
 - write reports
 - prepare complex strategic documentation
- critical thinking skills to develop on-site safety plan, identifying:
 - resource needs
 - hazards and risks
- oral communication skills to:
 - ask and answer questions
 - explain on-site safety plan to personnel

- give instructions
- seek feedback
- listen actively

Required knowledge

- environmental issues relating to:
 - life cycle of products: re-new, re-use and recycle
 - environmental regulations
- features required for on-site safety plan pertaining to:
 - site contract requirements
 - waste disposal methods
 - waste minimisation
 - waste prevention
 - waste segregation
 - work procedures
 - environmental issues
 - education and training outline
 - recycling and recovery requirements
 - monitoring personnel performance following safety training
 - quality control checks
 - review of effectiveness of new procedures and processes
- identification of safety issues pertaining to:
 - waste types, streams and characteristics and level of associated danger
 - waste non-conformances
 - unanticipated waste
 - waste non-conformance procedures
 - waste contaminants
 - hazardous waste
 - waste containment
 - waste disposal and recovery routes
- OHS requirements relating to:
 - dangerous goods and hazardous substances
 - OHS hierarchy of control
- waste audit, including:
 - analysing waste safety practices
 - analysing previous audit plans and audit processes pertaining to safety
- waste management provision, including:
 - organisational requirements in relation to safety
 - organisational structure and reporting requirements
 - legislation, regulations and codes of practice applicable to specific waste management

functions

- waste management safety options

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	This unit of competency could be assessed by demonstration of site safety plans developed.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>A person who demonstrates competency in this unit must be able to provide evidence of the required skills and knowledge specified in this unit.</p> <p>In particular the person should demonstrate the ability to:</p> <ul style="list-style-type: none"> • identify site safety requirements • specify all necessary PPE required to undertake work safely in each site area • gather necessary information to develop on-site safety plan following consultation with stakeholders • apply OHS requirements and duty of care to provide safe environment for personnel and general public.
Context of and specific resources for assessment	<p>Assessment of essential underpinning knowledge may be conducted in an off-site context. It is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> • work plans and approved specifications • forms and procedures manuals.
Method of assessment	<p>An on-site safety plan must be developed in line with industry expectations in the particular client environment. If the environment is narrowly defined or is not representative of industry needs, it may be necessary to refer to portfolio case studies to assess competency in the development of the plan.</p> <p>Assessment methods must:</p> <ul style="list-style-type: none"> • satisfy the endorsed Assessment Guidelines of the Property Services Training Package • include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application

	<ul style="list-style-type: none"> reinforce the integration of employability skills with workplace tasks and job roles confirm that competency is verified and able to be transferred to other circumstances and environments.
Guidance information for assessment	<p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p> <p>Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.</p> <p>This unit could be assessed on its own or in combination with other units of competency relevant to the job function, for example:</p> <ul style="list-style-type: none"> CPPCMN3001B Participate in environmentally sustainable work practices CPPCMN4007A Manage workplace safety arrangements.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Details of site and site requirements</i> may include:	<ul style="list-style-type: none"> areas allowing access to general public organisational and site OHS requirements number of personnel on site potential hazards and risks, including level of risk waste incoming waste present at site.
<i>Organisational requirements</i> may include information found in:	<ul style="list-style-type: none"> briefing papers job sheets letters memos operations manuals quality assurance documents tender and contract documents verbal or written instructions work procedures.
<i>Legislation and codes</i>	<ul style="list-style-type: none"> codes, including:

<p>may include:</p>	<ul style="list-style-type: none"> • Australian Code for the Transport of Dangerous Goods by Road and Rail • industry • commonwealth, state and territory legislation, including: <ul style="list-style-type: none"> • anti-discrimination • environmental protection • equal employment opportunity • freedom of information • industrial • OHS • trade practices • road laws.
<p><i>Site safety requirements</i> must include:</p>	<ul style="list-style-type: none"> • all necessary requirements to ensure the safety of: <ul style="list-style-type: none"> • environment • equipment • general public • personnel • structures.
<p><i>Site safety requirements</i> may also include:</p>	<ul style="list-style-type: none"> • awareness of potential hazards and risks • communication requirements • confined space awareness • emergency procedure guides • emergency response equipment • emergency shut-down and lock-out procedures • evacuation area • first aid • induction • PPE requirements • site security • training • warning signs and barriers.
<p><i>Site areas</i> may include:</p>	<ul style="list-style-type: none"> • evacuation areas • first aid bays • general public access areas • restricted areas.
<p><i>First aid and emergency facilities</i> may include:</p>	<ul style="list-style-type: none"> • breathing apparatus • eye baths • fire extinguishers • first aid kits.
<p><i>Wastes on site</i> may</p>	<ul style="list-style-type: none"> • solid (non-hazardous), e.g. construction and demolition

include:	<ul style="list-style-type: none"> • liquid (non-hazardous), e.g. chemical and aqueous • hazardous – regulated, prescribed, quarantined, medical and clinical • recoverable resources, e.g. recyclable and green waste.
<i>Emergency and personal protective equipment</i> must include:	<ul style="list-style-type: none"> • communications equipment • eye protection, such as goggles and protective glasses • eyewash kit • fire extinguishers • first aid kit • footwear • gloves • overalls and protective clothing.
<i>Emergency and personal protective equipment</i> could also include:	<ul style="list-style-type: none"> • breathing apparatus • emergency procedure guides • face shields or masks • hard hats • hearing protection • MSDS • spill kit.
<i>Personal protective equipment</i> must be:	<ul style="list-style-type: none"> • cleaned and fitted according to organisational requirements, manufacturer specifications and OHS requirements • worn when required according to organisational requirements • stored according to organisational requirements.
<i>Potential hazards and risks</i> are those identified by the organisation that may lead to:	<ul style="list-style-type: none"> • damage to plant, vehicle or property • harm to the environment • illness or injury to employees, contractors or the public • injuries resulting from manual handling and repetitive work.
<i>Potential hazards and risks</i> may include:	<ul style="list-style-type: none"> • broken glass • broken metal • compaction equipment • contamination • dust • fire • gases and fumes • hazardous waste (e.g. sharps) • narrow driveways • other vehicles and equipment • overhanging signs • projectiles • spark-producing equipment • unguarded conveyor belts

	<ul style="list-style-type: none">• weather.
<i>Emergency response action or procedures</i> may include:	<ul style="list-style-type: none">• cleaning up• containing emergency• isolating or shutting down equipment or plant• evacuation• first aid• making site safe• notifying authorities• using PPE.

Unit Sector(s)

Waste management

Custom Content Section

Not applicable.

CUAACD302 Produce computer-aided drawings

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package version 2.0.

Application

This unit describes the skills and knowledge required to use a range of computer-aided design and drafting (CADD) program functions to produce drawings. The focus of this unit is on the technical skills required to operate CADD, not on design skills.

It applies to individuals who use computer-aided drawing skills in various contexts.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Visual communication – art, craft and design

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for computer-aided drawing work	1.1 Clarify drawing requirements in concept or project information 1.2 Identify hardware, software, tools and equipment required for computer-aided design and drafting projects 1.3 Set up hardware and software according to operating instructions and organisational procedures 1.4 Identify and retrieve digitised information relevant to projects
2. Gather object parameters and/or	2.1 Establish and record critical dimensions and data for required designs

ELEMENT	PERFORMANCE CRITERIA
measurements	2.2 Identify requirements in relation to accuracy, tolerances and other key information
3. Prepare plots or drawings	3.1 Access and use <i>CADD functions and features</i> according to operating instructions 3.2 Access and use peripheral equipment required for projects 3.3 Prepare and review preliminary drawings in consultation with relevant people
4. Finalise drawings	4.1 Check designs against project objectives and specifications according to organisational procedures 4.2 Identify and make required adjustments to designs based on review and consultation with relevant people 4.3 Store data files according to operating instructions and organisational procedures 4.4 Submit final drawings within agreed time parameters

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 1.3, 1.4, 2.2, 3.1, 4.1	<ul style="list-style-type: none"> Interprets and evaluates detailed information, instructions and technical specifications in a range of formats to prepare for and produce computer aided drawings Reviews accuracy of drawings against specifications and project information
Writing	2.1, 2.2	<ul style="list-style-type: none"> Records key design information using correct conventions and terminology
Oral Communication	1.1, 3.3	<ul style="list-style-type: none"> Uses questioning and careful listening to elicit information and opinions from others
Numeracy	2.1, 2.2, 3.1	<ul style="list-style-type: none"> Identifies and records measurements and other numerically expressed specifications required for drawings Operates numerical functions of computer aided drawing equipment to produce drawings to accurate

		scale and measurements
Navigate the world of work	1.3, 4.1, 4.3	<ul style="list-style-type: none"> • Takes responsibility for following necessary organisational procedures when planning and undertaking work
Interact with others	3.3	<ul style="list-style-type: none"> • Participates in review of work progress with relevant people
Get the work done	1.1-1.4, 2.1, 2.2, 3.1-3.3, 4.1-4.4	<ul style="list-style-type: none"> • Plans and organises required equipment, software and data in logical steps according to workplace and project requirements • Prepares preliminary drawings for evaluation by others and makes recommended refinements • Uses features of digital systems and tools to produce, edit, store and retrieve drawings • Manages time to complete final drawings within established timeframes

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

CADD functions and features must include:	<ul style="list-style-type: none"> • drawing tools to support methods for drawing: <ul style="list-style-type: none"> • lines • arcs • polylines • texts • dimensions • edit functions • plotting and printing • view displays • working with layers.
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
CUAACD302 Produce computer-aided drawings	CUVACD302A Produce computer-aided drawings	Updated to meet Standards for Training Packages and clarify intent.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUAACD302 Produce computer-aided drawings

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package version 2.0.

Performance Evidence

Evidence of the ability to:

- select computer-aided design and drafting (CADD) hardware and software to suit project requirements
- follow operating instructions and organisational procedures
- use features and functions of a CADD program to produce drawings that meet project objectives
- use feedback from others to refine and produce final drawings within specified timelines.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline the relevant hardware, software, tools and equipment used for CADD
- describe the ways in which CADD is used within the specific workplace situation
- describe typical features and functions of CADD programs, including drawing tools, view displays, edit functions, working with layers, plotting and printing.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in creative arts industry environments. The assessment environment must include access to:

- CADD equipment and software
- project or concept information
- operating instructions and organisational procedures
- relevant people.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational educational and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

CUAACD303 Produce technical drawings

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package version 2.0.

Application

This unit describes the skills and knowledge required to apply a range of techniques to produce technical drawings that meet required standards and conventions.

It applies to individuals who use technical drawings in various contexts.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Visual communication – art, craft and design

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for technical drawing work	1.1 Clarify drawing requirements by referring to project documentation and consulting with appropriate people 1.2 Identify factors that may impact on technical drawing work 1.3 Select techniques to fit the purpose of the drawings 1.4 Prepare equipment and materials according to workplace procedures and safety requirements
2. Create technical drawings	2.1 Apply appropriate conventions and standards to technical drawings 2.2 Prepare and review preliminary drawings in consultation with

ELEMENT	PERFORMANCE CRITERIA
	relevant people and confirm required amendments 2.3 Produce technical drawings that are consistent with concept and purpose of drawings 2.4 Finalise and submit technical drawings within agreed timeframes

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2	<ul style="list-style-type: none"> Interprets project documentation and other relevant information to identify drawing requirements and constraints
Oral Communication	1.1, 2.2	<ul style="list-style-type: none"> Uses questioning and careful listening to elicit information and opinions from others
Numeracy	2.1, 2.3	<ul style="list-style-type: none"> Interprets numerical and spatial concepts related to drawing standards and conventions
Navigate the world of work	1.2, 1.4	<ul style="list-style-type: none"> Takes responsibility for following workplace procedures and safety requirements and recognises potential legal, ethical and contractual constraints when planning and undertaking work
Interact with others	1.1, 2.2	<ul style="list-style-type: none"> Participates in review of work progress with relevant people
Get the work done	1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4	<ul style="list-style-type: none"> Plans tasks in a logical sequence and manages time to complete final drawings within established timeframes Selects techniques appropriate to the drawing purpose and concept Ensures drawings comply with correct standards and conventions Prepares preliminary drawings for evaluation by others and makes recommended adjustments

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
CUAACD303 Produce technical drawings	CUVACD303A Produce technical drawings	Updated to meet Standards for Training Packages and clarify intent.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUAACD303 Produce technical drawings

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package version 2.0.

Performance Evidence

Evidence of the ability to:

- produce technical drawings which:
 - show a command of selected techniques
 - adhere to technical drawing standards and conventions
 - satisfy specified drawing purposes and concepts
- follow workplace procedures and safety requirements
- use feedback from others to refine and produce final drawings
- meet deadlines.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- describe physical properties and capabilities of the range of materials, tools and equipment used for technical drawing work
- explain technical drawing techniques and their application to a range of contexts and subject matter
- explain current standards and conventions for technical drawing
- describe work health and safety requirements for preparation of technical drawing materials and equipment.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in creative arts industry environments. The assessment environment must include access to:

- equipment and materials required to produce technical drawings
- documented technical drawing requirements
- workplace documentation
- relevant people.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational educational and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

CUAACD312 Produce computer-aided drawings

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to use different computer-aided design and drafting (CADD) program functions to produce drawings and documentation. It involves preparing to undertake the work, understanding the object or project brief parameters and measurements and finalising drawings according to requirements. The focus of this unit is on the technical skills required to operate CADD, not on design skills.

The unit applies to those who use computer-aided drawing skills in various contexts.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Visual Communication – Art, Craft and Design

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for computer-aided drawing work	1.1 Clarify drawing requirements and objectives in concept or project information 1.2 Identify hardware, software, tools and equipment required for computer-aided design and drafting projects 1.3 Set up hardware and software according to operating instructions and organisational procedures as required 1.4 Identify and retrieve digitised information required for projects
2. Gather object parameters and measurements	2.1 Establish and record critical dimensions and data for required designs

ELEMENT	PERFORMANCE CRITERIA
	2.2 Identify requirements in relation to accuracy, tolerances and other information according to drawing requirements
3. Prepare plots or drawings	3.1 Access and use CADD functions and features according to operating instructions 3.2 Access and use peripheral equipment required for projects 3.3 Prepare and review preliminary drawings in consultation with required personnel
4. Finalise drawings	4.1 Check designs against project objectives and specifications and mark up documentation according to organisational procedures 4.2 Identify and make required adjustments to designs in consultation with required personnel 4.3 Store data files according to operating instructions and organisational procedures 4.4 Submit final drawings within agreed time parameters

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Interprets and evaluates detailed information, instructions and technical specifications in different formats when preparing for and producing computer aided drawings Reviews accuracy of drawings against specifications and project information
Writing	<ul style="list-style-type: none"> Records key design information using industry standard conventions and terminology
Oral Communication	<ul style="list-style-type: none"> Elicits information and opinions from others using questioning and careful listening
Numeracy	<ul style="list-style-type: none"> Identifies and records measurements and other numerically expressed specifications required for drawings Operates numerical functions of computer aided drawing equipment and produces drawings to scale and measurements that meet drawing requirements
Self-management	<ul style="list-style-type: none"> Takes responsibility for following necessary organisational procedures when planning and undertaking work

SKILL	DESCRIPTION
Teamwork	<ul style="list-style-type: none"> • Participates in review of work progress with required personnel
Planning and organising	<ul style="list-style-type: none"> • Plans and organises required equipment, software and data in logical steps according to workplace and project requirements • Prepares preliminary drawings for evaluation by others and makes recommended refinements • Manages time to complete final drawings within established timeframes
Technology	<ul style="list-style-type: none"> • Produces, edits, stores and retrieves drawings using features of digital systems and tools

Unit Mapping Information

Supersedes and is equivalent to CUAACD302 Produce computer-aided drawings.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUAACD312 Produce computer-aided drawings

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- use features and functions of a computer-aided design and drafting (CADD) program to produce at least three different computer-aided drawings that meet project objectives.

In the course of the above, the candidate must:

- select CADD hardware and software to suit project requirements
- follow operating instructions and organisational procedures
- use feedback from others to refine and produce final drawings within specified timelines.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- software, peripheral equipment and tools used for CADD
- ways in which CADD is used within the specific workplace situation
- typical features and functions of CADD programs, including:
 - drawing tools to support methods for drawing lines, arcs, polylines, texts, dimensions
 - view displays
 - edit functions
 - working with layers
 - plotting and printing.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- CADD equipment and software
- project or concept information
- operating instructions and organisational procedures
- required personnel.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational educational and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

CUAACD313 Produce technical drawings

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to apply different techniques to produce technical drawings that meet required standards and conventions. It involves planning and preparing for technical drawing activities, creating technical drawings and finalising them according to project requirements.

The unit applies to those who use technical drawings in different contexts to meet project requirements

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Visual Communication – Art, Craft and Design

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for technical drawing work	1.1 Identify drawing requirements with reference to project documentation in consultation with required personnel 1.2 Identify factors that may impact on technical drawing work 1.3 Select techniques to fit the purpose of drawings 1.4 Prepare equipment and materials according to workplace procedures and safety requirements
2. Create technical drawings	2.1 Produce and review preliminary drawings according to drawing requirements 2.2 Apply applicable conventions and standards to technical drawings

ELEMENT	PERFORMANCE CRITERIA
	2.3 Discuss drawings with required personnel and confirm required amendments 2.4 Amend drawings according to drawing requirements
3. Finalise technical drawings	3.1 Check drawings against project objectives and drawing requirements according to organisational procedures 3.2 Finalise and submit technical drawings within agreed timeframes

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Interprets project documentation and other applicable information when identifying drawing requirements and constraints
Oral Communication	<ul style="list-style-type: none"> Elicits information and opinions from others using questioning and careful listening
Numeracy	<ul style="list-style-type: none"> Interprets numerical and spatial concepts related to drawing standards and conventions
Self-management	<ul style="list-style-type: none"> Takes responsibility for following workplace procedures and safety requirements when planning and undertaking work
Teamwork	<ul style="list-style-type: none"> Participates in review of work progress with required personnel
Planning and organising	<ul style="list-style-type: none"> Plans tasks in a logical sequence and manages time to complete final drawings within established timeframes

Unit Mapping Information

Supersedes and is equivalent to CUAACD303 Produce technical drawings.

Links

Companion Volume Implementation Guide is found on VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUAACD313 Produce technical drawings

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- produce technical drawings according to at least three different project requirements.

In the course of the above, the candidate must:

- show a command of selected techniques
- adhere to technical drawing standards and conventions
- satisfy specified drawing purposes and concepts
- follow workplace procedures and safety requirements
- use feedback from others to refine and produce final drawings
- meet deadlines.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- physical properties and capabilities of the range of materials, tools and equipment used for technical drawing work
- technical drawing techniques and their application to a range of contexts and subject matter
- common standards and conventions for technical drawing
- work health and safety requirements relating to preparing technical drawing materials and equipment.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- equipment and materials required to produce technical drawings
- documented technical drawing requirements
- workplace documentation
- required personnel.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational educational and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

CUAATS504 Work with Aboriginal and Torres Strait Islander cultural material

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package version 2.0.

Application

This unit describes the skills and knowledge required to work with Aboriginal and Torres Strait Islander cultural material in a culturally appropriate manner. It involves the complex and interrelated elements of Aboriginal and Torres Strait Islander cultures, which are the cultural and intellectual properties of specific communities; elements that may only be interpreted by appropriate persons, for example those recognised by the local Aboriginal or Torres Strait Islander community as an Elder or custodian of local cultural knowledge.

It applies to individuals who source, handle, interpret and exhibit Aboriginal or Torres Strait Islander cultural material in accordance with specific cultural and consultative requirements. The cultural knowledge necessary to achieve competency in this unit may only be accessible to Aboriginal or Torres Strait Islander people. This unit also reflects that there is no single Aboriginal or Torres Strait Islander culture.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Cultural services - Aboriginal and Torres Strait Islander cultural heritage

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Source Aboriginal or Torres Strait Islander	1.1 Identify and locate cultural material that may be appropriate for

ELEMENT	PERFORMANCE CRITERIA
cultural material	<p>exhibition or display</p> <p>1.2 Confirm traditional ownership of material in consultation with appropriate communities</p> <p>1.3 Consult with traditional custodians to determine suitable keeping place for materials not authorised for general exhibition</p> <p>1.4 Negotiate permission and advice for the use of cultural material according to cultural protocols</p> <p>1.5 Complete documentation including records and agreements according to cultural protocols</p> <p>1.6 Research issues and protocols in relation to the return of cultural material to local Aboriginal or Torres Strait Islander communities</p>
2. Handle Aboriginal or Torres Strait Islander cultural material	<p>2.1 Describe, move, store and maintain cultural material according to cultural requirements</p> <p>2.2 Note aspects of objects that need repair or attention and take action within scope of own job role or refer to relevant personnel as required</p> <p>2.3 Communicate specific cultural requirements to colleagues</p>
3. Prepare Aboriginal or Torres Strait Islander cultural material for exhibition	<p>3.1 Consult with custodians to agree on culturally appropriate approaches to promote, exhibit and display material, and limitations to mode of exhibit</p> <p>3.2 Develop culturally appropriate interpretive approaches</p> <p>3.3 Develop exhibition support materials that take account of cultural protocols in consultation with custodians</p> <p>3.4 Communicate requirements for display or exhibition of cultural material to colleagues</p>
4. Display and return Aboriginal or Torres Strait Islander cultural material	<p>4.1 Display material according to agreed cultural protocols and consultation outcomes</p> <p>4.2 Prepare material for return in accordance with cultural requirements</p> <p>4.3 Return cultural material to local Aboriginal or Torres Strait Islander communities in accordance with established cultural issues and protocols</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.6	<ul style="list-style-type: none"> Gathers, interprets and analyses information from a range of sources and identifies key information that assists in determining job and cultural requirements
Writing	1.5, 2.2, 3.3	<ul style="list-style-type: none"> Prepares specific information that conveys an understanding of outcomes and alternatives and uses accurate, specific and appropriate terminology appropriate to present to relevant personnel Completes relevant supporting documentation using clear and technically specific language terminology that reflect appropriate cultural protocols
Oral Communication	1.2, 1.3, 1.4, 2.3, 3.1, 3.3, 3.4	<ul style="list-style-type: none"> Uses culturally sensitive language to convey ideas and listens carefully to the needs of community members and custodians Uses a range of persuasive responses appropriate to audience and environment and makes comparisons that show an understanding of requirements Uses appropriate tone, pace and listening and questioning techniques to elicit others' views and confirm understanding
Navigate the world of work	1.1, 1.6, 2.1, 2.2, 3.1	<ul style="list-style-type: none"> Takes responsibility for following explicit and implicit policies, procedures and protocols relevant to own role and the cultural requirements associated with work
Interact with others	1.2, 1.3, 1.4, 2.3, 3.1, 3.3, 3.4	<ul style="list-style-type: none"> Shows respect for the values, beliefs and cultural expectations of others when communicating with colleagues and external stakeholders Collaborates with others to achieve joint outcomes playing an active role in facilitating agreement
Get the work done	1.1, 1.6, 2.1, 2.2, 3.1, 3.3, 4.1, 4.2, 4.3	<ul style="list-style-type: none"> Takes responsibility for planning, organising and implementing tasks and systems to manage and display culturally sensitive information and materials Systematically gathers and analyses all relevant information and evaluates options in order to make informed decisions Uses problem solving techniques to identify and analyse issues

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
CUAATS504 Work with Aboriginal and Torres Strait Islander cultural material	CULATS501A Work with Aboriginal and Torres Strait Islander cultural material	Updated to meet Standards for Training Packages and clarify intent.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUAATS504 Work with Aboriginal and Torres Strait Islander cultural material

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package version 2.0.

Performance Evidence

Evidence of the ability to:

- source Aboriginal or Torres Strait Islander cultural material for display or exhibition
- consult in a culturally sensitive and effective manner with Aboriginal or Torres Strait Islander community members and custodians about the display of cultural material
- develop agreements for the use of cultural material and record them where required
- undertake activities preparing for the display of Aboriginal or Torres Strait Islander cultural material in a logical and efficient manner, demonstrating knowledge of cultural protocols and practices
- move, store, display, maintain and return cultural material in a manner consistent with established cultural protocols.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- explain nature and scope of Aboriginal or Torres Strait Islander cultural material appropriate for exhibition or display
- identify appropriate keeping places for cultural material not suitable/forbidden for exhibition or display
- explain issues and protocols relating to the use and return of cultural material to Aboriginal or Torres Strait Islander communities
- identify copyright, moral rights and intellectual property issues with particular reference to Aboriginal or Torres Strait Islander cultural material
- identify sources of support for developing Aboriginal and Torres Strait Islander collections

- describe current conventions of collection management, including appropriate consultations and respect for traditional custodianship when working with Aboriginal or Torres Strait Islander cultural material, including non-western concepts of collecting
- explain cultural protocols and appropriate consultations for identifying, moving, storing, maintaining and displaying cultural material in the relevant community context
- explain current industry policy on acquiring and managing Aboriginal and Torres Strait Islander cultural material.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in Aboriginal and Torres Strait Islander cultural heritage environments. The assessment environment must include access to:

- Aboriginal or Torres Strait Islander cultural material or information on material when access is not available
- information about cultural protocols.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational educational and training legislation, frameworks and/or standards.

Assessment must ensure involvement in the assessment process of persons approved of by Elders, appropriate persons or custodians of the relevant Aboriginal or Torres Strait Islander community.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

CUACNM301 Move and store collection material

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package version 2.0.

Application

This unit describes the skills and knowledge required to handle, pack and unpack collection material when moving or storing it. It involves using techniques and materials suited to the material in accordance with established guidelines.

It applies to individuals who handle, move and store different types of collection material. Movement and storage may be within the same building of an organisation or to an external location. Storage may be short or long-term.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Cultural services - collection management

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine movement and storage requirements	1.1 Assess documentation to determine scope of work required for movement and storage of collection material 1.2 Identify organisational procedures and guidelines and specific requirements and confirm with relevant personnel 1.3 Assess collections to estimate projected current and future storage requirements with relevant personnel

ELEMENT	PERFORMANCE CRITERIA
	1.4 Seek specialist advice or assistance where required
2. Pack and unpack collection material	2.1 Select appropriate packing materials, tools and equipment and use safely 2.2 Handle collection material safely and in a manner that maintains integrity of collection material 2.3 Apply conservation and sustainability principles in the use of packaging materials 2.4 Label packaging to facilitate easy identification by others during transportation and within storage facilities 2.5 Recycle and dispose of waste responsibly
3. Move collection material	3.1 Select appropriate handling and moving equipment, and use safely 3.2 Handle collection material in a manner that protects individual items and contributes to efficient loading and unloading processes 3.3 Identify hazardous items and load them in a manner that minimises health and safety risk 3.4 Inspect load prior to transportation to ensure that items are loaded and secured appropriately, and make adjustments as required 3.5 Prepare transportation documentation
4. Arrange collection material and update records	4.1 Install, position or store collection material as required and within expected timeframes 4.2 Clear and clean work areas according to organisational procedures 4.3 Refer problems to relevant personnel as required 4.4 Update existing movement and storage records and prepare new records as required 4.5 Store records according to organisational policies and procedures

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description

Reading	1.1, 1.2, 2.3, 3.4, 4.2, 4.5	<ul style="list-style-type: none"> Reads and interprets documentation to determine requirements for moving and storing different types of collection material
Writing	2.4, 3.5, 4.4	<ul style="list-style-type: none"> Legibly completes simple documentation, recording key information in a style and format relevant to requirements
Oral Communication	1.2, 1.3, 1.4, 4.3	<ul style="list-style-type: none"> Seeks guidance and follows instructions to progress and complete work in accordance with industry and organisational processes and standards Uses appropriate tone and language when communicating with others, including when making required arrangements for movement or storage
Numeracy	1.3	<ul style="list-style-type: none"> Uses mathematical techniques to estimate time and measurement
Navigate the world of work	1.2, 1.4, 2.1, 2.3, 2.5, 3.1, 3.3, 4.2, 4.4, 4.5	<ul style="list-style-type: none"> Understands roles and responsibilities for completion of tasks, seeking assistance when necessary Takes personal responsibility for following explicit and implicit policies, procedures and legislative requirements
Interact with others	1.2, 1.3, 1.4, 4.3	<ul style="list-style-type: none"> Cooperates with others and contributes to work practices where joint outcomes are expected and deadlines are to be met
Get the work done	1.1, 1.3, 2.1, 3.1, 3.4, 4.1, 4.4	<ul style="list-style-type: none"> Plans and implements routine tasks and workload in a time-efficient manner Analyses task requirements in order to decide on appropriate equipment and practices Makes routine decisions based on implementation of standard procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
CUACNM301 Move and store collection material	CULCNM303A Move and store collection material	Updated to meet Standards for Training Packages and clarify intent.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUACNM301 Move and store collection material

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package version 2.0.

Performance Evidence

Evidence of the ability to:

- identify nature and scope of movement or storage work through review of workplace documentation and consultation with relevant personnel
- determine the job-specific requirements, based on the collection material to be moved and stored, and any cultural protocols and stakeholders to be considered
- prepare identified requirements, seeking specialist advice or assistance where required
- handle, move and store collection items using appropriate tools, equipment, techniques and organisational procedures to maintain the integrity of the collection material and meet required timeframe for movement and storage
- use safe and sustainable work practices during movement and storage work to:
 - handle collection material safely
 - use transport equipment and packaging material safely
 - minimise hazards during the work.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- explain the key organisational procedures and guidelines relating to:
 - storage and transport documentation and records
 - use of materials, tools and equipment, including labelling
 - manual handling and work health and safety (WHS) procedures and requirements
 - preventive pest management processes
 - waste recycling and disposal
- describe the packing and storage approaches and techniques for:

- culturally sensitive material
- different types of collection material
- internal and external transportation
- short and long-term storage
- explain the record-keeping procedures for collection movement and storage
- identify the security requirements and issues to be considered when moving or storing collection material.
- list sources of specialist advice for moving and storing collection material.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in creative arts industry environments. The assessment environment must include access to:

- a collection to be moved and stored
- materials, tools and equipment for packing, moving and storing collection items
- organisational procedures relating to moving and storing collection material
- sources of advice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational educational and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

CUADES305 Source and apply information on the history and theory of design

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to source information on design history and theory, and to apply that information in the individual's design work.

It applies to individuals who work in design and need to develop and maintain a general knowledge of design history and theory.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Design – Design Process

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect information on design history and theory	1.1 Identify and access applicable sources of information on design history and theory 1.2 Organise research material and findings for use in design practice, facilitating easy access and cross-referencing
2. Apply information to own area of work	2.1 Evaluate information in the context of current design practice 2.2 Assess which aspects of information on design history and theory could be used or adapted to inform current practice 2.3 Apply understanding of own area of work using applicable information in culturally appropriate way

ELEMENT	PERFORMANCE CRITERIA
3. Update and maintain knowledge of design trends	3.1 Identify and use opportunities to update and expand knowledge of design trends and developments 3.2 Incorporate and integrate knowledge into design activities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Identifies, interprets and evaluates information on historical and current design trends from different sources
Writing	<ul style="list-style-type: none"> Notes findings and sources of information for design knowledge, trends and developments Documents information for colleagues and peers as requested
Oral Communication	<ul style="list-style-type: none"> Asks questions and clarifies information, listens to responses and shares ideas with others
Self-management	<ul style="list-style-type: none"> Understands main tasks, responsibilities and boundaries of own role Takes responsibility for routine low-impact decisions within familiar situations
Planning and organising	<ul style="list-style-type: none"> Plans and implements required tasks
Initiative and enterprise	<ul style="list-style-type: none"> Contributes to new approaches within immediate work environment
Technology	<ul style="list-style-type: none"> Follows routine procedures for using digital technology to enter, store and retrieve information directly applicable to role

Unit Mapping Information

Supersedes and is equivalent to BSBDES305 Source and apply information on the history and theory of design.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUADES305 Source and apply information on the history and theory of design

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- identify features of the history and theory of design and how they can be adapted and applied to own work.

In the course of the above, the candidate must:

- source and organise research findings on history and theory of design applicable to own work
- identify one or more opportunities to expand on maintain currency of theoretical and design knowledge.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- current design trends in industry contexts applicable to that of one's own work
- evolution of design in industry contexts applicable to that of one's own work
- organisational information practices and their application in industry contexts applicable to that of one's own work
- sources of information on design history and theory applicable to own design work.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- sources of information on applicable industry history and theories of design.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

CUADES413 Develop and extend design skills and practice

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to develop and extend skills as a practising designer. It involves obtaining and developing conceptual and technical skills, developing an individual style in these skills and evaluating the use of these skills in own work tasks. Designers must continually refine, develop and evaluate their own conceptual and technical skills. Research, experimentation and collaboration are key factors in this process.

The unit applies to those who work as a designer, in any industry context, either independently or employed by an organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Design – Design Process

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Acquire and develop technical skills	1.1 Plan strategies for development of applicable technical skills in design practice 1.2 Plan and use opportunities to develop and assess technical skills 1.3 Identify and use practice, feedback, discussion and evaluation opportunities to continuously improve technical skills 1.4 Develop and extend technical skills through testing capabilities of materials, tools and equipment 1.5 Identify and use applicable media to stimulate technical and professional development

ELEMENT	PERFORMANCE CRITERIA
2 Develop conceptual skills and ideas	2.1 Engage in ongoing experimentation and exploration of different ideas and techniques 2.2 Discuss ideas with others and apply knowledge gained to own work 2.3 Stimulate conceptual and technical skills development using studies of others work 2.4 Research and share ideas across different design disciplines 2.5 Identify and use different opportunities to develop own skills and keep informed about current design practice
3 Develop own voice	3.1 Explore and experiment with new ideas in making and interpreting design work 3.2 Develop own voice and expand practice using technology where required
4 Evaluate own work	4.1 Seek and apply constructive criticism from others 4.2 Evaluate own work against planned strategy for own practice 4.3 Evaluate own work in the context of work by others 4.4 Adjust work processes and practice as necessary to improve technical, conceptual and commercial outcomes
5 Research work opportunities	5.1 Identify sources of information relating to work opportunities for designers 5.2 Identify networks and promotional opportunities for designers which may be helpful in developing career opportunities 5.3 Incorporate research results and information into own work and career planning

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Learning	<ul style="list-style-type: none"> Identifies and implements improvements in own creative and technical design skills and practice
Reading	<ul style="list-style-type: none"> Researches and evaluates a variety of textual information from different sources
Writing	<ul style="list-style-type: none"> Documents ideas, feedback and research results using clear and specific language
Oral	<ul style="list-style-type: none"> Participates in different verbal exchanges and presentations using applicable tone and vocabulary to suit the audience

SKILL	DESCRIPTION
Communication	<ul style="list-style-type: none"> Clarifies and confirms understanding using active listening techniques
Self-management	<ul style="list-style-type: none"> Determines importance of developing technical skills and of learning from feedback and self-reflection Broadens areas of interest and focus, seeks new challenges and understands expertise can be adapted and applied in diverse contexts
Teamwork	<ul style="list-style-type: none"> Cultivates relationships with people with the knowledge, skills and influence to provide collaborative support
Planning and organising	<ul style="list-style-type: none"> Takes responsibility for planning and implementing required tasks
Initiative and enterprise	<ul style="list-style-type: none"> Applies basic principles of lateral thinking to generate new or innovative ideas Recognises potential of new approaches to enhance work practices and outcomes Evaluates effectiveness of decisions on how well they meet stated goals
Problem-solving	<ul style="list-style-type: none"> Analyses and evaluates information to aid in decision making and problem solving
Technology	<ul style="list-style-type: none"> Understands principles and concepts underpinning the design and operation of digital systems and applies these when seeking to understand the potential of new technology

Unit Mapping Information

Supersedes and is equivalent to BSBDES403 Develop and extend design skills and practice.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUADES413 Develop and extend design skills and practice

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop and use strategies to develop or extend skills, ideas and a unique voice.

In the course of the above, the candidate must:

- identify adjustments to work processes as a result of peer feedback and self-evaluation
- research work options, networking and promotional opportunities and identify how to incorporate information into own work and career development.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- current and emerging designers in the applicable design discipline
- current and emerging trends and technologies in the applicable design discipline, and the opportunities and challenges they represent
- professional development information and resources available to designers in the applicable design discipline
- sources of information relating to work opportunities and career planning.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- materials, resources and equipment used in the development of technical and conceptual skills in the design context.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

CUADES511 Implement design solutions

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to take a design concept or solution to the implementation stage. It involves confirming the proposed solution, gathering resources required to implement the solution, testing the solution and developing a prototype, and presenting the prototype to required personnel.

The unit applies to those who work as a designer, in any industry context, either independently or employed by an organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Design – Design Process

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Organise resources for realising the design solution	1.1 Confirm nature and scope of the proposed design solution 1.2 Research resources required for developing the design concept to implementation stage 1.3 Investigate different factors impacting the selection and use of resources 1.4 Select and prepare resources based on research and other legislative or organisational requirements
2. Test the design solution	2.1 Experiment with the design solution using different techniques and processes 2.2 Evaluate, challenge and refine testing processes

ELEMENT	PERFORMANCE CRITERIA
	2.3 Gain input and feedback from required personnel during testing 2.4 Document outcomes of testing according to organisational and design solution requirements 2.5 Select final design solution based on outcomes of testing and input from others
3. Develop prototype	3.1 Create prototype based on agreed approaches 3.2 Select and organise materials, tools and equipment according to chosen design solution as required 3.3 Expose model to quality checks and ongoing analysis, enhancement and refinement 3.4 Compare completed prototype against identified needs and other considerations and make adjustments as required
4. Present prototype or model	4.1 Identify required personnel design should be presented to 4.2 Select format for presentation based on nature of audience and design 4.3 Present prototype and optimise clarity, conciseness and appeal

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Researches and interprets textual information from different sources
Writing	<ul style="list-style-type: none"> Documents research, resource requirements and testing outcomes using applicable language and formats
Oral Communication	<ul style="list-style-type: none"> Participates in different verbal exchanges and presentations using tone and vocabulary to suit audience Gains input and feedback using active listening and questioning techniques
Numeracy	<ul style="list-style-type: none"> Interprets and applies numeric information applicable to design solution Compares numerical data gathered from testing
Self-management	<ul style="list-style-type: none"> Understands and adheres to organisational policies, procedures and legislative requirements during planning and implementation of design solution

SKILL	DESCRIPTION
Teamwork	<ul style="list-style-type: none"> • Takes audience, purpose and contextual factors into account when making decisions about what to communicate, with whom, why and how
Planning and organising	<ul style="list-style-type: none"> • Sequences and schedules routine and complex activities, monitors implementation, and manages required communication
Initiative and enterprise	<ul style="list-style-type: none"> • Makes different critical and non-critical decisions in relatively complex situations, taking client requirements and different into account • Creates new and innovative ideas through exploration, analysis and critical thinking
Problem-solving	<ul style="list-style-type: none"> • Applies formal problem-solving processes when responding to unpredictable issues and challenges that arise during the testing process

Unit Mapping Information

Supersedes and is equivalent to BSBDES501 Implement design solutions.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUADES511 Implement design solutions

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- implement solutions according to at least two different designs.

In the course of the above, the candidate must:

- undertake critical analysis, testing and development of a prototype or aspect of a design solution to meet an identified need
- present prototype to required personnel using applicable best practice methods.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- elements and principles of design and their application in the applicable design context
- key features of the wider industry, with economic, social and historical context for the design solution
- design trends and technologies including other designs and the work of other design practitioners in the applicable design context
- sources of information that support the development of technical and other knowledge in the applicable design context
- technical expertise, resources, materials, tools, equipment, techniques and industry processes required for the area the design solutions are being implemented in.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- other people to discuss the collaborative nature of the design process
- resources required to test a design solution in a given industry context including materials, tools, equipment and expertise.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

CUADES512 Establish, negotiate and refine a design brief

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to work proactively with a client or commissioning organisation to develop and negotiate a design brief. It involves determining design requirements with stakeholders, developing and refining the design brief and finalising the terms and conditions of the brief.

It applies to individuals working in any industry or design context where the designer plays a key role in determining the scope and nature of work required. Establishment, negotiation and refinement of a design brief requires the integration of highly-developed creative thinking, communication and planning skills in a process that may not be linear. Adaptability and effective responses to change and new ideas are crucial.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Design – Design Process

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish design requirements	1.1 Identify and make contact with required stakeholders for the design project, in addition to the client 1.2 Identify and source information and references required for design project 1.3 Undertake critical analysis of sources and extract key information to inform the design project 1.4 Determine overall objectives and parameters for design project in

ELEMENT	PERFORMANCE CRITERIA
	<p>collaboration with client and other key stakeholders</p> <p>1.5 Seek, review and act on information needed to inform constructive communication with client</p>
2. Develop and refine design brief	<p>2.1 Develop concepts and ideas for inclusion in design brief</p> <p>2.2 Undertake own analysis of concept and challenge ideas and approaches taken</p> <p>2.3 Present ideas in applicable format/medium and discuss, debate and critically analyse in collaboration with key stakeholders</p> <p>2.4 Re-evaluate and refine options based on own analysis and discourse with others</p> <p>2.5 Establish and agree on final nature and scope of design brief with client and document details according to organisational policies, procedures and standards</p>
3. Negotiate terms and conditions	<p>3.1 Negotiate and agree terms and conditions of brief in accordance with applicable organisational and professional standards</p> <p>3.2 Clarify, agree and document roles and responsibilities of those involved in the project</p> <p>3.3 Confirm agreements in writing in accordance with organisational policies and procedures</p> <p>3.4 Identify the need for specialist advice when developing formal agreements or contracts, and seek required assistance</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Identifies and interprets textual information from various sources
Writing	<ul style="list-style-type: none"> Develops different documents using applicable vocabulary, context and formatting for different audiences
Oral Communication	<ul style="list-style-type: none"> Participates in discussions and elicits views of others using questions and listening techniques Presents ideas and seeks feedback from others using applicable tone, vocabulary and language structures
Numeracy	<ul style="list-style-type: none"> Interprets and applies numeric information applicable to design brief
Self-management	<ul style="list-style-type: none"> Identifies and adheres to organisational policies and procedures, industry standards and legislative requirements during planning and

	design of design solution
Teamwork	<ul style="list-style-type: none"> • Seeks information from stakeholders using applicable communication conventions and protocols • Uses a range of collaborative techniques to clarify and refine ideas and negotiate agreeable outcomes with others • Clarifies and refines ideas and negotiates agreeable outcomes with others using different collaborative techniques
Planning and organising	<ul style="list-style-type: none"> • Sequences and schedules complex activities, monitors implementation, and manages required communication
Problem-solving	<ul style="list-style-type: none"> • Applies formal problem-solving processes when responding to unpredictable issues and challenges that arise during the testing process
Initiative and enterprise	<ul style="list-style-type: none"> • Makes different critical and non-critical decisions in complex and non-complex situations, taking client and organisational requirements and possible constraints into account • Generates new and innovative ideas and concepts through exploration, analysis and critical thinking

Unit Mapping Information

Supersedes and is equivalent to BSBDES502 Establish, negotiate and refine a design brief.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUADES512 Establish, negotiate and refine a design brief

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- develop and finalise at least two different design briefs for a specific industry purpose.

In the course of the above, the candidate must:

- identify and establish brief requirements with client and key stakeholders.
- determine and include the following information and references to the design brief:
 - legislative and regulatory context
 - financial and budgetary information
 - organisational materials
 - technical reports and data
 - schedules and timelines
- participate in a discussion to clarify, negotiate and agree on terms and conditions.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legal issues that affect negotiations and contracts in the applicable work context
- the design process within the specific industry context/design discipline
- scope, nature and potential variations that occur within design briefs applicable to a specific context
- sources of information to assist the development of design concepts within a specific industry context.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- required equipment and media to communicate and present ideas
- sources of information relevant to industry context
- interaction with others to reflect the collaborative nature of the work, and communication and negotiation skills required.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

CULMS002B Research and evaluate Aboriginal or Torres Strait Islander cultural material

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit describes the performance outcomes, skills and knowledge required to research the context and interpretation of Aboriginal or Torres Strait cultural material. As such, the unit focuses on the skills to analyse cultural material, including current collections and the impact of post-colonial history. These skills then form the basis for appropriate treatment and interpretation of cultural material. The unit includes a focus on appropriate consultation with the traditional custodians of cultural material.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Application of the unit This unit has particular application to Aboriginal or Torres Strait Islander peoples.

The cultural knowledge necessary to achieve competency in this unit may only be accessible to Aboriginal or Torres Strait Islander peoples. This unit also recognises that there is no single Aboriginal or Torres Strait Islander culture.

The unit deals with complex and interrelated elements of Aboriginal or Torres Strait Islander cultures, which are the cultural and intellectual properties of specific communities across the continent and islands of Australia. These may only be interpreted by appropriate persons, for example those recognised by the local Aboriginal or Torres Strait Islander community as an Elder or custodian of local cultural knowledge.

Any organisation or individual planning to train or assess this unit would be expected to work in a culturally appropriate manner with the appropriate Aboriginal or

Torres Strait Islander community, for example through the establishment of a local Aboriginal or Torres Strait Islander reference group. In particular, it is vital to ensure respectful integration of any local cultural knowledge or protocols that will inform the implementation of the unit.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability Skills The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary for the qualification in which this unit of competency is packaged, will assist in identifying Employability Skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 Research the context 1.1 Identify *relevant sources of information* on *cultural*

ELEMENT	PERFORMANCE CRITERIA
<p>of Aboriginal or Torres Strait Islander cultural material</p>	<p><i>material</i> and the <i>context</i> for its interpretation</p> <p>1.2 Use <i>formal and informal research techniques</i> in a culturally appropriate manner to access <i>information</i></p> <p>1.3 Critically evaluate the validity of the range of interpretations of cultural material and the cultural relevance to its traditional custodians</p>
<p>2 Assess post-colonial interpretation of Aboriginal or Torres Strait Islander cultural material</p>	<p>2.1 Critically evaluate the ways in which different aspects of post-colonisation history have affected the interpretation of Aboriginal or Torres Strait Islander cultural material</p> <p>2.2 Critically evaluate collections in relation to the <i>context</i> in which materials were collected and interpreted and the respect shown for <i>cultural protocols</i> in sourcing, handling and exhibiting cultural material</p> <p>2.3 Assess ways in which interpretations by those other than traditional custodians may have impacted on communities and/or individuals</p>
<p>3 Develop approaches to the interpretation of Aboriginal or Torres Strait Islander cultural material</p>	<p>3.1 Identify and explore potential <i>new and appropriate approaches to the interpretation of cultural material</i> based on knowledge and understanding of consultation with traditional custodians and respect for their wishes</p> <p>3.2 Integrate the concept and practice of community consultation within interpretive approaches</p> <p>3.3 Develop substantiated positions for interpretive approaches</p> <p>3.4 Enhance interpretative approaches <i>by challenging and adapting</i> own ideas</p>
<p>4 Communicate new approaches to stakeholders</p>	<p>4.1 Identify <i>key stakeholders</i> in the interpretation and exhibition of cultural material, including traditional custodians</p>

ELEMENT

PERFORMANCE CRITERIA

- 4.2 Consult and negotiate ways with stakeholders in culturally appropriate ways to interpret Aboriginal or Torres Strait *Islander cultural material* in accordance with wishes of traditional custodians

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research and critical-thinking skills to analyse, interpret and present complex and varied references for application to cultural material
- literacy skills to critically evaluate and communicate ideas and concepts surrounding cultural material.

Required knowledge

- broad range of sources of information about post-colonial history, theory and cultural practice relating to Aboriginal or Torres Strait Islander cultural material
- key aspects of post-colonial history and its impact on the collection and interpretation of Aboriginal or Torres Strait Islander cultural material
- copyright, moral rights and intellectual property issues and legislation with particular reference to Aboriginal or Torres Strait Islander cultural material
- cultural protocols and appropriate consultations for the movement, storage and maintenance of cultural material in the relevant context/type of display
- cultural protocols for the exhibition of cultural material in the relevant community context.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction

EVIDENCE GUIDE

with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- sound knowledge of information sources for Aboriginal or Torres Strait Islander cultural material
- knowledge of cultural protocols and practices as well as appropriate consultative processes in seeking information
- application of research and analytical skills to evaluate Aboriginal or Torres Strait Islander cultural material and its context.

Context of and specific resources for assessment

Assessment must ensure:

- involvement in the assessment process of persons approved of by Elders, appropriate persons or custodians of the relevant community
- access to sources of information on Aboriginal or Torres Strait Islander cultural material.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- project to research a specific collection of Aboriginal or Torres Strait Islander cultural material
- project to research and document the cultural significance of particular objects
- case studies to assess ability to research and use different types of information in the analysis of cultural material
- oral or written questioning to assess knowledge of cultural material.

Holistic assessment with other units relevant to the industry sector, workplace and job role is

EVIDENCE GUIDE

recommended, for example:

- CULMS001B Work with Aboriginal or Torres Strait Islander cultural material
- other collection and exhibition management units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Relevant sources of information may include:

- community members (family groups, cultural educators, Elders)
- libraries
- museums
- archives
- cultural centres
- community organisations
- Indigenous units within local, state or national bodies

Cultural material may be:

- part of an existing collection (public or private)
- not yet part of a collection
- held by the local Aboriginal or Torres Strait Islander community or broader community
- held by an organisation external to the community
- held by individuals
- in the care of traditional custodians

The ***context*** of cultural material may relate to:

- pre-colonisation cultural practices
- post-colonisation collection and interpretive practices
- cultural/spiritual significance of cultural material to community
- the way material was acquired and historical view

RANGE STATEMENT

of Indigenous collections

- treatment of collection materials
- dispersal of skeletal remains and cultural materials within and outside of Australia
- men's or women's business
- secret or non-secret business
- rarity
- locality

Formal and informal research techniques may include:

- discussion
- note taking, listing
- interviews
- questionnaires
- critical discourse
- analysis
- reflection
- comparing information
- summation
- judgement
- observation

Information may relate to:

- philosophy
- Indigenous world views
- effects of colonisation on Indigenous lives and cultures
- dreaming stories
- world histories
- cultural issues
- spiritual beliefs
- aesthetics
- politics
- gender and identity issues
- land and place - traditional custodians of Country
- signs and symbols in cultural practice
- evaluative criticism in relation to interpretations made by post-colonial interpreters
- oral histories

RANGE STATEMENT

Cultural protocols may relate to:

- acquisition of material
- transportation
- storage
- written documentation on cultural materials
- exhibition
- geographic location
- degree of consultation with traditional custodians
- respect for the wishes of traditional custodians

New and appropriate approaches to interpretation may relate to:

- local Aboriginal or Torres Strait Islander community involvement
- different perceptions of both pre and post-colonial history
- interpretation in the context of post-colonial effects and behaviours
- local history
- oral histories
- appropriate consultation with traditional custodians
- respect for the wishes of traditional custodians
- industry/sector debate

Challenging and adapting ideas may include:

- comparing
- contrasting
- reflecting
- critiquing
- judging
- considering merit
- discussing and debating

Key stakeholders may include:

- Indigenous communities, including traditional custodians
- current holders of collections (private and public)
- cultural centres
- Indigenous units within local, state and national bodies
- museum/heritage organisations

Unit Sector(s)

Not applicable.

Competency field

Competency field Aboriginal or Torres Strait Islander Museum Practice

CULMS010B Contribute to the preservation of cultural material

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to contribute to the preservation of cultural material through a sound knowledge of conservation principles, practices and ethics and the application of basic preservation activities.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Application of the unit

This unit applies to individuals who have significant knowledge of preservation issues and may be involved in the application of basic preservation techniques with the involvement of a professional conservator.

The content of this unit relates to work that has a significant impact on Australia's cultural heritage and care must be taken to ensure appropriate implementation of the unit.

Any individual or organisation planning to undertake training and/or assessment of this unit must therefore consult with an appropriately qualified conservator or conservation organisation. The Australian Institute for the Conservation of Cultural Material is the recognised professional body in this area.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability Skills The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary for the qualification in which this unit of competency is packaged, will assist in identifying Employability Skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1 Develop preservation skills and knowledge | <p>1.1 Seek and access <i>opportunities to develop, update and maintain knowledge of preservation</i> issues and concepts</p> <p>1.2 Integrate knowledge into work activities within scope of individual responsibility</p> |
| 2 Undertake basic preservation activities | <p>2.1 Undertake <i>basic preservation activities</i> within scope of responsibility as agreed with a conservator and in accordance with <i>organisational plans and policies</i></p> <p>2.2 Correctly apply techniques in a manner which</p> |

ELEMENT	PERFORMANCE CRITERIA
	maintains the integrity of the <i>cultural material</i>
2.3	Record data generated in the course of activities clearly and accurately in the appropriate format
2.4	Follow <i>health, safety and environmental requirements</i> at all times
2.5	Ensure that ethical and <i>cultural protocols</i> are adhered to at all times

Required Skills and Knowledge

Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- learning skills to undertake ongoing professional development and acquisition of knowledge around preservation issues and concepts
- literacy skills to interpret conservation plans, to research conservation information, document and to report on condition of cultural material.

Required knowledge

- distinction between preservation, conservation and restoration
- basic preservation principles and methods
- principles and methods for handling cultural material
- available sources of appropriate expert advice
- AICCM Code of Ethics and Code of Practice
- copyright, moral rights and intellectual property legislation and issues that impact on conservation
- cultural protocols that impact on conservation of cultural material, including those for Aboriginal or Torres Strait Islander material
- role of a conservator and of a person working under the guidance of a conservator, including the scope of work undertaken by each and rationale for this
- requirements for safe work and manual handling
- formats and features of conservation plans, object condition reports.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- sound general knowledge of preservation techniques relevant to the collection/industry sector
- understanding of conservation ethics and cultural protocols, including limitations on the scope of work to be undertaken
- practical demonstration of competent and safe techniques working on one or more items under the guidance of a conservator.

Context of and specific resources for assessment

Assessment must ensure:

- access to cultural material
- access to equipment, materials and tools used in basic preservation activities.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- assessment of cultural material on which the candidate has worked
- direct observation of the candidate using techniques
- evaluation of candidate's responses to different collection scenarios to assess ability to develop approaches for different preservation needs and articulate different challenges and issues to be considered
- oral or written questioning to assess knowledge of different techniques and procedures.

EVIDENCE GUIDE

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- CULMS009B Implement preventive conservation activities.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Opportunities to develop, update and maintain knowledge of preservation issues and concepts may include:

- research
- attendance at seminars, workshops
- membership of professional organisations
- using conservator as a mentor
- reading current journals, newsletters and electronic discussion lists

Basic preservation activities will vary depending on the type of cultural material, but may include:

- surface cleaning
- designing/making storage enclosures and display supports
- attaching backboards to paintings
- creating hanging systems for paintings
- mounting and framing

Activities must be undertaken in accordance with advice from a specialist conservator to avoid potential damage to cultural material.

Organisational plans and policies vary in structure and

- preservation plans
- conservation plans

RANGE STATEMENT

name but may include:

- collection management policies
- disaster preparedness policies

Cultural material is defined as 'objects, collections, artworks, specimens, structures or sites' and includes:

- archaeological material
- books and manuscripts
- cultural sites/buildings
- ethnographic material
- flora and fauna
- film/audiovisual material
- furniture
- photographs
- technological/industry items
- textiles
- works on paper/canvas

Health, safety and environmental requirements may relate to:

- use of chemicals or other toxic substances
- storage of chemicals
- provision and use of safety equipment
- safe manual handling
- safe use of tools and equipment
- reporting of occupational health and safety issues, including events and near misses
- impact on other parts of the collection
- toxic and hazardous materials in a collection
- condition/stability of item (dirt, mould, dust and pesticides)

Cultural protocols may relate to:

- who can handle the cultural material
- where an item may be handled
- when an item may be handled
- consultation on potential treatments
- storage requirements
- appearance of the item
- relationship between item and other material in the collection
- methods and approaches to display

Unit Sector(s)

Not applicable.

Competency field

Competency field Preventive Conservation

FBPBPG2002 Operate the carton erection process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to set up, operate and shut down a range of semi-automated carton packing equipment.

The unit applies to individuals who work under general supervision in bottling and packaging and are responsible for operating and monitoring a carton erection process and associated equipment.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Bottling and Packaging (BPG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to operate carton erection equipment	1.1 Confirm work instructions and identify potential health and safety in the workplace hazards and controls with supervisor 1.2 Select, fit and use appropriate personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Ensure that product and dry goods are available and ready for use 1.4 Ensure that services are available and ready for operation 1.5 Prepare carton erection equipment and check to confirm readiness for use 1.6 Set equipment to meet carton erection requirements
2. Operate and monitor the carton erection process	2.1 Start-up carton erection equipment according to operating instructions 2.2 Monitor control points to confirm performance is maintained within equipment operation specification 2.3 Erect cartons according to specifications 2.4 Monitor carton erection equipment to confirm operating condition 2.5 Identify, rectify and report out-of-specification end product, process and equipment performance according to workplace procedures 2.6 Liaise with operators in other work areas to ensure ongoing packaging process runs efficiently and effectively
3. Shut down the carton erection process	3.1 Shut down carton erection equipment according to operating instructions 3.2 Prepare carton erection equipment for cleaning according to workplace procedures
4. Conduct housekeeping activities	4.1 Carry out cleaning procedures 4.2 Collect, treat and dispose of or recycle waste generated by both the process and cleaning procedures according to workplace procedures 4.3 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key messages in standard operating procedures
Navigate the world of work	<ul style="list-style-type: none"> Follow clear instructions within defined level of responsibility Recognise organisational expectations and follows explicit protocols and procedures Seek clarification when required
Get the work done	<ul style="list-style-type: none"> Respond to routine problems using step by step instruction and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPBPG2002 Operate the carton erection process	FDFBP2002A Operate the carton erection process	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPBPG2002 Operate the carton erection process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively prepared for, started up, operated, and shut down all items of equipment involved in the carton erection process on a minimum of one occasion, including:

- confirming equipment is ready for operation, including:
 - cleaning and sanitation processes are completed
 - carton magazines and guides are operational
 - insert magazines and guides are operational
 - any adjacent coding equipment is set up and operational
 - line controls (conveyors) are operational
 - line lube is operational and being correctly applied
 - all hot melt guns or jets are operational
 - equipment is set for correct carton dimensions
 - vacuum pump is operational
 - carton feeds are set up and accurately aligned for 6 or 12 pack cartons
- monitoring and adjusting process equipment to achieve required quality outcomes, ensuring:
 - compressed air pressure is at correct level
 - vacuum pressure is at correct level
 - hot melt units are maintained with correct wax level
 - carton supply is maintained
 - carton inserts are maintained
 - vacuum cups are picking up properly
 - hot glue strokes are correct length and producing a firm seal
- taking corrective action in response to typical faults and inconsistencies
- liaising with other work areas involved the packaging process

- completing workplace records as required
- applying safe work practices and identifying health and safety in the workplace hazards and controls.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and principles of the carton erection equipment
- key features of carton erection equipment and components
- links to related work areas in the packaging process
- effect of process stages on end product
- quality characteristics and uses of end product
- effect of product and materials on process outcomes
- emergency and troubleshooting procedures
- process specification, procedures and operating parameters
- equipment and instrumentation components, purpose and operation
- basic operating principles of process control systems where relevant
- services required
- significance and methods of monitoring control points
- common causes of variation and corrective action required
- workplace health and safety hazards and controls
- routine maintenance requirements
- lock-out and tag-out procedures
- procedures and responsibility for reporting problems
- shutdown and cleaning requirements associated with changeovers and types of shutdown
- recording requirements and procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - carton erection equipment
 - carton erection resources and consumables
 - tools and equipment for adjusting and maintaining equipment
 - personal protective equipment
- specifications:
 - work procedures and operator manuals or instructions.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPBPG2004 Operate the palletising process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to set up, operate and shut down a range of semi-automated and automated packaging equipment involved in the palletising process in a packing environment.

The unit applies to individuals who work under general supervision in bottling and packaging and are responsible for operating and monitoring a palletising process and associated equipment.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Bottling and Packaging (BPG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to operate palletising equipment	1.1 Confirm work instructions, including identifying potential health and safety in the workplace hazards and controls with supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Select, fit and use appropriate personal protective equipment 1.3 Ensure that product and materials are available to meet palletising requirements 1.4 Ensure that services are available and ready for operation 1.5 Prepare palletising equipment and check to confirm readiness for use 1.6 Set up equipment to meet palletising requirements
2. Operate and monitor the palletising process	2.1 Start up palletising equipment according to operating instructions 2.2 Monitor control points to confirm performance is maintained within equipment operation and specification 2.3 Ensure product is palletised according to requirements 2.4 Monitor palletising equipment to confirm operating condition 2.5 Identify, rectify and report out-of-specification end product, process and equipment performance according to workplace procedures 2.6 Liaise with operators in other work areas to ensure ongoing packaging process runs efficiently and effectively
3. Shut down the palletising supply process	3.1 Shut down palletising equipment according to operating instructions 3.2 Prepare palletising equipment for cleaning according to workplace procedures
4. Conduct housekeeping activities	4.1 Carry out cleaning procedures 4.2 Collect, treat and dispose of or recycle waste generated by both the process and cleaning procedures 4.3 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key messages in standard operating procedures
Navigate the world of work	<ul style="list-style-type: none"> Follow clear instructions within defined level of responsibility Recognise organisational expectations and follows explicit protocols and procedures Seek clarification when required
Get the work done	<ul style="list-style-type: none"> Respond to routine problems using step by step instruction and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPBP2004 Operate the palletising process	FDFBP2011A Operate the palletising process	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPBPG2004 Operate the palletising process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively set up, operated and shut down the all items of equipment in the palletising process on a minimum of one occasion, including:

- confirming equipment is ready for operation, including:
 - cleaning and sanitation processes are completed
 - vacuum is operational
 - pallet pattern is set to specifications
 - slip sheets for export are available
 - plastic shrink wrapper is loaded and operational
 - pallet identification equipment is operational
 - sufficient and correct pallets are available
 - carton turning equipment is operational
 - pallet tacking hot glue is operational
 - infeed guides and gates are operational
- monitoring and adjusting process equipment to achieve required quality outcomes, ensuring:
 - compressed air pressure is at correct level
 - vacuum pressure is correct
 - cartons are going onto stripping plate according to set pattern
 - the ongoing quality and appearance of shrink wrapping
 - the ongoing quality and appearance of pallet identification
 - the ongoing quality and appearance of pallets and slip sheets
 - stacks are square on pallets
 - the ongoing quality and appearance of stacked pallets
- taking corrective action in response to typical faults and inconsistencies

- liaising with other work areas involved the packaging process
- completing workplace records as required
- applying safe work practices and identifying health and safety in the workplace hazards and controls.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and principles of palletising equipment
- key features of palletising equipment and components
- links to related processes
- effect of process stages on end product
- quality characteristics and uses of end product
- effect of product and materials on process outcomes
- emergency and troubleshooting procedures
- process specification, procedures and operating parameters
- equipment and instrumentation components, purpose and operation
- basic operating principles of process control systems where relevant
- services required
- significance and methods of monitoring control points
- common causes of variation and corrective action required
- health and safety in the workplace hazards and controls
- routine maintenance requirements
- lock-out and tag-out procedures
- procedures and responsibility for reporting problems
- shutdown and cleaning requirements associated with changeovers and types of shutdown
- recording requirements and procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - palletising equipment
 - palletising resources and consumables
 - tools and equipment for adjusting and maintaining equipment
 - personal protective equipment
- specifications:
 - work procedures and operating instructions or instructions.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPBPG2008 Perform basic packaging tests and inspections

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to carry out the tests and inspections required to monitor product and process at various control points on an operating packaging line.

The unit applies to individuals who work under general supervision in bottling and packaging and are responsible for applying basic quality assurance principles to product.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Bottling and Packaging (BPG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify requirements for packaging testing	1.1 Confirm work instructions and identify potential health and safety in the workplace hazards and controls with supervisor 1.2 Select, fit and use appropriate personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify key packaging equipment and recognise its function and operating principles
2. Prepare for testing	2.1 Receive and register samples and prepare for testing 2.2 Ensure that services are available and ready for use 2.3 Select, prepare and check test equipment and materials are available and ready for use according to testing procedures 2.4 Identify and report defects in samples, materials and test equipment
3. Perform on-line packaging tests	3.1 Carry out test method as directed 3.2 Use equipment and materials as directed 3.3 Read and interpret results according to testing procedures 3.4 Identify out-of-standard results and take appropriate action according to workplace procedures 3.5 Liaise with operators in other work areas to ensure ongoing packaging process runs efficiently and effectively
4. Complete on-line packaging tests	4.1 Dispose of waste generated according to workplace procedures 4.2 Clean, store and maintain test equipment according to test equipment instructions 4.3 Carry out work in accordance with workplace environmental guidelines 4.4 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Seek clarification when required
Navigate the world of work	<ul style="list-style-type: none"> Follow clear instructions within defined level of responsibility Recognise worksite expectations and follows explicit protocols

Skill	Description
	and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPBP2008 Perform basic packaging tests and inspections	FDFLAB2003A Perform basic packaging tests and inspections	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent Recoded to Bottling and Packaging sector (BPG) Prerequisite removed	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPBPG2008 Perform basic packaging tests and inspections

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed basic packaging tests and inspections at a minimum of two different critical control points on an operating packaging line, including:

- confirming test equipment is ready for operation, including:
 - recognising and rejecting contaminated or faulty glassware and equipment
 - conducting safety checks
 - replacing consumables
 - setting instrument and calibration
- operating test equipment according to workplace procedures and manufacturer instructions
- carrying out routine tests
- reading and interpreting results
- recording results as required
- monitoring the process and test equipment to identify out-of-specification results or non-compliance
- taking corrective action in response to out-of-specification results, anomalies or non-compliance
- reporting and/or recording corrective action according to workplace procedures
- following procedures to repeat or validate results
- liaising with other work areas involved the packaging process
- applying safe work practices and identifying health and safety in the workplace hazards and controls.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- common bottling and packaging techniques
- enterprise policy and procedure with regard to:
 - packaging line quality assurance testing
 - health and safety in the workplace
- purpose and principles of the test
- relevant standards and specifications, and basic legislative requirements (e.g. quality, health, safety, labelling and equipment) and their implications
- procedure specification and operating parameters
- effect of sampling and testing stages on results or outcomes
- start-up and set-up procedures required
- common causes and knock-on effects of inaccuracies and preventive or corrective action required
- normal range of results on products or packaging items tested
- emergency procedures for a range of operational problems
- procedures and responsibility for reporting problems
- health and safety in the workplace hazards and controls
- cleaning and sanitising requirements of equipment and work area
- sampling plan and procedures relevant to work task.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - tools and equipment for conducting tests
 - personal protective equipment
 - instructions, information, specifications and schedules
 - products and materials on which to conduct tests
- specifications:
 - work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPBPG3002 Operate the labelling process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to set up, operate and shut down a range of semi-automated and automated product labelling equipment.

This unit applies to individuals who work under broad direction and exercise autonomy and judgement, and are responsible for applying basic principles to the operation and monitoring of a labelling process and associated equipment.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Bottling and Packaging (BPG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to operate labelling equipment	1.1 Interpret work instructions and identify potential health and safety in the workplace hazards and controls 1.2 Select, fit and use appropriate personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Ensure that product and materials are available to meet labelling requirements 1.4 Prepare product and materials to meet labelling requirements 1.5 Ensure that services are available and ready for operation 1.6 Prepare product labelling equipment and check to confirm readiness for use according to operating instructions 1.7 Set equipment to meet labelling requirements
2. Operate and monitor the labelling process	2.1 Start up labelling equipment according to operating instructions 2.2 Monitor control points to confirm performance is maintained within specification 2.3 Products are labelled according to specification 2.4 Monitor labelling equipment to confirm operating condition 2.5 Identify, rectify and report out-of-specification end product, process and equipment performance 2.6 Liaise with operators in other work areas to ensure ongoing packaging process runs efficiently and effectively
3. Shut down the labelling process	3.1 Shut down labelling equipment according to operating instructions 3.2 Prepare labelling equipment for cleaning and maintenance according to workplace procedures
4. Conduct house-keeping activities	4.1 Collect, treat and dispose of or recycle waste generated by both the process and cleaning procedures according to workplace procedures 4.2 Conduct work according to workplace environmental guidelines 4.3 Record workplace information according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Oral communication	<ul style="list-style-type: none"> Report out of specification details clearly using language, tone and pace appropriate to audience
Get the work done	<ul style="list-style-type: none"> Respond to predictable routine problems, faults and out of specification issues, and implements standard or logical solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPBP3002 Operate the labelling process	FDFBP3002A Operate the labelling process	<p>Updated to meet Standards for Training Packages</p> <p>Minor changes to Performance Criteria to clarify intent</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPBPG3002 Operate the labelling process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively set up, operated and shut down an automated or semi-automated product labelling system on a minimum of one occasion, including:

- confirming equipment is ready for operation, including:
 - heating glue to correct temperature
 - checking glue meets specification according to label type
 - confirming dryness of container in readiness for labels
 - checking labels meet specification of product
 - inserting labels, correctly orientated in magazine
 - feeding label web through application mechanism
- monitoring and adjusting process equipment to achieve required quality outcomes, ensuring:
 - label adhesion
 - label orientation
 - label damage
 - label positioning
 - smooth versus bubbled labels
 - misprinted labels
 - any label or product coding applied as part of the process
- taking corrective action in response to typical faults and inconsistencies
- liaising with other work areas involved in the packaging process
- completing workplace records as required
- applying safe work practices and identifying health and safety in the workplace hazards and controls.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and principles of labelling equipment
- key features of labelling equipment and components
- links to related processes
- effect of process stages on end product
- quality characteristics of end product
- product and materials preparation requirements and effect of variation on the process which may include effect on end results of:
 - glue temperature
 - glue type
 - wet containers
 - faulty label feed
 - incorrect or inaccurate labels
- emergency and troubleshooting procedures
- process specification, procedures and operating parameters
- equipment and instrumentation components, purpose and operation
- basic operating principles of process control systems where relevant
- services required
- significance and method of monitoring control points within the process
- common causes of variation and corrective action required
- routine maintenance requirements
- health and safety in the workplace hazards and controls
- lock-out and tag-out procedures
- procedures and responsibility for reporting problems
- shutdown and cleaning requirements associated with changeovers and types of shutdown
- waste handling requirements and procedures
- recording requirements and procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - a product labelling context
 - work procedures and instructions
 - personal protective equipment
 - products, consumables and materials

- documentation and recording requirements and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPFSY1001 Follow work procedures to maintain food safety

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package version 1.0.

Application

This unit of competency describes the skills and knowledge required to maintain food safety when carrying out work tasks. Basic food safety practices include personal hygiene and conduct, food handling, housekeeping and waste disposal related to work tasks and responsibilities where work involves routine manual processes and operation of simple automated equipment.

This unit applies to individuals who work alongside a supervisor in most situations and is relevant to a number of job roles throughout food processing industries at various levels.

All work must be carried out to comply with workplace procedures, in accordance with State/Territory food safety requirements that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Food Safety (FSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Handle food safely	1.1 Identify food handling requirements applicable to the workplace 1.2 Carry out food handling as directed

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Maintain the workplace in a clean and tidy state
2. Identify, control and report food safety hazards	2.1 Monitor work area, materials, equipment and product routinely to ensure compliance with food safety requirements 2.2 Identify processes, practices or conditions which are not consistent with the food safety program and tell supervisor
3. Comply with personal hygiene standards	3.1 Ensure personal hygiene meets the requirements of the food safety program 3.2 Tell supervisor of any health conditions and illness 3.3 Wear clothing and footwear appropriate for the food handling task 3.4 Follow food safety program requirements when transferring between tasks and locations in the workplace

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace food safety procedures and information Interpret environmental, recycling and waste disposal guidelines
Writing	<ul style="list-style-type: none"> Record information on paper-based and electronic media Report and document health conditions and illnesses
Numeracy	<ul style="list-style-type: none"> Monitor and interpret food safety information and data
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures relevant to own responsibilities Understand main tasks, responsibilities and boundaries of own role, including use of personal protective clothing and equipment, housekeeping standards and procedures, quality requirements and operating procedures
Interact with others	<ul style="list-style-type: none"> Communicate and report information to relevant persons Ask questions to clarify understanding or seek further information Cooperate with others to control food safety hazards
Get the work done	<ul style="list-style-type: none"> Make routine decisions to correct abnormal food safety issues

Skill	Description
	<ul style="list-style-type: none"> <li>Identify and report problems to appropriate personnel

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPFSY1001 Follow work procedures to maintain food safety	FDFFS1001A Follow work procedures to maintain food safety	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPFYSY1001 Follow work procedures to maintain food safety

Modification History

Release	Comments
Release 1	This version released with FBPF Food, Beverage and Pharmaceutical Training Package version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all elements and performance criteria in this unit.

There must be evidence that the individual has followed work procedures to maintain food safety on at least one occasion, including:

- locating and following workplace information relating to food safety responsibilities
- monitoring own work and implementing any controls as required by the food safety program, including visual inspections and checks
- following workplace procedures to maintain food safety as required by the food safety program relating to own work
- identifying and correcting or reporting situations that do not meet the requirements of the food safety program and/or could result in unsafe food
- handling, cleaning and storing equipment, utensils, packaging materials and similar items according to the requirements of the food safety program as required by work role
- maintaining personal hygiene consistent with the food safety program
- taking necessary precautions when moving around the workplace and/or from one task to another to maintain food safety
- wearing and maintaining appropriate clothing/footwear as required by work tasks and consistent with the requirements of the food safety program
- reporting health conditions and illness as appropriate according to the food safety program
- handling and/or disposing of out-of-specification or contaminated materials, ingredients and product, waste and recyclable material as required by work responsibilities
- maintaining the work area in a clean and tidy state
- cleaning and sanitising equipment according to workplace procedures
- recording food safety information according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- food safety requirements related to work responsibilities, including personal hygiene, requirements and procedures to report illness and safe food handling practices for own work, as well as the possible consequences of not following these procedures
- common types and sources of contamination that occur in the work area, including cross-contamination
- control methods and procedures used in the workplace, including reporting non-compliance and following instructions
- storage and handling requirements for ingredients, materials and product used related to work role
- housekeeping requirements and responsibilities, and use and storage of housekeeping/cleaning equipment
- purpose and importance of cleaning and sanitation procedures
- suitable standard for materials, equipment and utensils used in the work area
- waste collection, recycling and handling procedures relevant to own work responsibilities
- procedures to follow in the event of pest sighting or discovery of infestation
- clothing and footwear requirements for working in and/or moving between food handling areas
- personal clothing maintenance, laundering and storage requirements
- appropriate bandages and dressings to be used when undertaking food handling
- workplace cleaning procedures
- recording/reporting requirements and responsibilities for workplace food safety.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - appropriate clothing and related apparatus
 - reporting and monitoring systems
- specifications:
 - food safety information relating to the workplace, including a food safety program outlining food safety hazards and control methods
 - related work instructions and procedures
 - work tasks and responsibilities
 - cleaning and sanitation policies and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPFSY2001 Implement the food safety program and procedures

Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to maintain personal hygiene and conduct work tasks where work involves operation of production and packaging equipment and processes.

This unit applies to individuals who participate and comply with safety programs in the food processing sector. It does not apply to the pharmaceutical industry.

Legislative and regulatory requirements apply to food safety and are enforced through state/territory jurisdictions. Users must check with the relevant regulatory authority before delivery.

Pre-requisite Unit

Nil

Unit Sector

Food safety (FSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Implement the food safety program	1.1 Identify food handling requirements 1.2 Carry out food handling and control food safety hazards according to the food safety program 1.3 Report any incident where food safety control requirements are not met and take corrective action as directed

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Record food safety information to meet requirements of the food safety program 1.5 Maintain the workplace in a clean and tidy order to meet workplace standards 1.6 Conduct work to comply with workplace environmental guidelines
2. Participate in maintaining and improving food safety	2.1 Monitor work area, materials, equipment and product to ensure compliance with food safety requirements 2.2 Identify and report processes, practices or conditions that could result in a food safety breach, and take corrective action as directed 2.3 Raise food safety issues with supervisor
3. Comply with personal hygiene standards	3.1 Ensure personal hygiene meets the requirements of the food safety program 3.2 Report health conditions and illness as required by the food safety program 3.3 Wear appropriate clothing and footwear for the food handling task 3.4 Move around the workplace in compliance with the food safety program

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information relating to food safety and environmental guidelines
Numeracy	<ul style="list-style-type: none"> Monitor and interpret food safety information and data
Navigate the world of work	<ul style="list-style-type: none"> Understand main tasks, responsibilities and boundaries of own role, including use of personal protective clothing and equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPFSY2001 Implement the food safety program and procedures	FDFFS2001A Implement the food safety program and procedures	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPFYSY2001 Implement the food safety program and procedures

Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has effectively implemented the food safety program and procedures on two separate occasions in a food processing or food packaging environment, including:

- identifying own responsibilities with regard to food safety
- identifying food safety risks in the workplace and the control measures used to manage them
- applying control measures in own work
- monitoring compliance with food safety standards
- identifying and acting on non-compliances, and participating in improving safety
- maintaining required standards of personal hygiene.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- sources of information and expertise on procedures and responsibilities for food safety relating to own work
- basic concepts of critical control point (CCP)-based food safety, including identification of hazards that are likely to occur, establishing appropriate methods of control and confirming that controls are met
- food safety management arrangements in the workplace, including awareness of food safety legislation, workplace policies and procedures to implement responsibilities, understanding the relationship between the quality system and the food safety program, personnel responsible for developing and implementing the food safety program, the role of internal and external auditors as appropriate, procedures followed to investigate contamination events, and performance improvement processes

- Food Standards Code and why it exists
- common microbiological, physical and chemical hazards related to the foods handled in the work area, including the types of hazards likely to occur, the conditions under which they occur, possible consequences, and control methods to prevent occurrence
- basic understanding of the properties, handling and storage requirements of ingredients, materials and products handled and used
- methods used to monitor that food safety is under control, including the purpose of sampling
- action required in the event of non-compliance (corrective action is typically described in the food safety program and/or related workplace information)
- purpose of keeping records, and the recording requirements of the food safety program
- methods used in the workplace to isolate or quarantine food that may be unsafe
- product and ingredient traceability procedures, such as product recall where required by work responsibilities
- clothing and footwear requirements for working in and/or moving between food handling areas
- personal clothing maintenance, laundering and storage requirements
- appropriate bandages and dressings to be used when undertaking food handling
- housekeeping requirements and responsibilities relating to own work, and use and storage of housekeeping/cleaning equipment where relevant
- procedures to follow in the event of pest sighting or discovery of infestation
- purpose and importance of cleaning and sanitation procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real food processing workplace
- resources, equipment and materials:
 - food safety information relating to the workplace, including a food safety program outlining food safety hazards and control methods
 - sampling and test procedures and related equipment
 - appropriate clothing and related apparatus
 - reporting and monitoring systems
- specifications:
 - work instructions and procedures relevant to work task
 - cleaning and sanitation policies and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPFSY3001 Monitor the implementation of quality and food safety programs

Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to provide a leadership role in supporting day-to-day implementation of the quality and food safety programs and procedures in a work area.

The unit applies to individuals who monitor, maintain and oversee quality standards and food safety programs and take corrective action in response to non-compliance. It does not apply to the pharmaceutical industry.

Legislative and regulatory requirements apply to food safety and are enforced through state/territory jurisdictions. Users must check with the relevant regulatory authority before delivery.

Pre-requisite Unit

Nil

Unit Sector

Food safety (FSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Ensure others in the work area are able to meet quality and food safety requirements	1.1 Ensure appropriate personal protective clothing and equipment is available, functional and fits correctly 1.2 Confirm that information on food safety and quality responsibilities and procedures is current, accessible and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>communicated to others in the work area</p> <p>1.3 Confirm that information about identified hazards and the outcomes of risk assessment and risk control procedures is accessible and communicated to others in the work area</p> <p>1.4 Confirm that mentoring and coaching support is available to support individuals and groups to implement quality and safe food handling procedures</p>
2. Monitor observance of quality standards and food safety programs in the work area	<p>2.1 Confirm that work procedures in the work area are clearly defined, documented and followed</p> <p>2.2 Identify deviation from procedures, and report and address within level of responsibility</p> <p>2.3 Ensure that staff behaviour is consistent with workplace policies and procedures that support food safety and quality</p> <p>2.4 Identify and report food safety and quality hazards</p> <p>2.5 Record food safety and quality information</p> <p>2.6 Maintain the work area to comply with housekeeping standards</p> <p>2.7 Conduct work to comply with workplace environmental guidelines</p>
3. Take corrective action in response to quality and food safety non-compliance	<p>3.1 Implement workplace procedures for responding to quality and food safety non-compliance</p> <p>3.2 Investigate hazardous events to identify cause</p> <p>3.3 Implement control measures to prevent recurrence and minimise risks of hazardous events</p>
4. Improve quality and food safety in the work area	<p>4.1 Identify opportunities for improving food safety and quality, and raise with relevant personnel</p> <p>4.2 Contribute to revising procedures to support effective control of quality and food safety hazards</p> <p>4.3 Communicate improvements to team members</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret food safety program Interpret workplace food safety practices and procedures
Navigate the world of work	<ul style="list-style-type: none"> Apply knowledge of regulations and policies relevant to workplace food safety program
Get the work done	<ul style="list-style-type: none"> Use problem-solving skills to investigate non-conformance, and revise procedures where necessary

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPFSY3001 Monitor the implementation of quality and food safety programs	FDFFS3001A Monitor the implementation of quality and food safety programs	<p>Updated to meet Standards for Training Packages</p> <p>Prerequisite unit removed</p> <p>Minor changes to Performance Criteria to clarify intent</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPFYSY3001 Monitor the implementation of quality and food safety programs

Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has effectively monitored the implementation of quality and food safety programs on two different occasions, including:

- confirming quality and food safety program requirements, risks and control measures of the work area
- confirming that control measures are in place and that personnel in the work area are equipped and informed to implement programs
- identifying, addressing and following up on non-compliances
- identifying causes of non-compliance
- conducting risk assessments and recommending responsive actions
- providing support to others to implement the programs
- completing and maintaining documentation.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- procedures and responsibilities for food safety relevant to the workplace
- principles of a critical control point (CCP) analyses approach to managing food safety, including identifying hazards that are likely to occur, establishing appropriate methods of control, and confirming that controls are met
- Food Standards Code
- basic concepts of quality assurance, including hazards, risk assessment and control methods

- methods to manage and support quality and food safety in the workplace, including systems for maintaining and updating documents, including operating procedures and specifications
- clothing and footwear requirements for working in and/or moving between food handling areas, including personal clothing maintenance, laundering and storage requirements
- appropriate bandages and dressings to be used when undertaking food handling
- housekeeping requirements and responsibilities relating to own work, including use and storage of housekeeping/cleaning equipment
- procedures to follow in the event of pest sighting or discovery of infestation
- purpose and importance of cleaning and sanitation procedures
- legislative requirements for food safety and quality
- awareness of common microbiological, physical and chemical hazards related to the foods handled in the work area, including the types of hazards likely to occur, the conditions under which they occur, possible consequences, and control methods to prevent occurrence
- suitable standard for materials, measuring devices, equipment and utensils used in the work area
- properties of food and ingredients used that affect food safety, including an understanding of related storage, processing and handling requirements
- reasons that food safety/quality hazards occur, including an understanding of common microbiological, physical and chemical hazards, related control methods and the way changes in equipment and/or processing methods can affect food safety and quality outcomes
- procedures for identifying unsafe and/or non-conforming product, including control points and evidence of out-of-specification product or materials
- sampling procedures, test methods and inspections
- options for responding to non-compliance, including legal responsibility, risk management and cost/implications of different responses, and level of responsibility for decision-making
- methods used in the workplace to isolate or quarantine food that may be unsafe
- waste collection, recycling, handling and disposal, including handling/disposal requirements for different types of waste, including hazardous waste
- traceability and recall procedures within level of responsibility
- documentation system and procedures, including recordkeeping to meet both company and legal requirements, procedures for developing and/or reviewing workplace procedures, and document control systems used in the workplace
- internal and external auditing arrangements, roles and responsibilities as they relate to own work responsibilities
- appropriate communication skills and techniques to convey information on quality and food safety requirements to others in the workplace.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - personal protective clothing and equipment as required
 - reporting and monitoring systems
- specifications:
 - food safety program for the work area that identifies critical control points, control measures and corrective actions
 - quality policy, system and procedures
- relationships:
 - interactions with work team and supervisor.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPFSY3002 Participate in a HACCP team

Modification History

Release	Comments
Release 2	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to participate in the development and review of a hazard analysis critical control point (HACCP)-based food safety program.

The unit applies to individuals who work under broad direction and take responsibility for their own work, including limited responsibility for the work of others, and who participate in the development of a food safety program typically limited to their immediate work area.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Food Safety (FSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to develop or review a food safety program	1.1 Recognise roles and responsibilities for participating in, developing or reviewing a food safety program 1.2 Identify the scope of a food safety program

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Identify and review food safety hazards	<p>2.1 Identify processes to be covered by the food safety program, and recognise the steps within each process</p> <p>2.2 Identify food safety hazards that are reasonably expected for each critical control point</p> <p>2.3 Review safety handling methods, processing techniques and existing support programs used in the workplace as part of a team</p>
3. Establish or review methods to monitor and control food safety hazards	<p>3.1 Establish acceptable methods of control for each food safety hazard that is reasonably expected to occur</p> <p>3.2 Validate control methods against safety standards</p> <p>3.3 Establish or review procedures for taking preventative action</p> <p>3.4 Establish or review appropriate methods for monitoring that processes remain within control</p> <p>3.5 Establish required corrective action to respond to situations where hazards are not effectively controlled</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret details of the food safety program

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPFSY3002 Participate in a HACCP team Release 2	FBPFSY3002 Participate in a HACCP team Release 1	Dot point about different types of food safety hazards added to Knowledge Evidence	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPFYSY3002 Participate in a HACCP team

Modification History

Release	Comments
Release 2	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has actively participated in a food safety team on a minimum of two occasions, including:

- identifying food safety hazards in the critical control points (CCPs) of production processes
- establishing and validating control standards and methods for a minimum of two potential hazards
- applying food safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and intent of food safety legislation, including Food Standards Code
- the roles and responsibilities for developing and maintaining the food safety program, including roles of internal and external auditors and authorised officers
- techniques for applying critical control point principles, including techniques for identifying hazards, assessing the likelihood of occurrence, determining acceptable methods of control, monitoring and recording requirements for each control point, identifying corrective action if controls are not met, and developing system review procedures
- common microbiological, physical, chemical and allergen hazards related to the foods handled in the work area, including the types of hazards likely to occur, the conditions under which they occur, possible consequences, and control methods to prevent occurrence

- techniques used to map operations and analyse food safety requirements, such as preparation of flow charts, hazard analysis charts and tables, and data analysis reports
- raw materials, ingredients and finished product composition and characteristics, and related handling and storage requirements
- food processing methods used in the workplace or work area, and their effect on food safety
- the role of consultation in the development, implementation and ongoing maintenance of the food safety program
- documentation and recording requirements to support communication and monitoring of the food safety program, including procedures for maintaining and updating relevant documents, such as operating procedures
- main types of food safety hazards and contamination likely to occur given product type and processing methods used
- conditions required for bacterial food poisoning to occur, such as water activity, pH, composition and time and temperature as relevant to food handled
- acceptable control methods for identified hazards, and required corrective actions when control requirements are not met
- typical support programs, such as cleaning schedules, pest control, stock rotation, product traceability, and personal hygiene, and how they can be used as part of a food safety program
- validation and verification processes and techniques and responsibilities.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - workplace food safety program documentation
- specifications:
 - review/audit arrangements
 - advice on quality and food safety legislation
 - procedures for developing or modifying specifications and other advice on food safety requirements
 - reporting/recording system
- relationships (internal and/or external):
 - interactions with team members.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPGPS2011 Operate a creamed honey manufacture process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package version 1.0.

Application

This unit of competency describes the skills and knowledge required to set up, monitor, and adjust a process to produce creamed honey.

This unit applies to individuals who apply basic operating principles to the operation and monitoring of machines and equipment used to cream honey in a production environment within the honey processing industry.

All work must be carried out to comply with workplace procedures, in accordance with State/Territory work health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Grocery and product supplies (GPS)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare the equipment and process for operation	1.1 Confirm liquid and seed honey are available to meet production requirements 1.2 Identify and confirm cleaning and maintenance requirements have

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>been met</p> <p>1.3 Fit and adjust machine components and related attachments according to operating requirements</p> <p>1.4 Enter processing or operating parameters to meet safety and production requirements</p> <p>1.5 Check and adjust equipment performance as required</p> <p>1.6 Conduct pre-start checks according to operator instructions</p>
2. Operate and monitor the creamed honey manufacture process	<p>2.1 Start-up and operate the honey manufacture process according to work health and safety and operating procedures</p> <p>2.2 Monitor equipment to identify variation in operating conditions</p> <p>2.3 Identify variation in equipment operation and report maintenance requirements</p> <p>2.4 Confirm that specifications are met at each stage according to production specifications</p> <p>2.5 Identify, rectify or report out-of-specification product and process outcomes according to workplace procedures</p> <p>2.6 Maintain the work area according to workplace guidelines</p> <p>2.7 Enter workplace records in required format</p>
3. Shut down the creamed honey manufacture process	<p>3.1 Identify the appropriate shutdown procedure</p> <p>3.2 Shut down the process safely according to operating procedures</p> <p>3.3 Identify and report maintenance requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and interpret standard operating procedures for the creamed honey manufacturing process
Writing	<ul style="list-style-type: none"> Complete records according to workplace guidelines on paper-based and electronic media

Skill	Description
Numeracy	<ul style="list-style-type: none"> Monitor control points for time and temperature measurements, vacuum pressure and steam flow
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities Understand main tasks, responsibilities and boundaries of own role, including use of personal protective clothing and equipment, housekeeping standards and environmental care requirements Maintain a clean and hazard-free work area Maintain hygiene standards
Interact with others	<ul style="list-style-type: none"> Report operational and safety information to relevant personnel using required communication method
Get the work done	<ul style="list-style-type: none"> Solve routine problems according to workplace guidelines and using experience of past solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPGPS2011 Operate a creamed honey manufacture process	FDFGPS2011A Operate a creamed honey manufacture process	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPGPS2011 Operate a creamed honey manufacture process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has:

- conducted pre-start checks on machinery used for creaming honey
- started, operated, monitored and adjusted process equipment used for creaming honey to achieve required quality outcomes
- taken corrective action in response to typical faults and inconsistencies
- completed workplace records in required format
- applied safe work practices, and identified work health and safety hazards and controls
- safely shut down equipment
- applied food safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic principles of crystallisation, including:
 - an understanding of crystal structure and where appropriate
 - methods used to reduce crystal size
 - the effects of temperature and agitation on crystal formation
 - appropriate ratio of seed to liquid honey
 - factors that influence the crystallisation process, including moisture content and crystal size
- basic operating principles of equipment, including:
 - main equipment components
 - status and purpose of guards
 - equipment operating capacities and applications

- purpose and location of sensors and related feedback instrumentation
- services required for creamed honey manufacture and action to take if services are not available
- quality and organoleptic characteristics of different types of honey processed
- quality characteristics to be achieved by the final product, and related test methods used to confirm quality
- quality requirements of seed and liquid honey used, and the effect of variation on the final product
- operating requirements, parameters and corrective action required where the process is outside specified operating parameters (including ambient and processing temperatures, agitation speeds, and holding times and temperatures)
- typical equipment faults and related causes, including:
 - signs and symptoms of faulty equipment
 - early warning signs of potential problems
- methods used to monitor each stage of the production process, including inspecting, measuring and testing as required
- inspection or test points (control points) in the process and the related procedures and recording requirements
- contamination and food safety risks associated with the process and related control measures (this relates specifically to air inclusion and moisture content, and related methods of control)
- common causes of variation and corrective action required
- factors that affect the stability and shelf-life of the finished product and options to extend shelf-life, including storage conditions for packed product
- work health and safety hazards and controls, including the limitations of protective clothing and equipment relevant to the work process
- requirements of different shutdowns as appropriate to the process and workplace production requirements, including:
 - emergency and routine shutdowns
 - procedures to follow in the event of a power outage
- isolation, lock out and tag out procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process
- basic operating principles of process control, including the relationship between control panels and systems and the physical equipment
- routine maintenance procedures for creamed honey manufacture equipment
- cleaning and sanitation procedures for creamed honey manufacture equipment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - process and related equipment and services
 - seed and liquid honey
 - personal protective clothing and equipment
 - sampling schedules, and test procedures and equipment
 - cleaning procedures, materials and equipment
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements
 - information on equipment capacity and operating parameters
 - production schedule/batch instructions
 - specifications, control points and processing parameters
 - documentation and recording requirements and procedures
- relationships:
 - interactions with team members and supervisors.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR1010 Carry out manual handling tasks

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to identify manual handling requirements of a work function, use manual handling aids to lift or move items and identify and assess manual handling risks.

This unit applies to individuals who work alongside a supervisor in most situations and exercise limited autonomy.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Participate in processes to identify and assess manual handling	1.1 Identify the manual handling components of a work function 1.2 Identify manual handling risks to self and others within level of responsibility and tell supervisor
2. Contribute to manual handling risk minimisation	2.1 Check that manual handling equipment is available and ready for use 2.2 Ensure that personal protective equipment, including clothing and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	footwear, is fit or use,
3. Plan and conduct manual handling	3.1 Identify sources of risks 3.2 Modify workplace layout and environment within area of control to minimise manual handling risk 3.3 Modify work tasks within area of control to minimise the risk of injury 3.4 Use manual handling aids according to workplace procedures 3.5 Use movement and postures to minimise the risk of injury within the limits of the work environment and the demands of the task

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Interact with others	<ul style="list-style-type: none"> Ask simple questions and listen carefully to clarify understanding or seek further information
Get the work done	<ul style="list-style-type: none"> Follow simple, clear instructions Recognise and seek guidance to correct simple problems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR1010 Carry out manual handling tasks	FDFOPR1003A Carry out manual handling tasks	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR1010 Carry out manual handling tasks

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively carried out a minimum of three, different manual handling tasks, including:

- identifying the risks associated with each manual handling task (to self and others)
- eliminating risks, including through movement, posture and effectively using equipment provided
- modifying work to eliminate or minimise risk
- applying safe work procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- different types of manual handling activities, including lifting, reaching, pushing, pulling, holding, restraining, throwing and carrying
- types of injuries that can result from manual handling
- aspects of manual handling that may be risks (hazard identification), including:
 - repetitive or sustained application of force
 - repetitive or sustained awkward posture
 - repetitive or sustained movement
 - application of high force
- manual handling of unstable or unbalanced loads, such as liquids or animals
- workplace procedures and responsibilities for identifying and reporting manual handling hazards
- factors to be considered when assessing manual handling risks relevant to work role (refer to workplace risk assessment sheets and code of practice advice where available), including:

- postures
- movements
- force required
- duration and frequency of manual handling activity
- environmental conditions, such as hot and cold work environments
- procedures and responsibilities for conducting risk assessments of manual handling tasks
- typical options for eliminating or controlling manual handling risks associated with work functions, including principles of hierarchy of control and the advantages and disadvantages of different options
- types of equipment and/or techniques used to eliminate or reduce manual handling risks in the workplace, including when and how to use each type of technique/equipment relevant to manual handling tasks in work role
- level of authority to address health and safety issues related to manual handling and related workplace arrangements for managing safety issues
- sources of advice on manual handling relevant to work function
- equipment available to assist manual handling, related inspections required to identify faulty equipment and related reporting procedures
- personal protective equipment checks including:
 - check for correct fit
 - appropriate for task
 - undamaged
- movement and postures that increase the risk of injury, and movements and postures to minimise the force in the body as applied to specific tasks in the workplace.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - work procedures, including advice on manual handling requirements and safe work practices.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2012 Maintain food safety when loading, unloading and transporting food

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0

Application

This unit of competency describes the skills and knowledge required to maintain food safety when loading and transporting temperature-sensitive ingredients and products.

This unit applies to loading, unloading and transport activities where the transport operator does not have direct physical contact with food. Where food is handled directly by the transport operator, the relevant food handling unit also applies.

All work must be carried out to comply with workplace procedures, in accordance with State/Territory work health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to transport food	1.1 Read or listen to work instructions from supervisor and clarify where needed

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Identify work health and safety hazards and tell supervisor</p> <p>1.3 Wear appropriate personal protective equipment and ensure correct fit</p> <p>1.4 Confirm that food storage vehicles, containers and receptacles are appropriate for use</p> <p>1.5 Prepare food storage vehicles and containers and receptacles for use according to workplace procedures and safety and food safety requirements</p> <p>1.6 Load and secure food to meet transportation and temperature control requirements according to workplace procedures and food safety requirements</p> <p>1.7 Follow hand washing and disinfecting procedures according to food safety requirements</p>
2. Load, unload and transport food safely	<p>2.1 Monitor food safety control measures to ensure that food safety is maintained during transport</p> <p>2.2 Report incidents where food safety control requirements are not met and take corrective action as directed</p> <p>2.3 Unload food according to workplace procedures and transportation and temperature control requirements</p> <p>2.4 Record food safety information according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> • Assemble and sort product • Count accurately • Read a thermometer and temperature charts • Weigh product
Reading	<ul style="list-style-type: none"> • Check cleaning records • Interpret and follow food safety and work health and safety requirements

Skill	Description
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures relevant to own responsibilities Understand main tasks, responsibilities and boundaries of own role, including use of personal protective clothing and equipment, housekeeping standards and procedures, quality requirements and operating procedures Take steps to develop skills and knowledge of temperature controlled food products
Interact with others	<ul style="list-style-type: none"> Communicate and report operational and safety information to relevant persons Select and use appropriate terminology when communicating with personnel Participate in conversations relevant to role by responding and explaining as required
Get the work done	<ul style="list-style-type: none"> Make routine decisions relating to temperature, freshness and handling of product Recognise and respond to non-conforming product Use digital technologies including electronic scales

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2012 Maintain food safety when loading, unloading and transporting food	FDFO2012A Maintain food safety when loading, unloading and transporting food	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2012 Maintain food safety when loading, unloading and transporting food

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has maintained food safety when loading, unloading and transporting food on at least one occasion, including:

- accessing workplace information to determine food handling and transport requirements
- selecting, fitting and using PPE
- confirming that the vehicle and associated equipment are appropriate and ready for use, including confirming that vehicle type is capable of maintaining the required temperature range for product
- preparing transport containers (this will vary depending on the type of food and transport method), such as checking cleaning records and, where required, confirming product compatibility to ascertain that appropriate level of cleaning has occurred
- preparing the storage/holding environment as required, including confirming that temperature parameters for the loading and unloading areas are met
- following procedures to load/unload food to ensure that materials/product is loaded/unloaded in correct sequence and configuration and that food cannot become contaminated by being located in proximity to other food or non-food items that can cause contamination (osmosis)
- monitoring temperature parameters and related food safety control points before, during and after transporting food, and recording information in the required format
- taking appropriate corrective action in response to failure to meet temperature parameters or other food safety requirements as required by workplace procedures
- cleaning and sanitising food containers according to enterprise procedures
- following relevant work health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- work health and safety hazards and controls, including the purpose and limitations of protective clothing and equipment
- food safety control points in the loading/unloading and transportation of food materials and product, and related methods of control
- characteristics of food transported and related transport environment requirements
- microbiological, physical and chemical hazards that can occur when loading, transporting and unloading food, appropriate to nature and method of food transported, including the types of hazards likely to occur, the conditions under which they occur, and possible consequences
- methods and procedures used to control food safety hazards (this depends on the type of controls and equipment used), including the purpose and operation of equipment procedures in place to maintain food safety and workplace records, such as temperature control charts and cleaning and sanitation records
- procedures used to confirm that transportation and related food safety equipment is appropriate for use and operational, such as equipment capacity to maintain a given temperature environment appropriate to the food product
- cleaning and sanitation requirements for maintaining food safety when loading, unloading and transporting food
- potential for cross-contamination resulting from location in proximity to other food or non-food items that are transported, where contamination by osmosis is a possibility.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - workplace information, including temperature charts and cleaning records
 - food storage vehicles, containers and receptacles
 - food materials and product to be loaded/unloaded and transported
- specifications:
 - work procedures relevant to loading/unloading and transportation, including advice on required temperature parameters to be maintained
 - food safety information
 - loading/unloading and transport advice/schedules
 - documentation and recording requirements and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2023 Operate a packaging process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0

Application

This unit of competency describes the skills and knowledge required to set up, operate, adjust and shut down a packaging process or sub-system.

This unit applies to individuals who operate and monitor a packaging process and associated equipment in a food processing packaging environment. The unit applies in a food processing packaging environment where no other specific packaging unit is available.

A packaging process may relate to primary and secondary packaging activities. It typically requires the operation of a series of related items of equipment to achieve the required outcome.

All work must be carried out to comply with workplace procedures, in accordance with State/Territory work health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work in	1.1 Read or listen to work instructions from supervisor and clarify

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
processing area	<p>where needed</p> <p>1.2 Identify work health and safety hazards and tell supervisor</p> <p>1.3 Wear appropriate personal protective equipment (PPE) and ensure correct fit</p> <p>1.4 Confirm that packaging components and consumables, materials and items to be packaged are available to meet operating requirements</p> <p>1.5 Identify and confirm cleaning and maintenance requirements and status according to workplace procedures</p>
2. Prepare the equipment and process for operation	<p>2.1 Fit and adjust machine components and related attachments</p> <p>2.2 Enter operating parameters to meet safety and production requirements</p> <p>2.3 Load or position materials, product and packaging components and consumables according to food safety and operating requirements</p> <p>2.4 Check and adjust equipment performance according to operating and job requirements</p> <p>2.5 Carry out pre-start checks according to operator instructions</p>
3. Operate and monitor the process	<p>3.1 Start, operate and monitor the process for variation in operating conditions according to work health and safety and operating procedures</p> <p>3.2 Monitor the process to confirm that specifications are met</p> <p>3.3 Identify, rectify and report out-of-specification equipment, product or process outcomes according to workplace requirements</p>
4. Shut down the process	<p>4.1 Identify the appropriate shutdown procedure</p> <p>4.2 Shut the process down safely according to operating procedures</p> <p>4.3 Report maintenance requirements according to workplace procedures</p> <p>4.4 Maintain workplace records according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace and standard operating procedures relevant to job role Interpret production requirements
Writing	<ul style="list-style-type: none"> Record operating, routine maintenance and shutdown information on paper-based and electronic media
Numeracy	<ul style="list-style-type: none"> Monitor and interpret production and process control indicators and data Monitor supply and flow of materials to and from the process
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities Identify skills, knowledge and experience required for performing own role in the workplace Ask questions to clarify understanding or seek further information
Interact with others	<ul style="list-style-type: none"> Communicate and report operational and safety information to relevant personnel
Get the work done	<ul style="list-style-type: none"> Access and interpret process control panels and system Maintain a clean and hazard-free work area Identify out-of-specification standards and maintain quality specifications Confirm equipment status and condition Interpret process and equipment information to monitor process and respond to abnormal performance and variations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2023 Operate a packaging process	FDFOP2023A Operate a packaging process	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2023 Operate a packaging process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has operated a packaging process on at least one occasion, including:

- accessing workplace information to identify packaging requirements
- selecting, fitting and using PPE
- confirming supply of necessary packaging components/consumables, materials and services
- conducting pre-start checks, including:
 - inspecting equipment condition to identify any signs of wear
 - setting coders and printers
 - selecting appropriate equipment settings and/or related parameters
 - cancelling isolation or lock-outs as required
 - confirming that equipment is clean and correctly configured for packaging requirements
 - positioning sensors and controls correctly
 - ensuring any scheduled maintenance has been completed
 - confirming that all safety guards are in place and operational
- starting, operating, monitoring and adjusting packaging equipment to achieve required outcomes, including:
 - packaging components/consumables and/or product
 - monitoring control points (for example, weights, codes, placement, glue temperatures, alignment and appearance, configuration and seal integrity) as required to confirm process remains within specification
- monitoring supply and flow of materials to and from the process
- taking corrective action in response to out-of-specification results
- responding to and/or reporting equipment failure within level of responsibility
- locating emergency stop functions on equipment

- following isolation and lock-out/tag-out procedures as required to take packaging equipment off-line in preparation for cleaning and/or maintenance within level of responsibility
- completing workplace records as required
- maintaining work area to meet housekeeping standards
- using process control systems according to enterprise procedures
- cleaning and sanitising equipment according to enterprise procedures
- following relevant work health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and basic principles of the packaging process, including:
 - the purpose and characteristics required of packaging materials used
 - the principles of the packaging process used (where methods involve vacuum or map packaging, it includes an understanding of the effect of modified atmosphere on product shelf-life)
- product and packaging coding requirements and related legal requirements, including product weight
- basic operating principles of equipment, including:
 - main equipment components
 - status and purpose of guards
 - equipment operating capacities and applications
 - the purpose and location of sensors and related feedback instrumentation
- services required and action to take if services are not available
- the flow of processes supplying the packaging process and the effect of outputs on downstream processes
- quality characteristics required of the packaging process, including seal integrity requirements
- effect of variation in inputs, including packaging components/consumables, materials and/or services, on process performance
- operating requirements and parameters, and corrective action required where operation is outside specified operating parameters, including restart procedures following a crash or jam-up
- typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems
- methods used to monitor the packaging process, including visual inspecting, and measuring and testing as required by the process
- inspection or test points (control points) in the process and the related procedures and recording requirements
- contamination/food safety risks related to stages in the packaging process, and related control measures
- common causes of variation and corrective action required

- work health and safety hazards and controls relevant to the packaging process
- requirements of different shutdowns as appropriate to the packaging process, including:
 - emergency and routine shutdowns and procedures to follow in the event of a power outage
 - conducting basic equipment referencing where required
- isolation, lock-out and tag-out procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process
- basic operating principles of process control, including the relationship between control panels and systems and the physical equipment
- cleaning and sanitation procedures for packaging equipment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective clothing and equipment
 - packaging and related equipment and services
 - materials to be packaged and packaging components/consumables
 - sampling schedules, test procedures and equipment
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements
 - information on equipment capacity and operating parameters
 - specifications, control points and operating parameters
 - documentation and recording procedures
 - cleaning procedures, materials and equipment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2037 Operate a filtration process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0

Application

This unit of competency describes the skills and knowledge required to set up, operate, adjust and shut down a filtration process.

This unit applies to individuals who work under general supervision and exercise limited autonomy in a food processing environment. It typically applies to the production worker responsible for applying basic operating principles to the operation and monitoring of a filtration process and associated equipment.

All work must be carried out to comply with workplace procedures, in accordance with State/Territory work health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work in filtration processing area	1.1 Confirm materials are available to meet operating requirements 1.2 Identify and confirm cleaning and maintenance requirements and status according to work health and safety and food safety

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.3 Wear appropriate personal protective clothing and ensure correct fit
2. Prepare the filtration equipment and process for operation	2.1 Fit and adjust machine components and related attachments to meet operating requirements 2.2 Enter processing and operating parameters to meet safety and production requirements 2.3 Check equipment performance and adjust according to production requirements 2.4 Carry out pre-start checks according to work health and safety and operating procedures
3. Operate and monitor the filtration process	3.1 Start, operate and monitor the filtration process for variation in operating conditions 3.2 Confirm separation of solids from solution meets specifications 3.3 Monitor the process to confirm that specifications are met 3.4 Identify, rectify and report out-of-specification equipment, product or process outcomes according to workplace requirements 3.5 Follow and apply workplace housekeeping and environmental procedures
4. Shut down the filtration process	4.1 Identify the appropriate shutdown procedure 4.2 Shut down the process according to work health and safety and operating procedures 4.3 Identify and report maintenance requirements according to workplace procedures 4.4 Maintain workplace records according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace and standard operating procedures relevant to job role Interpret production requirements
Writing	<ul style="list-style-type: none"> Record operating, routine maintenance and shutdown information on paper-based and electronic media
Numeracy	<ul style="list-style-type: none"> Monitor and interpret production and process control indicators and data Monitor supply and flow of materials to and from the process
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities Identify skills, knowledge and experience required for performing own role in the workplace Ask questions to clarify understanding or seek further information
Interact with others	<ul style="list-style-type: none"> Communicate and report operational and safety information to relevant personnel Use modes of communication suitable to purpose to confirm understanding when conducting operational start-up and shutdown procedures
Get the work done	<ul style="list-style-type: none"> Access and interpret process control panels and system Maintain a clean and hazard-free work area Identify out-of-specification standards and maintain quality specifications Confirm equipment status and condition Interpret process and equipment information to monitor process and respond to abnormal performance and variations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2037 Operate a filtration process	FDFOP2037A Operate a filtration process	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2037 Operate a filtration process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has operated a filtration process on at least one occasion, including:

- accessing workplace information to identify filtration processing requirements
- selecting, fitting and using personal protective clothing and/or equipment
- confirming supply of necessary materials and services
- conducting pre-start checks, including:
 - inspecting equipment condition to identify any signs of wear
 - selecting and fitting appropriate screens and equipment components
 - selecting settings and/or related parameters
 - cancelling isolation or lock-outs as required
 - positioning sensors and controls correctly
 - ensuring any scheduled maintenance has been carried out
 - confirming that all safety guards are in place and operational
- starting, operating, monitoring and adjusting filtration process and equipment to achieve required outcomes, including:
 - flow rates
 - residence time
 - solids for in-feeds and out-feeds (this is typically done by conducting a spin test)
- monitoring supply and flow of materials to and from the filtration process
- taking corrective action in response to out-of-specification results, including identifying and responding to sieve or screen blockages or tears
- identifying and/or reporting equipment faults, including confirming condition screens and sieves and replacing damaged components within level of responsibility
- locating emergency stop functions on equipment

- follow isolation and lock-out/tag-out procedures to take filtration and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility
- cleaning and sanitising filtration equipment
- completing workplace records
- maintaining work area to meet housekeeping standards
- using process control systems according to workplace procedures
- following relevant work health and safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and basic principles of filtration, including stages and changes that occur during filtration
- basic operating principles of filtration equipment, including:
 - main equipment components
 - status and purpose of guards
 - equipment operating capacities and applications, including relevant screens and sieves by filtration equipment
 - the purpose and location of sensors and related feedback instrumentation
- services required for operation of filtration equipment used in the workplace
- the flow of the filtration process and the effect of product output on downstream processes
- effect of raw material characteristics on filtration performance
- quality characteristics required of filtration process output
- test methods used to monitor solids in in-feed and out-feed streams
- operating requirements and parameters for the filtration process and corrective action required where operation is outside specified operating parameters
- typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems, including screen or sieve damage
- common causes of variation in the operation of the filtration process and corrective action required
- spoilage and other food safety risks associated with filtration
- work health and safety hazards and controls, including the limitations of protective clothing and equipment relevant to the work process
- requirements of different shutdowns as appropriate to the filtration process and workplace production requirements, including emergency and routine shutdowns, and procedures to follow in the event of a power outage
- cleaning procedures appropriate for the range of filtration components used
- isolation, lock-out and tag-out procedures and responsibilities required for the operation of the filtration process
- cleaning and sanitising methods and procedures required for the filtration process
- procedures and responsibility for reporting production and performance information

- environmental issues and controls relevant to filtration, including handling of effluent
- basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective clothing and equipment
 - filtration and related equipment and services
 - materials required for filtration
 - sampling schedules and test procedures and equipment as required
 - cleaning procedures, materials and equipment
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements, stock flow systems, production schedules, and batch/recipe instructions
 - information on equipment capacity and operating parameters
 - production schedule/batch instructions
 - documentation and recording requirements and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2063 Clean equipment in place

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to prepare process equipment for cleaning in place or in-line. It applies to food processing equipment that is fixed in place and cannot be moved to a cleaning station. It requires the operator to initiate, monitor and control variables during cleaning.

This unit applies to individuals who work in food processing facilities performing a defined range of activities, most of which are routine and predictable.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for cleaning	1.1 Read or listen to work instructions from supervisor and clarify where needed 1.2 Identify health and safety hazards in the workplace and tell supervisor 1.3 Wear appropriate personal protective equipment and ensure

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>correct fit</p> <p>1.4 Confirm that chemical stocks are available to meet cleaning and food safety requirements</p> <p>1.5 Confirm that services are available and ready for operation</p> <p>1.6 Plan equipment shut down and take equipment off-line for cleaning</p> <p>1.7 Configure equipment and related valves and pipework to confirm readiness for cleaning</p> <p>1.8 Set the plant for the cleaning cycle</p>
2. Operate and monitor the cleaning process	<p>2.1 Carry out the cleaning cycle as directed</p> <p>2.2 Monitor the cleaning process for completeness</p> <p>2.3 Record cleaning data appropriately</p> <p>2.4 Identify, rectify and report out-of-specification process and equipment performance</p>
3. Dispose of waste and return plant to operating condition	<p>3.1 Flush cleaning chemicals from plant and dispose of accordingly</p> <p>3.2 Set up plant to meet operational requirements</p> <p>3.3 Conduct work according to workplace environmental guidelines</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Decant and mix chemicals in the correct proportion Monitor actions including temperature gauges and tank levels

Unit Mapping Information

Code and title	Code and title	Comments	Equivalence status
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current version	previous version		
FBPOPR2063 Clean equipment in place	FDFOP2003A Clean equipment in place	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2063 Clean equipment in place

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively cleaned food processing equipment that is fixed in place, on a minimum of two occasions, including:

- shutting down equipment and preparing for cleaning
- preparing and using chemicals according to safe work requirements
- cleaning equipment to meet work standards
- monitoring cleaning and report or address any non-compliances
- flushing equipment and dispose of waste according to environmental guidelines
- completing required documentation
- applying safe work practices and identify health and safety hazards and controls in the workplace
- applying food safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and basic principles of cleaning in place (CIP), including the use and functions of caustic and acid solutions, and cleaning sequence and stages as required in the workplace
- purpose and use of cleaning equipment and chemicals used
- terminology relating to the chemical solutions used
- safe work procedures, including appropriate signage of cleaning activities, and safe handling and storage of cleaners and sanitisers used
- health and safety workplace procedures, including purpose and limitations of personal protective equipment
- cleaning and sanitising requirements, including different levels of cleaning requirements

- characteristics of cleaning and sanitising chemicals used, including basic composition as well as compatibility of chemicals with types of equipment
- methods used to render equipment safe to clean, including the status and purpose of equipment guards, relevant lock out/tag out and isolation procedures
- equipment settings required for cleaning and operating
- basic operating principles of process control where relevant, including the relationship between control panels and systems and the physical equipment
- inspection points for cleaning and sanitising
- consequences of contamination of process flows by cleaning solutions and related safeguards
- types of waste generated by both the production and the cleaning process and related collection, treatment and disposal requirements
- environmental consequences of incorrect cleaning waste disposal procedures
- requirements to liaise with/advise related work areas
- reporting and recording systems.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - personal protective clothing and equipment
 - equipment to be cleaned, and related CIP system
 - chemicals and/or automated chemical addition system
- specifications:
 - workplace standard operating procedures and task-related documents.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2064 Clean and sanitise equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to clean, sanitise and carry out related procedures for food processing production equipment.

This unit applies to individuals who are primarily responsible for cleaning or where a more detailed knowledge of cleaning and sanitation processes is required in order to carry out cleaning responsibilities. This unit applies to both wet and dry cleaning methods.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for cleaning	1.1 Read or listen to work instructions from supervisor and clarify where needed 1.2 Identify health and safety hazards in the workplace and inform supervisor 1.3 Wear appropriate personal protective equipment (PPE) and ensure correct fit

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Confirm that cleaning and sanitising agents and services are available and ready for use 1.5 Clear equipment of product and packaging consumables in preparation for cleaning 1.6 Render equipment safe to clean 1.7 Liaise with other work areas about timing of cleaning
2. Clean and sanitise equipment to meet workplace requirements	2.1 Clean and sanitise equipment to workplace requirements 2.2 Inspect equipment to confirm operating condition and cleanliness 2.3 Identify, rectify and report unacceptable equipment condition 2.4 Store cleaning equipment and chemicals 2.5 Dispose of waste from cleaning process appropriately 2.6 Restore equipment to operating order 2.7 Complete documentation according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Ask questions to clarify understanding or seek further information
Numeracy	<ul style="list-style-type: none"> Decant and mix chemicals in the correct proportion Monitor actions, including temperature gauges and tank levels
Get the work done	<ul style="list-style-type: none"> Locate stop functions on equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

FBPOPR2064 Clean and sanitise equipment	FDFOP2004A Clean and sanitise equipment	Updated to meet Standards for Training Packages	Equivalent unit
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Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2064 Clean and sanitise equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively cleaned and sanitised a minimum of two different items of equipment, including:

- preparing equipment for cleaning
- preparing and use chemicals according to safe work requirements
- cleaning and sanitising equipment to meet work standards
- monitoring cleaning and reporting or addressing any non-compliances
- disposing of waste according to environmental guidelines
- completing required documentation
- applying safe work practices and identifying health and safety hazards and controls in the workplace
- applying food safety procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the purpose of cleaning and sanitation and importance in maintaining food safety
- functions of cleaners, sanitisers and related equipment
- safe work procedures, including appropriate signage of cleaning activities, safe handling and storage of cleaners and sanitisers used, safety when using cleaning methods
- health and safety requirements in the workplace, including purpose and limitations of personal protective equipment (PPE)
- cleaning and sanitation requirements relating to work responsibilities, including the need for different levels of cleaning where relevant
- procedures for preparing cleaners and sanitisers as required
- cleaning methods to be followed relating to workplace procedures

- other work areas/operators who need to be consulted/advised on timing of cleaning
- methods used to render equipment safe to clean, including understanding the status and purpose of equipment guards, relevant lock out/tag out and isolation procedures and related equipment settings for both cleaning and operating as required
- procedures for cleaning and sanitising
- types of waste generated by the cleaning process and related collection, treatment and disposal requirements
- potential environmental impact of incorrect waste handling
- inspection, cleaning and storage requirements of cleaning equipment used
- inspection points and methods for confirming the effectiveness of cleaning and sanitation, including visual inspection, and where required, recording of cleaning conducted
- inspection requirements to confirm equipment condition, including acceptable equipment condition, ability to identify faulty or unacceptable equipment, and take required corrective action
- recording requirements and responsibilities.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - cleaning and sanitising equipment according to workplace requirements
 - cleaning equipment and chemicals
 - PPE
- specifications:
 - workplace standard operating procedures and task-related documents.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2065 Conduct routine maintenance

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to inspect equipment and carry out routine maintenance and adjustment using a limited range of hand tools.

This unit applies to individuals who perform routine maintenance in a food and beverage environment. It typically targets the production worker responsible for conducting simple and routine maintenance tasks to support the operation of machines or equipment.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Conduct routine inspection of plant and equipment	1.1 Read or listen to work instructions from supervisor and clarify where needed 1.2 Identify health and safety hazards in the workplace and tell supervisor 1.3 Wear appropriate personal protective equipment and ensure correct fit

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Inspect equipment to identify signs of wear 1.5 Assess the nature of maintenance requirement
2. Prepare to conduct routine maintenance	2.1 Assess the maintenance task to determine tools and services required 2.2 Prepare equipment for maintenance 2.3 Select hand tools according to task requirements 2.4 Check tools before use and report unsafe and faulty items 2.5 Plan and schedule maintenance in consultation with affected work areas to minimise disruption to production
3. Carry out routine maintenance	3.1 Carry out routine maintenance on equipment 3.2 Report maintenance activities in line with workplace procedures
4. Complete maintenance tasks	4.1 Return equipment to operating order when maintenance is complete 4.2 Store tools and materials 4.3 Notify the relevant personnel of maintenance completion 4.4 Maintain a clean and tidy workplace

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Interact effectively with staff members
Get the work done	<ul style="list-style-type: none"> Make routine decisions to correct simple and familiar problems Apply routine fault finding methods to trace and identify equipment faults and implement standard and familiar solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2065 Conduct routine maintenance	FDFOP2011A Conduct routine maintenance	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2065 Conduct routine maintenance

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively conducted routine maintenance on a minimum of two different items of plant and/or equipment, including:

- identifying routine maintenance tasks for machine or equipment
- monitoring operation and identifying need for maintenance tasks
- carrying out routine maintenance tasks according to workplace procedures
- on completion of maintenance tasks, returning equipment to operational order, including confirming that all equipment parts, nuts and bolts are accounted for and correctly tightened
- scheduling maintenance tasks that are beyond one's own job role and communicating requirements with affected personnel
- selecting and using appropriate tools to undertake routine maintenance within scope of own job role
- assessing readiness for returning machine or equipment to operation or referring for further attention
- completing maintenance documentation
- applying safe work practices and identifying health and safety hazards and controls in the workplace.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- systems and programs in place to manage routine maintenance of plant and equipment in the workplace
- responsibilities for participating in the maintenance program, including operator role and the role of others
- procedures for raising maintenance orders where requirements are outside operator role

- basic operating principles of equipment to be maintained
- signs and symptoms of faulty equipment and early warning signs of potential problems
- basic checks used to confirm the nature of maintenance requirements, including distinguishing between mechanical and electrical faults and identifying probable causes or conditions that may increase maintenance requirements of equipment used
- procedures for issuing, maintaining and storing tools used
- safe use of hand tools and measuring instrumentation relevant to maintenance responsibilities
- lubrication requirements, including requirements to use food grade lubricants as required, and consequences of using incorrect type or amount of lubricants
- safe work procedures, including appropriate signage of maintenance activities, use of appropriate personal protective equipment, and awareness of safety hazards and controls relating to maintenance tasks
- methods used to render equipment safe to work on or clean including lock out/tag out and isolation procedures (in some cases this may involve liaising with other maintenance operators)
- procedures and inspections to be carried out to confirm that equipment is in operating order and all parts are accounted for
- food safety risks arising from poor personal hygiene, cleaning and housekeeping practices and procedures associated with routine maintenance
- maintenance planning, scheduling and recording procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - maintenance tools and equipment
 - operational machinery and equipment
 - safety equipment
 - spares and consumables
- specifications:
 - operation procedures
 - service equipment and maintenance instructions.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2066 Apply sampling procedures

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to interpret sampling plans, and to collect and transfer samples to retain sample integrity.

This unit applies to individuals who would typically be required to follow specific sampling procedures under general supervision.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for sampling	1.1 Read or listen to work instructions from supervisor and clarify where needed 1.2 Identify health and safety hazards in the workplace and inform supervisor 1.3 Wear appropriate personal protective equipment and ensure correct fit 1.4 Identify sampling requirements in the sampling plan

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Prepare sampling equipment, containers and labels
2. Collect samples	2.1 Collect samples as specified in the sampling plan 2.2 Handle and prepare samples to preserve sample and source integrity 2.3 Identify and report defects or abnormalities in source material and sample 2.4 Record sample information in line with workplace requirements 2.5 Maintain a clean and tidy workplace

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Record sample information accurately
Get the work done	<ul style="list-style-type: none"> Solve familiar and generally predictable problems within workplace guidelines

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2066 Apply sampling procedures	FDFOP2013A Apply sampling procedures	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2066 Apply sampling procedures

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively taken 10 samples, in line with the sampling plan, including:

- accessing and interpreting sampling plan to identify requirements
- selecting, fitting and using personal protective equipment
- preparing for sampling to ensure required tools, containers and labels are available
- following sampling procedures and the sampling plan to collect samples from the designated points, in the quantities and at the times specified
- identifying atypical source materials and/or samples and take corrective action, such as reporting abnormalities, repeating sample collection and/or following intensive sampling schedules
- completing sample records according to workplace requirements, such as labelling samples as required
- transferring samples for testing
- maintaining work area to meet housekeeping standards.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in the workplace, including the purpose and limitations of personal protective equipment
- basic sampling principles, including the importance of following the sampling plan to obtain representative sampling reflecting characteristics of source material, the sample characteristics and related preservation, handling and storage requirements, and the labelling system purpose and requirements
- tests to be conducted on samples, and related handling and preparation requirements and responsibilities

- characteristics of materials sampled, and common contaminants and related conditions under which contamination is likely to occur
- sampling techniques relevant to samples collected, such as sterilisation methods and procedures
- the relationship between sampling, testing and production processes, including different sampling regimes that may apply in response to non-standard conditions or after corrective action is taken to adjust production outputs
- procedures and responsibility for reporting and recording sampling information, including legislative requirements
- procedures for preparing samples.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - sampling plan
 - recording and reporting system
 - sampling equipment and containers as required
 - product/source material to be sampled.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2067 Work in a food handling area for non-food handlers

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to conduct work in a food handling area where the work does not involve direct food contact.

This unit applies to individuals who typically work in stores, warehousing, cleaning and maintenance roles. This unit is not appropriate for a person who has direct contact with food or raw materials or ingredients. Where this is a requirement, refer to relevant food safety units.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Maintain food safety while working in a food handling area	1.1 Read or listen to work instructions from supervisor and clarify where needed 1.2 Identify health and safety hazards in the workplace and inform supervisor

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Wear appropriate personal protective equipment and ensure correct fit 1.4 Identify and follow food safety requirements related to work tasks 1.5 Carry out work responsibilities so that the safety of food is maintained 1.6 Identify and report procedures or practices which are inconsistent with requirements of the workplace food safety program
2. Maintain food handling area in clean and orderly state	2.1 Confirm that equipment and the food handling area meet the cleaning and sanitation requirements of workplace food safety program 2.2 Collect and dispose of waste according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Ask questions to clarify understanding or seek further information
Get the work done	<ul style="list-style-type: none"> Maintain a clean and hazard-free work area

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2067 Work in a food handling area for non-food handlers	FDFOP2016A Work in a food handling area for non-food handlers	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2067 Work in a food handling area for non-food handlers

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has worked safely and effectively in a food handling area, in a non-food handling role, to effectively maintain food safety standards on at least two different occasions, including:

- accessing and applying workplace information on food safety policies and procedures relevant to own work
- fitting and using appropriate personal protective clothing and equipment as required by work tasks to meet food business requirements
- checking own work area to identify food safety hazards
- carrying out work responsibilities to ensure that food safety is not compromised
- taking necessary precautions when moving between or around the workplace and/or from one task to another to minimise the risk of contamination
- recognising and reporting situations or procedures that could compromise food safety
- sorting and disposing of waste according to workplace procedure
- maintain workplace standards in work area.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in the workplace, including the purpose and limitations of protective clothing and equipment
- food safety requirements related to own work as determined by the workplace
- sources of advice on food safety issues and responsibilities in the workplace
- personal hygiene practices and clothing and footwear requirements associated with working in and moving in and between food handling areas and moving between food handling and non-food handling areas

- suitable standard for materials and equipment used in the food handling area, including materials that are unsuitable for use
- methods and procedures to be followed when carrying out work responsibilities in a food handling area to ensure that food safety is not compromised
- the types of contamination that can occur as a result of work activities, and procedures used to prevent these types of contamination from occurring
- cleaning and sanitation requirements and responsibilities, including cleaning methods appropriate to a food handling environment and those used in the specific food handling area
- waste collection, recycling and handling procedures
- workplace standards to be maintained in the work area.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - work area and related equipment to undertake work function
 - waste collection, treatment, recycling and/or disposal equipment
- specifications:
 - food safety policies and procedures relevant to work role
 - work procedures, including procedures for entering and exiting food handling areas.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2068 Operate a process control interface

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to operate a computer-based interface to modify and/or interrogate a control system.

This unit applies to individuals who work under general supervision. This includes identifying and providing solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Navigate the process control interface	1.1 Confirm the readiness of the control interface and related components for operation 1.2 Use the hardware provided to operate the interface 1.3 Use page links to move between screens 1.4 Acknowledge messages and alarms 1.5 Access required information from screen displays

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.6 Record interface system malfunctions and report to supervisor
2. Use interface system to operate and maintain a process within required parameters	2.1 Start, monitor and shut down individual items of equipment and processes using the control interface 2.2 Select equipment, alter status and enter settings to meet operating requirements 2.3 Activate sequences to initiate process operation 2.4 Recognise equipment giving a bad signal or bad measurements and take responsive action
3. Analyse data to predict and control performance	3.1 Select and analyse trends to identify performance patterns 3.2 Identify causes of abnormal or unacceptable performance and take corrective action 3.3 Record information in workplace format

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Access and interpret process control panels and system
Numeracy	<ul style="list-style-type: none"> Monitor and interpret production and process control indicators and data Monitor supply and flow of materials and product
Navigate the world of work	<ul style="list-style-type: none"> Ask questions to clarify understanding or seek further information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

FBPOPR2068 Operate a process control interface	FDFOP2030A Operate a process control interface	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit
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Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2068 Operate a process control interface

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively operated a process control interface on at least two occasions, including:

- recognising and responding to error messages and alarms
- accessing relevant performance data using the control system, including locating and interpreting performance trend information
- recording log information using the interface system according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- processes and equipment being controlled, including required processing sequences
- operating principles of process control and interface system, including the relationship between control panels, systems and the physical equipment, and where relevant, operating conditions required for accurate information input from sensors and related instrumentation
- action required to respond to error messages and alarms
- typical faults that can occur when operating a process control interface and corrective action required
- performance data collected by the control interface system and its application to troubleshoot performance, including the ability to identify and investigate related trend data to track cause and effect
- recording requirements and responsibilities.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - process control interface hardware and software
 - work station or equipment to be controlled
 - process to be controlled
 - communication systems and equipment
 - workplace information recording systems, requirements and procedures
- specifications:
 - operating procedures and related advice on equipment operation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2069 Use numerical applications in the workplace

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to use numerical applications in the workplace.

This unit applies to individuals who work under general supervision.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Apply basic mathematical concepts to calculate workplace information	1.1 Identify calculation requirements and select appropriate method 1.2 Obtain data from relevant sources and interpret correctly 1.3 Undertake calculations using addition, subtraction, multiplication and division to support work role
2. Apply basic mathematical concepts to estimate workplace	2.1 Identify estimation requirements and select appropriate estimation 2.2 Obtain data from relevant sources and interpret correctly 2.3 Make estimations of quantities, ratios and speed to meet work

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
information	requirements 2.4 Record calculations and measurement information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret work tasks, instructions, procedures and other basic workplace documentation requiring numerical applications
Navigate the world of work	<ul style="list-style-type: none"> Understand tasks and responsibilities requiring numerical applications in the workplace Ask questions to clarify understanding or seek further information
Interact with others	<ul style="list-style-type: none"> Communicate information with relevant personnel
Get the work done	<ul style="list-style-type: none"> Recognise simple problems and seek guidance to correct

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2069 Use numerical applications in the workplace	FDFO2061A Use numerical applications in the workplace	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2069 Use numerical applications in the workplace

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively used numerical applications for work purposes, on at least two different occasions, including:

- identifying whether a calculation or estimation is required to meet workplace requirements
- performing calculations involving basic addition, subtraction, division and multiplication to support work role (this may involve use of a calculator and conversion tables)
- using estimation techniques to check quantities, ratios, speed and other required data estimates
- using estimation techniques to check calculated results and workplace data
- recording calculations and measurement information accurately, according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- mathematical processes, including addition, subtraction, multiplication and division
- application of calculation and estimation techniques to meet work requirements
- units of measurement used in the workplace, including whole numbers, fractions and decimals to one decimal point (this may include use of conversion charts)
- representation of numerical information relevant to work requirements, including charts, graphs and tables
- recording requirements and responsibilities relevant to work role.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - real or simulated work tasks requiring simple estimation and calculation
 - conversion tables, calculators and measuring instruments.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2070 Apply quality systems and procedures

Modification History

Release	Comments
Release 2	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to monitor quality of work outcomes to maintain and improve quality in a processing context.

This unit applies to individuals who work under general supervision and exercise limited autonomy.

All work must be carried out to comply with workplace procedures according to state/territory health and safety, environmental regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Monitor quality of work outcome	1.1 Identify quality requirements of work process

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Inspect inputs to confirm capability to meet quality requirements 1.3 Conduct work to produce required outcomes 1.4 Monitor work processes to confirm quality of output and/or service 1.5 Adjust processes to maintain outputs within specification
2. Participate in maintaining and improving quality at work	2.1 Monitor work area, materials, processes and product to ensure compliance with quality, health and safety requirements 2.2 Conduct work in accordance with workplace environmental guidelines 2.3 Identify and report non-conformance in inputs, process, product and/or service according to workplace reporting requirements 2.4 Take corrective action within level of responsibility to maintain quality standards 2.5 Raise quality issues with designated personnel 2.6 Record quality data in accordance with workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret basic quality directions and instructions
Oral communication	<ul style="list-style-type: none"> Discuss and report quality information to relevant personnel
Numeracy	<ul style="list-style-type: none"> Read and interpret gauges and scales

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2070 Apply quality systems and procedures Release 2	FBPOPR2070 Apply quality systems and procedures Release 1	Foundation Skills updated Clarification about product traceability and recall added to Knowledge Evidence	Equivalent

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2070 Apply quality systems and procedures

Modification History

Release	Comments
Release 2	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has applied quality systems and procedures on at least two separate occasions, including:

- identifying control points or inspection points for own work, and related methods used to monitor quality
- maintaining quality of own work, including relevant checks and inspections where required in order to monitor control points and check and inspect equipment, materials, product, packaging consumables, processing conditions and service standards relevant to own work
- determining when and how to make adjustments to maintain output within specified parameters
- identifying and responding to out-of-specification or unacceptable inputs and/or outputs
- recording quality data in required format.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- quality policy, procedures and responsibilities
- quality system used in the workplace, sources of information on quality requirements, the role of internal and external auditors, as appropriate, and performance improvement processes
- traceability requirements
- recall procedures for products that do not meet safety standards

- basic concepts of quality assurance, including hazards, risk assessment and control methods
- requirements of internal and external customers
- control points for own work, including the purpose of the control point, the risk if not controlled, and the method of control used
- monitoring, testing and inspection procedures relating to process control requirements
- scope to correct/control variation within equipment and process capacity parameters
- evidence of out-of-specification or unacceptable performance
- procedures for responding to out-of-specification or unacceptable performance/outcomes, including procedures for identifying or isolating materials or product of unacceptable quality
- systems used to trace product ingredients as relevant to own work
- requirements to report and record quality information.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - sampling and test procedures and related equipment
 - systems for recording quality information
- specifications:
 - work instructions
 - quality policy, system and procedures, including company codes of practice/good manufacturing practices (GMP).

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR2071 Provide and apply workplace information

Modification History

Release	Comments
Release 2	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to provide and apply workplace information in a processing context.

This unit applies to individuals who work under general supervision and exercise limited autonomy.

All work must be carried out to comply with workplace procedures according to state/territory health and safety, environmental regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Provide and apply information to suit	1.1 Identify information requirements for work operations

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
workplace and audience requirements	1.2 Collect and assess required information 1.3 Select and structure information in a logical way to convey meaning to others 1.4 Use appropriate methods to communicate effectively with others
2. Respond to information requests	2.1 Process information requests promptly and courteously 2.2 Apply effective listening and verbal communication skills to obtain information 2.3 Clarify the nature of requests 2.4 Provide appropriate information in response to requests 2.5 Provide information in a form appropriate to the enquirer 2.6 Refer requests to appropriate personnel where they fall outside area of responsibility
3. Use and maintain workplace information	3.1 Access a range of information sources to support work requirements 3.2 Record information in appropriate formats according to workplace reporting requirements 3.3 Interpret information to inform work requirements 3.4 Apply effective listening and verbal communication to exchange information

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret basic directions and instructions
Writing	<ul style="list-style-type: none"> Use paper-based and electronic proformas to record and store basic workplace information and data

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2071 Provide and apply workplace information Release 2	FBPOPR2071 Provide and apply workplace information Release 1	Foundation Skills updated Clarification about traceability and recall added to Knowledge Evidence	Equivalent

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2071 Provide and apply workplace information

Modification History

Release	Comments
Release 2	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively provided and applied workplace information on at least one occasion, including:

- identifying and accessing information to undertake work responsibilities
- ascertaining or clarifying information requirements by asking questions
- preparing and presenting simple written or verbal presentations that structure and present information in a logical sequence
- working effectively with others to achieve work outcomes
- respecting and, where appropriate, representing the views of others
- recording information in required format.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- communication channels, including consultative arrangements established in the workplace
- common colloquial and technical terms relating to work function
- sources of information and advice relating to work responsibilities
- methods and technologies used to access, record and store workplace information, including print, and screen-based systems as relevant to the workplace
- presentation techniques to convey information on a range of typical workplace subjects appropriate to the audience
- recognition of different personal communication styles and appropriate communication options

- recognition of cultural diversity as appropriate in the workplace
- reporting roles and responsibilities
- traceability and recall information and requirements
- interpersonal skills, including active listening, questioning, seeking and responding to feedback
- basic meeting procedures to identify and achieve meeting/discussion outcomes.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - advice on work roles and responsibilities
 - typical workplace information
 - standard forms and equipment for recording workplace information, as required.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR3004 Set up a production or packaging line for operation

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to set up a production or packaging line for operation.

This unit applies to individuals who work under broad direction and take responsibility for their own work.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for line setup	1.1 Confirm materials are available to meet production requirements 1.2 Confirm availability of tools, equipment and related accessories according to job requirements 1.3 Select and fit personal protective equipment according to job requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify processing parameters and settings for production or packaging according to workplace procedures
2. Set-up the line for operation	2.1 Identify and confirm cleaning and maintenance requirements 2.2 Inspect equipment according to workplace procedures 2.3 Enter processing or packaging parameters and select or adjust machine settings according to workplace procedures 2.4 Check and adjust equipment performance 2.5 Conduct pre-start checks, adjust equipment performance and confirm equipment is ready and safe to operate, notifying relevant personnel of completion 2.6 Complete line setup to match production or packaging schedule and operating requirements 2.7 Complete records according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace and standard operating procedures relevant to job role Interpret production requirements
Numeracy	<ul style="list-style-type: none"> Interpret production and process control indicators and data

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR3004 Set up a production	FDFOP3002A Set up a production or	Updated to meet Standards for Training	Equivalent unit

or packaging line for operation	packaging line for operation	Packages Minor changes to Performance Criteria to clarify intent	
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Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR3004 Set up a production or packaging line for operation

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively set up a production or packaging line on at least one occasion, in line with production schedule, including:

- conducting pre-start checks on machinery used for production to determine cleaning, maintenance and operation readiness
- determining production parameters and requirements
- setting up line according to production requirements
- taking corrective action in response to typical faults and inconsistencies
- completing workplace records and communicate line status with other personnel as required
- applying safe work practices and identifying hazards and controls.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- operating principles of equipment and related accessories, including equipment adjustment points, range and location/alignment requirements of sensors and related feedback instruments, and status and purpose of guards
- operating capacities of equipment used in the work area, including different types of equipment and/or components by processing operations
- nature of set-up/changeover requirements, including product compatibility and related cleaning requirements, impact of variation in materials or product on set-up requirements, and equipment and/or attachment changeovers related to given products
- typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems
- pre-start checks required by set-up/changeover

- related processes and personnel dependent on line set-up, and communication responsibilities
- isolation, lock-out and tag out procedures and responsibilities
- health and safety hazards and controls in the workplace
- procedures and responsibility for reporting equipment performance information
- operating principles of process control, including the relationship between control panels and systems and the physical equipment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - personal protective equipment
 - production/packaging schedule and related advice on setup/changeover requirements
 - process/packaging equipment and related accessories and services
 - materials/consumables required of the process
 - hand tools
- specifications:
 - information on equipment capacity and operating parameters.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR3005 Operate interrelated processes in a production system

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to set up, operate, adjust and monitor interrelated processes in a production system.

This unit of competency describes the skills and knowledge required to set up, operate, adjust and monitor interrelated processes in a production system. A production system typically involves a series of interrelated processes that must be coordinated and concurrently operated to produce the required outcome.

This unit applies to individuals who have skills and knowledge the operational requirements of the production system for the industry in which it is applied. Individuals apply higher level planning and problem-solving skills, work under broad direction and take responsibility for their own work.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
<p>1. Prepare the production system for operation</p>	<p>1.1 Confirm availability of equipment, materials and services according to workplace procedures</p> <p>1.2 Identify and confirm cleaning requirements and equipment status</p> <p>1.3 Select and fit personal protective equipment according to job requirements</p> <p>1.4 Enter processing/operating parameters and select or adjust machine settings according to workplace procedures</p> <p>1.5 Load or position materials, ingredients and/or product according to workplace procedures</p> <p>1.6 Conduct pre-start checks, adjust equipment performance and confirm equipment is ready and safe to operate</p>
<p>2. Operate and monitor the production system</p>	<p>2.1 Start up and operate and monitor the system and equipment for variation in operating conditions</p> <p>2.2 Identify, rectify and report out-of-specification product and process outcomes to maintain the process within specification</p> <p>2.3 Maintain the work area and report maintenance requirements according to workplace procedures</p> <p>2.4 Conduct work according to workplace and environmental procedures</p>
<p>3. Hand over production system operation</p>	<p>3.1 Maintain records according to workplace procedures</p> <p>3.2 Conduct handover according to workplace procedures</p> <p>3.3 Confirm process operators are properly informed of system and related equipment status at completion of handover</p>
<p>4. Shut down the production system</p>	<p>4.1 Identify the appropriate shutdown procedure</p> <p>4.2 Shut down the system according to workplace procedures</p> <p>4.3 Identify and report maintenance requirements</p>
<p>5. Contribute to continuous improvement of the production system</p>	<p>5.1 Review system performance against output plan/targets according to workplace procedures</p> <p>5.2 Identify and investigate opportunities for system improvement</p> <p>5.3 Develop and implement proposals for improvement within workplace planning arrangements, authority levels and according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace and standard operating procedures relevant to job role Interpret production requirements
Writing	<ul style="list-style-type: none"> Record operating, routine maintenance and shutdown information on paper-based and electronic media
Numeracy	<ul style="list-style-type: none"> Monitor and interpret production and process control indicators and data Monitor supply and flow of materials to and from the process

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR3005 Operate interrelated processes in a production system	FDFOP3003A Operate interrelated processes in a production system	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR3005 Operate interrelated processes in a production system

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively operated interrelated processes in a production system, on at least one occasion, including:

- conducting pre-start checks on production system components
- confirming machine set-up is ready to achieve production requirements
- applying safe work practices and identify hazards and controls
- selecting and fitting personal protective equipment (PPE)
- starting, operating, monitoring and adjusting process equipment throughout the system to achieve required quality outcomes
- identifying system problems and taking corrective action
- conducting operational handovers
- shutting down system
- identifying and investigating opportunities for operational improvements within areas of responsibility
- completing workplace records
- shutting down equipment according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and basic principles of the production system, including the system process flow, the interrelationships of each process to identify the impact of variation on related processes, and optimisation options
- basic operating principles of equipment and related accessories used by the system, including equipment adjustment points, status and purpose of guards, and range and location/alignment requirements of sensors and related feedback instruments

- operating capacities of equipment used in the system, including different types of equipment and/or components by processing/packaging operations
- related systems and responsibilities for interaction, including related production systems, services supply, packaging/warehousing, maintenance, laboratory/quality assurance and planning and scheduling
- product characteristics and common types of variation in materials and/or ingredients used, including the effect of variation on each stage of the system and scope to adjust or correct
- typical production related problems, including equipment faults, common causes and warning signs, incorrect or poor supply of materials, incorrect settings and poor operator control
- relevant procedures, specifications and operating parameters for the system and the individual processes
- isolation, lock-out and tag out procedures and responsibilities
- hazards, risks, controls and methods for monitoring processes within the system, including health and safety in the workplace, food safety, quality and environmental hazards and risks
- workplace system and approach to equipment maintenance
- process improvement procedures and related consultative arrangements
- troubleshooting procedures and problem-solving techniques
- communication responsibilities to inform related work areas/support functions and other shifts of operational status and production issues
- procedures and responsibility for reporting production and performance information.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - PPE
 - production system equipment and related accessories and services
 - materials/consumables required by the process
 - communication and recording systems and procedures
- specifications:
 - production schedule and related advice on system requirements
 - information on equipment capacity and operating parameters.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR3006 Operate interrelated processes in a packaging system

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to set up, operate, adjust and monitor interrelated processes in a packaging system.

This unit applies to individuals who work under broad direction and take responsibility for their own work.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare the packaging system for operation	1.1 Confirm equipment, materials and services are available to meet packaging requirements 1.2 Identify and confirm cleaning requirements and equipment status 1.3 Select and fit personal protective equipment according to job

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>requirements</p> <p>1.4 Enter processing/operating parameters and select or adjust machine settings according to workplace procedures</p> <p>1.5 Load or position product and/or packaging components and consumables according to workplace procedures</p> <p>1.6 Conduct pre-start checks, adjust equipment performance and confirm equipment is ready and safe to operate</p>
2. Operate and monitor the packaging system	<p>2.1 Start up and operate and monitor the system and equipment for variation in operating conditions</p> <p>2.2 Identify and report non-conformances according to workplace procedures</p> <p>2.3 Maintain the work area and report maintenance requirements</p> <p>2.4 Conduct work according to workplace environmental standards</p>
3. Hand over packaging system operation	<p>3.1 Maintain workplace records according to workplace procedures</p> <p>3.2 Conduct handover procedures</p> <p>3.3 Confirm process operators are properly informed of system and related equipment status at completion of handover</p>
4. Shut down the packaging system	<p>4.1 Identify the appropriate shutdown procedure</p> <p>4.2 Shut down the system</p> <p>4.3 Identify and report maintenance requirements according to workplace procedures</p>
5. Contribute to continuous improvement of the system	<p>5.1 Review system performance against output plan/targets</p> <p>5.2 Identify and investigate opportunities for system improvement</p> <p>5.3 Develop and implement proposals for improvement within workplace planning arrangements, authority levels and according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace and standard operating procedures relevant to job role Interpret production requirements
Writing	<ul style="list-style-type: none"> Record operating, routine maintenance and shutdown information on paper-based and electronic media
Numeracy	<ul style="list-style-type: none"> Monitor and interpret production and process control indicators and data Monitor supply and flow of materials to and from the process

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR3006 Operate interrelated processes in a packaging system	FDFOP3004A Operate interrelated processes in a packaging system	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR3006 Operate interrelated processes in a packaging system

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively operated interrelated processes in a packaging system on at least two separate occasions, including:

- setting and/or adjusting equipment to meet packaging requirements
- inspecting equipment condition to identify any signs of wear
- confirming selection of appropriate settings and/or related parameters
- ensuring that isolation or lock outs are cancelled
- confirming that equipment is clean and correctly configured for packaging requirements, positioning sensors and controls correctly
- ensuring any scheduled maintenance has been carried out
- confirming that all safety guards are in place and operational loading and/or positioning product, packaging components and consumables.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and basic principles of the packaging system, including:
 - the process flow and the interrelationships of each previous processes that can affect packaging outcomes, packaging technology, and packaging equipment components
- basic operating principles of equipment and related accessories used by the system, including:
 - equipment adjustment points, status and purpose of guards, and range and location/alignment requirements of sensors and related feedback instruments
- operating capacities of equipment used in the system, including different types of equipment and/or components by processing/packaging operations

- related systems and responsibilities for interaction, including related production and further packaging/storage stages, services supply, maintenance, laboratory/quality assurance and planning and scheduling
- technical knowledge of product/packaging characteristics and the main factors that impact on shelf-life
- typical packaging related problems, including equipment faults, common causes and warning signs, incorrect or poor supply of materials and finished product, incorrect settings and poor operator control
- relevant procedures, specifications and operating parameters for the system and the individual processes
- isolation, lock out and tag out procedures and responsibilities
- hazards, risks, controls and methods for monitoring processes within the system, including health and safety, food safety, quality and environmental hazards and risks in the workplace
- workplace system and approach to equipment maintenance
- process improvement procedures and related consultative arrangements
- troubleshooting procedures and problem-solving techniques
- communication responsibilities to inform related work areas/support functions and other shifts of operational status and production issues
- procedures and responsibility for reporting production and performance information.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - personal protective equipment
 - production schedule and related advice on system requirements
 - packaging system equipment and related accessories and services
 - product, packaging components and consumables by the process
 - communication and recording systems and procedures
- specifications:
 - information on equipment capacity and operating parameters.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPOPR4001 Apply principles of statistical process control

Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to collect statistical information and interpret data in order to inform work processes.

This unit applies to individuals who are required to collect, interpret and record data to inform work. This typically includes plotting data on run charts and statistical process control (SPC) charts; and identifying trends and variations according to given limits.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Operational (OPR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Collect statistical information	1.1 Identify data collection requirements and confirm with supervisor 1.2 Gather data using available collection equipment 1.3 Accurately record data to meet data collection requirements
2. Interpret data	2.1 Analyse data to identify variations and trends 2.2 Carry out calculations to determine unknown values

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	2.3 Determine corrective action requirements based on data 2.4 Document and store data according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Use statistical analysis techniques to calculate, compare and manipulate data
Writing	<ul style="list-style-type: none"> Record data and present information in required format
Get the work done	<ul style="list-style-type: none"> Make decisions based on analysis of available data Use manual and computer-based methods to interpret data and identify trends

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR4001 Apply principles of statistical process control	FDFOP2015A Apply principles of statistical process control	<p>Updated to meet Standards for Training Packages</p> <p>Unit code updated to reflect AQF level</p> <p>Minor changes to Performance Criteria to clarify intent.</p>	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
		Prerequisite removed.	

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR4001 Apply principles of statistical process control

Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has applied the principles of statistical process control to at least two different sets of data, including:

- identifying data needed for collection
- gathering and accurately recording required data
- applying statistical analysis techniques and identifying variations, trends and any necessary corrective actions
- presenting a range of statistical data in appropriate workplace format.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- data sampling methods, including the nature of the sample on which data is based, and the reasons for different sampling requirements that may apply in a given situation
- concept of variation, including the difference between common and special causes of variation, and consequent options for reducing variation and remaining within a given range
- the purpose and process of establishing targets and limits
- the concept of standard distribution/standard deviation
- methods used to interpret statistical data, including methods to determine the average, median and mean, and what these measures indicate
- a variety of calculations to determine unknown values
- using binomial theorem
- using variability and probability to estimate and interpret outcomes in both numerical and qualitative terms

- situations in which corrective action is required.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - statistical process control data
 - related data collection and analysis systems
 - calculator.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPHM3001 Apply Good Manufacturing Practice requirements

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to comply with relevant Good Manufacturing Practice (GMP) requirements and workplace quality standards in a pharmaceutical manufacturing facility.

The unit applies to individuals who apply GMP requirements to undertake pharmaceutical manufacture work. Individuals work under broad direction and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pharmaceutical (PHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify GMP as a regulatory concept	1.1 Locate sources of information relevant to work role from current Australian and other applicable regulatory frameworks for manufacturing pharmaceuticals 1.2 Locate sources of information relevant to work role relating to current global harmonisation of GMP compliance and product registrations

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Identify requirements of GMP related to own work	<p>2.1 Locate sources of information on GMP requirements in the workplace</p> <p>2.2 Identify GMP requirements for pharmaceutical manufacture tasks</p> <p>2.3 Confirm specific GMP requirements for own work</p> <p>2.4 Identify GMP non-compliant situations and risks to product quality</p> <p>2.5 Alert relevant personnel and take appropriate action according to GMP requirements and workplace procedures</p>
3. Complete workplace documentation to support GMP	<p>3.1 Use workplace procedures to identify GMP requirements for documentation</p> <p>3.2 Record information, including calculations and test results according to workplace reporting procedures and GMP requirements</p> <p>3.3 Certify records, including electronic records, according to GMP requirements</p>
4. Identify and follow biosecurity requirements	<p>4.1 Identify information appropriate to work role relating to biosecurity requirements</p> <p>4.2 Follow workplace biosecurity requirements and responsibilities related to work role</p>
5. Apply GMP requirements when carrying out work activities	<p>5.1 Identify common forms of contamination</p> <p>5.2 Conduct work according to workplace environmental procedures</p> <p>5.3 Maintain workplace cleanliness and tidiness to meet GMP requirements</p> <p>5.4 Identify and report signs of unacceptable plant or equipment condition, including calibration status</p> <p>5.5 Identify GMP requirements for routinely monitoring work area, materials, equipment and product</p> <p>5.6 Complete documentation according to workplace procedures</p>
6. Ensure personal hygiene and conduct meet GMP requirements	<p>6.1 Maintain personal hygiene to meet GMP requirements</p> <p>6.2 Carry out hand washing according to best practice hygiene standards</p> <p>6.3 Prepare, use, store and dispose of personal protective equipment and contamination prevention clothing according to GMP requirements and workplace procedures</p> <p>6.4 Comply with area entry and exit procedures when moving around</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	the workplace
7. Participate in improving GMP	<p>7.1 Identify processes, practices or conditions which are inconsistent with GMP requirements and report according to workplace procedures</p> <p>7.2 Identify elements of GMP that help improve products and processes</p> <p>7.3 Implement corrective action within level of responsibility</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information about GMP compliance requirements in workplace documentation
Writing	<ul style="list-style-type: none"> Record workplace information using appropriate language and in required format
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities Understand main tasks, responsibilities and boundaries of own role
Interact with others	<ul style="list-style-type: none"> Report operational and safety information to relevant personnel using required communication method
Get the work done	<ul style="list-style-type: none"> Use problem-solving techniques to address routine issues within level of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPHM3001 Apply Good Manufacturing Practice	FDFPH2001A Apply Good Manufacturing Practice procedures	Updated to meet Standards for Training Packages Additional elements	No equivalent unit

requirements		and performance criteria Code changed to reflect AQF alignment	
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Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPHM3001 Apply Good Manufacturing Practice requirements

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has applied Good Manufacturing Practice (GMP) requirements, and demonstrated each of the following points at least once:

- read and interpreted relevant instructions and labels applicable to GMP operations, including pictorial and written signs and instructions
- followed workplace information relating to GMP responsibilities
- completed forms and reports according to GMP requirements and workplace procedures
- recorded calculations and test results
- identified and responded to:
 - out-of-calibration equipment
 - out-of-specification or unacceptable raw materials, packaging components, final or part processed product
- maintained workplace cleanliness and tidiness to meet GMP requirements
- maintained personal hygiene consistent with GMP requirements, including:
 - making team leader or supervisor aware of reportable illness
 - removal of jewellery
 - removal of makeup
- cleaned and sanitised hands using recognised procedures for:
 - washing with soap and water
 - rubbing with an alcohol-based formulation
- used personal protective clothing and equipment and contamination prevention clothing according to GMP requirements
- provided accurate verbal and written descriptions of incidents or situations that did or could have:
 - compromised GMP compliance or product quality

- provided the potential for product contamination.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- GMP as a regulatory concept, including regulatory obligations of employees, and the potential implications of non-compliance
- sections of Australian and other applicable regulatory frameworks relevant to pharmaceutical manufacturing:
 - National Medicines Policy
 - Therapeutic Goods Act (TGA)
 - Therapeutic Goods Regulations
 - Manufacturing Principles
 - Therapeutic Goods Orders
 - GMP code of practice
 - other TGA guidelines relevant to product and market
 - state or territory regulations or legislation relating to environmental manufacturing and health and safety in the workplace
 - United States Food, Drug and Cosmetic Act and associated Codes of Federal Regulations and guidance
 - European directives and legislation of European Union member states applicable to pharmaceutical manufacturing.
- drivers of global harmonisation initiatives, including risks in the supply chain when operating in a global environment, including the following:
 - Pharmaceutical Inspection Co-operation Scheme (PIC/S) background and guidance
 - The International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH) background and guidance
 - World Health Organization (WHO) background and guidance
- the relationship between GMP and the quality system, including:
 - personnel responsible for designing and managing GMP
 - personal role to maintain GMP
 - the role of internal and external auditors
 - quality procedures
 - quality assurance
 - quality control
 - risk management procedures
- personal clothing use, storage and disposal requirements and hygiene requirements, including:
 - informing team leader or supervisor of reportable illness
 - removal of jewellery
 - removal of makeup

- personal clothing and footwear requirements for working in and moving between work areas
- workplace cleaning standards and responsibilities relating to own work, including:
 - waste collection
 - recycling, safe handling and disposal for different types of waste
 - safe handling and disposal of hazardous waste
- sections of the following Acts and Regulations related to biosecurity requirements of pharmaceutical manufacturing:
 - the Gene Technology Act 2000
 - Biosecurity Act 2015
 - Export Control Act 1982
 - Imported Food Control Act 1992
 - regulatory requirements which apply to the supply of materials which are genetically modified organisms
 - regulatory requirements relating to quarantining and use of materials and products
- awareness of common contaminants relevant to the work process, including:
 - microbiological, from materials, equipment, environment and personnel
 - physical, from equipment, environment and personnel
 - chemical, from other products or materials, including cleaning agents
- quality control methods and procedures, including the purpose of control and the consequence if not controlled
- properties, handling and storage requirements of raw materials, packaging components and final product
- GMP requirements for maintaining plant and process equipment
- GMP requirements for transferring of equipment and material between areas
- GMP requirements for equipment status labelling
- documentation systems and procedures, including:
 - recordkeeping to meet both workplace and legal requirements
 - responsibilities for reporting and recording information
 - batch documentation
 - cleaning records
 - training records
 - product and materials traceability procedures
 - controls and methods for ensuring electronic data integrity and paper data integrity
 - significance of certifying and verifying GMP records
- procedures for responding to out-of-specification or unacceptable process performance or outcomes
- awareness of controls to protect personnel and the environment from contamination by products and materials.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a pharmaceutical manufacturing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment and contamination prevention clothing
 - alcohol based hand cleanser
 - soap and water
 - commercial pharmaceutical production and packaging equipment
- specifications:
 - GMP requirements
 - workplace reporting procedures
 - workplace procedures related to GMP
 - workplace biosecurity requirements
 - workplace environmental procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPHM3003 Work in a controlled environment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to prepare to enter, work and exit a controlled environment in a pharmaceutical manufacturing facility.

The unit applies to individuals who apply Good Manufacturing Practice (GMP) requirements and operating principles to working in a controlled environment. Individuals work under broad direction and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pharmaceutical (PHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to enter a controlled environment	1.1 Obtain workplace information, including workplace procedures related to working in a controlled environment 1.2 Remove jewellery and makeup according to workplace procedures 1.3 Wash hands according to workplace procedures 1.4 Source and fit personal protective equipment (PPE) and contamination prevention clothing prior to entering controlled

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	environment 1.5 Check controlled environment operating conditions prior to entry
2. Work in a controlled environment	2.1 Enter controlled environment according to workplace procedures 2.2 Take commodity items into the controlled environment according to workplace procedures 2.3 Conduct work activities to minimise risk of contamination
3. Maintain a controlled environment	3.1 Identify controlled environment contamination risks 3.2 Control environmental contamination according to GMP requirements and workplace procedures 3.3 Maintain controlled environment work area according to workplace cleaning standards and environmental requirements 3.4 Report practices inconsistent with GMP according to workplace procedures
4. Exit a controlled environment	4.1 Follow workplace procedures to exit a controlled environment 4.2 Remove PPE and contamination prevention clothing according to workplace procedures 4.3 De-gown according to workplace procedures 4.4 Check, store and dispose of PPE according to manufacturer specifications, environmental and work health and safety requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret signs, symbols, checklists, production schedules, cleaning schedules and other technical information relevant to working in controlled environments Access and interpret GMP information relevant to working in controlled environments

Skill	Description
Writing	<ul style="list-style-type: none"> Complete workplace documentation using appropriate language and in required format
Interact with others	<ul style="list-style-type: none"> Report GMP concerns to relevant personnel using required communication method
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements and GMP, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Controlled environment must include at least one of the following:	<ul style="list-style-type: none"> controlled, non-classified environment cleanrooms that are controlled environments that have been certified as meeting an internationally recognised standard.
Contamination prevention clothing must include at least one of the following:	<ul style="list-style-type: none"> facility suits for controlled, non-classified environment disposable and reusable garments for controlled, classified cleanroom environments.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPHM3003 Work in a controlled environment	Not applicable	New unit	No equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPHM3003 Work in a controlled environment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has worked in at least one controlled environment, and demonstrated that they have:

- accessed workplace information to identify controlled environment work requirements
- read and interpreted workplace procedures, including pictorial and written signs/instructions applicable to working in a controlled environment
- checked operating conditions of the controlled environment according to workplace and Good Manufacturing Practice (GMP) requirements
- maintained good personal hygiene and cleanliness appropriate to working in a controlled environment, consistent with GMP requirements, including:
 - making team leader or supervisor aware of reportable illness
 - removal of jewellery
 - removal of makeup
 - following changing procedures
- cleaned and sanitised hands using recognised procedures for:
 - washing with soap and water
 - rubbing with an alcohol-based formulation
- used facility suits and personal protective equipment appropriate for the grade of controlled environment or cleanroom in a manner that does not generate additional contaminants
- entered and exited a controlled environment in a manner to minimise contamination
- identified and reported any condition that may cause shedding of abnormal numbers or types of contaminants
- identified contamination hazards typically encountered in pharmaceutical manufacturing environments and took steps to prevent identified hazards

- cleaned and maintained work area to meet workplace cleaning standards and environmental requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- international nomenclature and classification of controlled environments and cleanrooms
- GMP grades of cleanrooms and their relationship to the International Organization for Standardization (ISO) classification system
- GMP requirements for the qualification of cleanrooms
- key design requirements for controlled environments and cleanroom for product protection:
 - layout and architecture
 - product and process requirements for clean air
 - filtration, including High Efficiency Particulate Air (HEPA) filters and the theory of particle filtration
 - airlocks for materials, equipment and people
 - turbulent and laminar air flows
 - pressure differentials
 - box-within-a-box principle
 - cleanability and maintainability
- how controlled environments operate to control contamination, including:
 - clean rooms, including how they are certified
 - controlled, non-classified environments
 - clean zones
 - monitor and test systems
 - isolator technology
 - at rest and in operation
 - gowning and cleaning
- GMP requirements and workplace procedures for working in controlled environments and cleanrooms, including:
 - requirements for approving and taking commodity items into the cleanroom
 - restrictions on movement of personnel to minimise cross-contamination
 - cleanroom garments, including types, materials, processing and reprocessing
 - personal hygiene requirements
 - clothing and footwear requirements for working in and moving between work areas
 - personal clothing use, storage and disposal requirements
 - workplace cleaning standards and environmental requirements relating to own work
 - responsibilities of general cleaning staff and how to work with a cleaning team

- the role of cleaning and sanitising in preventing contamination of materials and products and protection of personnel, including:
 - how improper cleaning of a controlled environment or cleanroom can lead to product contamination
 - the need for proper selection of equipment and materials for proper cleaning
- controlled environment operating conditions, including:
 - differentials pressures
 - particle counts
 - microbial sampling
 - laminar air flow
 - humidity
 - temperature
 - room status
 - cleanliness status
- hygiene and basic elements of microbiology
- sources of contamination, including:
 - product
 - people
 - tools
 - facilities
 - equipment
- risks associated with controlled environment and cleanroom operators:
 - physical behaviour, including how to walk and stand in a cleanroom
 - personal hygiene
 - psychological
 - workplace attitudes and habits
 - communications between workers
 - electrostatic discharge
- contamination risks associated with controlled environment and clean room operations, including:
 - number of personnel in the controlled environment
 - activities being undertaken
 - leaks
 - malfunctioning equipment
 - low differential pressures
 - high particle counts
 - incorrect air flow and velocity
 - humidity
 - temperature
 - room status inactive or in alarm

- lack of cleanliness
- common practices inconsistent with GMP found in controlled environment and clean room operations, including:
 - damage to plant or equipment
 - failure of cleaning regime
 - signs of pest infestation
 - missing or inaccurate records
 - failure to follow workplace procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a pharmaceutical manufacturing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment and contamination prevention clothing
 - cleaning materials and equipment associated with working in a controlled environment
- specifications:
 - workplace procedures related to working in a controlled environment including gowning/de-gowning procedures that comply with GMP requirements
 - workplace cleaning standards and environmental requirements related to working in a controlled environment.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPHM3004 Clean and sanitise facilities and equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to plan, prepare, clean and sanitise processing facilities and equipment in a pharmaceutical manufacturing facility.

The unit applies to individuals who apply Good Manufacturing Practice (GMP) requirements and operating principles to the cleaning and sanitising of facilities and equipment. Individuals work under broad direction and take responsibility for their own work.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pharmaceutical (PHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare to clean pharmaceutical processing areas and equipment	1.1 Obtain cleaning task requirements, including job specifications and workplace procedures for sampling and testing cleaning outcomes 1.2 Identify surfaces and soil and dirt types and select appropriate cleaning techniques 1.3 Select and prepare cleaning chemicals required for job 1.4 Select and check cleaning equipment and consumables for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>serviceability and compliance with cleaning and sanitation requirements of GMP cleaning program</p> <p>1.5 Rectify or report faults before starting work</p> <p>1.6 Confirm services are available and ready for operation</p> <p>1.7 Source and fit personal protective equipment (PPE) according to procedures for health and safety in the workplace</p> <p>1.8 Obtain cleaning consumables to meet anticipated usage patterns</p> <p>1.9 Select and install signs and barricades according workplace procedures</p> <p>1.10 Set the plant for automated cleaning cycle or initiate a manual clean</p>
2. Remove waste	<p>2.1 Collect and dispose of waste according to procedures and legislative requirements for the environment and health and safety in the workplace</p> <p>2.2 Clean and sanitise rubbish bins and insert new replacement bin liners according to workplace procedures</p>
3. Clean and sanitise pharmaceutical processing surfaces	<p>3.1 Change status label of area and equipment and check status prior to cleaning</p> <p>3.2 Remove loose dirt and debris from pharmaceutical processing surfaces prior to applying cleaning treatment</p> <p>3.3 Follow cleaning steps according to workplace procedures</p> <p>3.4 Apply cleaning chemicals to pharmaceutical surfaces according to manufacturers' specifications and workplace procedures</p> <p>3.5 Thoroughly rinse and dry surfaces according to workplace procedures</p> <p>3.6 Apply chemical disinfectants and sanitisers to surfaces according to workplace procedures</p> <p>3.7 Report practices inconsistent with GMP according to workplace procedures</p>
4. Clean and sanitise pharmaceutical processing equipment	<p>4.1 Clean and sanitise processing equipment according to GMP requirements and workplace procedures</p> <p>4.2 Monitor the cleaning process and identify and report deviations from job specifications according to workplace procedures</p> <p>4.3 Inspect and confirm equipment cleanliness status against</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>acceptance criteria and take appropriate action to rectify non-conformances</p> <p>4.4 Confirm relevant sampling or testing methods including sampling or testing points, types of samples and measurements requirements</p> <p>4.5 Take, collect, store and transport samples according to sampling plan, relevant methods and standards</p> <p>4.6 Return equipment to operating order</p> <p>4.7 Record and certify data and information about equipment cleaning and sanitising, including cleaning status, sampling and testing according to workplace procedures and GMP requirements</p>
5. Return plant to operating condition	<p>5.1 Remove signs and barricades according to workplace procedures and work health and safety</p> <p>5.2 Clean, check and store cleaning equipment and PPE according to manufacturers' specifications, environmental and workplace health and safety requirements</p> <p>5.3 Store and dispose of unused chemicals according to manufacturers' specifications, and workplace health and safety requirements</p> <p>5.4 Order and replenish cleaning consumables</p> <p>5.5 Document tasks completed according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Identify and follow signs, symbols, checklists, production schedules, cleaning schedules and other technical information relevant to cleaning and sanitising facilities and equipment Identify and follow workplace information, specifications and safety data sheets (SDS) Identify and interpret GMP information relevant to cleaning and sanitising facilities and equipment
Writing	<ul style="list-style-type: none"> Complete checklists, standard forms and reports relating to

Skill	Description
	practices inconsistent with GMP
Oral communication	<ul style="list-style-type: none"> Use clear language to report contamination risks and practices inconsistent with GMP Participate in verbal exchanges to respond to questions and clarify information
Numeracy	<ul style="list-style-type: none"> Interpret measurements and numerical symbols in SDSs Record data and information using mathematical symbols and conventions
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements and GMP, associated with own role and area of responsibility

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

PPE must include:	<ul style="list-style-type: none"> one of the following: <ul style="list-style-type: none"> protective gown scrubs smock statcoat cleanroom coverall disposable coverall plus all of the following: <ul style="list-style-type: none"> disposable overshoes or cleanroom boots hair net goggles or safety glasses.
Waste must include:	<ul style="list-style-type: none"> cleaning material or product waste hazardous waste general processing and laboratory waste.
Monitoring of the cleaning process must include:	<ul style="list-style-type: none"> chemical strength cycle time(s) temperature contact time rinse water quality.
Sampling or testing	<ul style="list-style-type: none"> visual inspection

methods must include:	<ul style="list-style-type: none"> • pH tests of final rinse water • swabbing of equipment surfaces for presence of contamination.
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPHM3004 Clean and sanitise facilities and equipment	Not applicable	New unit	No equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPHM3004 Clean and sanitise facilities and equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, the individual has cleaned and sanitised facility surfaces and equipment of at least one manufacturing environment, including:

- accessed cleaning schedules or other workplace information to identify cleaning requirements
- interpreted workplace procedures applicable to cleaning operations, including pictorial and written signs/instructions
- identified soil types present in the following work surfaces, and selected cleaning equipment and agents required to clean the surfaces:
 - floors
 - walls
 - ceilings
 - benches
 - outer surfaces of equipment
 - door handles and door frames
 - light switches
 - vents
 - grills
 - pass-through cabinets
- identified hazards and controlled risks, including contamination hazards encountered in pharmaceutical manufacturing environments
- confirmed supply of necessary cleaning and sanitising equipment and services
- replenished different types of consumables used in cleaning processes
- selected and prepared cleaners and sanitisers according to workplace procedures
- selected, fitted and used personal protective equipment (PPE) required for tasks

- prepared equipment for cleaning according to manufacturers' instructions, including:
 - rendered equipment safe to clean
 - cleared product and waste materials
 - covered motors and instrumentation where steam or water hoses are used
 - dismantled and reassembled equipment parts for cleaning according to operation and maintenance manual
- applied correct cleaning and sanitising procedures to equipment and surfaces
- taken samples and conducted tests according to workplace procedures
- inspected equipment to identify equipment condition and cleanliness
- stored cleaners, sanitisers and related equipment according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- responsibilities of cleaning staff and procedures for cleaning teams
- common types of microbiological, physical and chemical contaminants in pharmaceutical processing facilities
- Good Manufacturing Practice (GMP) requirements and role of cleaning and sanitising in preventing contamination of materials and products, and in the protection of personnel and external contractors
- risks associated with cleaning and sanitising operations and cross contamination prevention
- personal hygiene, clothing and footwear requirements,
- clothing storage and disposal for working in and moving between work areas
- terminology relating to chemical cleaning and decontamination, including:
 - cleaners
 - disinfectants
 - sanitisers
 - sterilants
 - fogging
 - fumigation
- services used in a pharmaceutical manufacturing process, including:
 - potable and purified water
 - steam
 - compressed and instrumentation air
- types of cleaning equipment suitable for use in a pharmaceutical processing environment, including their use and storage,
- different cleaning methods:
 - clean-in-place (CIP)
 - clean-out-of place (COP)
 - manual cleaning

- purpose and basic principles of CIP, including the use and functions of caustic and acid solutions, and cleaning sequence and stages
- advantages and disadvantage of automated and semi-automated CIP systems
- types of cleaning equipment include:
 - CIP spray balls
 - bottle brushes
 - disinfecting solutions
 - non-shedding wipes
- hygienic vs unhygienic design features of facilities and equipment, including inserts and dead legs
- the differences between:
 - cleaning
 - disinfecting
 - sanitising
 - sterilising
- properties and functions of different cleaning and sanitising agents for pharmaceutical industry
- different levels of cleaning requirements depending on the reason for cleaning, and whether equipment is dedicated or shared
- the influence of the time between manufacture and cleaning (dirty hold time), and the time between cleaning and use (clean hold time) on a cleaning process
- acceptance criteria used to evaluate cleaning quality, including:
 - how cleaning is measured
 - commonly used sampling and testing
- considerations when choosing and using cleaning chemicals including:
 - the correct selection of chemicals for the surface being cleaned
 - the chemical and physical properties of the soils or residues to be removed
 - the interactions between cleaning chemicals and the surfaces they may adhere to
 - the solubility of the soil/residue in the cleaning solution
 - the need to rotate sanitisers
 - the frequency of cleaning and sanitising
- manual, semi-automated and fully automated cleaning methods
- the variable factors that influence cleaning effectiveness and performance
- critical parameters in a cleaning and sanitising process including:
 - time
 - temperature
 - concentration
 - GMP requirements for the validation of cleaning processes
- waste related to pharmaceutical manufacturing processes, including:
 - cleaning material
 - product waste

- hazardous waste
- general processing and laboratory waste
- waste collection, recycling and handling procedures relevant to own work responsibilities
- procedures for responding to out-of-limits or unacceptable performance or outcomes
- common practices inconsistent with GMP found in cleaning and sanitising operations, including:
 - damage to plant or equipment
 - failure of cleaning regime
 - signs of pest infestation
 - missing or inaccurate records
 - failure to follow workplace procedures
- purpose of keeping records and the recording requirements of GMP, including the legal significance of certifying and verifying GMP records.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a commercial pharmaceutical or complementary medicine manufacturing workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment
 - equipment and surfaces to be cleaned
 - chemicals and/or automated chemical addition system services and their related safety data sheets
 - data collection forms and information recording systems
- specifications:
 - cleaning procedures and related advice on equipment operation that comply with GMP requirements
 - workplace health and safety procedures related to cleaning and sanitising pharmaceutical manufacturing equipment
 - cleaning schedule
 - data collection and information recording requirements and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPHM4001 Monitor and maintain Good Manufacturing Practice requirements

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to provide a leadership role in the day-to-day monitoring and maintenance of Good Manufacturing Practice (GMP) in a pharmaceutical manufacturing facility.

The unit applies to individuals with specialised skills and knowledge of GMP requirements who communicate workplace policies and procedures relevant to pharmaceutical manufacturing operations and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pharmaceutical (PHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Empower team members to identify GMP requirements	1.1 Ensure personal protective equipment and contamination prevention clothing used by team members is serviceable and fitted correctly according to work health and safety requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Ensure GMP requirements and workplace procedures are available</p> <p>1.3 Identify and address training needs according to team member's level of responsibility</p> <p>1.4 Provide training and coaching to support individuals and groups to implement GMP requirements and related workplace procedures</p> <p>1.5 Demonstrate personal hygiene to others to support implementation of GMP requirements and workplace procedures</p> <p>1.6 Monitor and control resource allocation according to workplace procedures and GMP requirements</p> <p>1.7 Ensure GMP control measures used in the work area are identifiable by workers</p>
2. Monitor personal hygiene and conduct of team members	<p>2.1 Ensure personal hygiene of work team meets GMP requirements</p> <p>2.2 Prepare, use, store and dispose of personal protective equipment and contamination prevention clothing according to GMP requirements and workplace procedures</p> <p>2.3 Ensure personal movements within workplace comply with area entry and exit procedures</p>
3. Monitor implementation of GMP requirements	<p>3.1 Clearly define, document and follow GMP requirements in work area</p> <p>3.2 Conduct a root cause analysis (RCA) as part of a cross-functional team and report non-compliance(s) from workplace procedures</p> <p>3.3 Identify and report GMP non-conformance(s) and signs of unacceptable plant or equipment condition</p> <p>3.4 Put in place quality approved corrective action or preventative action (CAPA)</p> <p>3.5 Record information according to workplace reporting procedures and to meet GMP requirements</p> <p>3.6 Ensure team members maintain work area according to workplace cleaning standards</p>
4. Maintain and facilitate continuous improvement	4.1 Identify, report and correct processes or conditions which could result in GMP non-conformance according to individual

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
of GMP	level of responsibility 4.2 Promptly resolve matters relating to GMP or refer them to appropriate personnel 4.3 Monitor effectiveness of CAPA and control measures according to level of responsibility 4.4 Advise others in the work area of GMP matters relevant to their work role 4.5 Maintain workplace records and documents according to workplace procedures and GMP requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information about GMP requirements in workplace procedures
Writing	<ul style="list-style-type: none"> Prepare GMP training documentation using structure, technical language and format appropriate for purpose and audience
Numeracy	<ul style="list-style-type: none"> Analyse and interpret numerical performance indicators for workplace reporting related to GMP requirements
Oral Communication	<ul style="list-style-type: none"> Demonstrate two-way communication including active listening and confirming instructions when explaining GMP requirements to team members
Interact with others	<ul style="list-style-type: none"> Use appropriate vocabulary, including technical language directly relevant to role Report GMP performance to relevant personnel using required communication method
Get the work done	<ul style="list-style-type: none"> Access and use electronic document management systems

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Personal hygiene must include:	<ul style="list-style-type: none"> • informing team leader or supervisor of any reportable illnesses • removal of jewellery, including: <ul style="list-style-type: none"> • rings • watches • bracelets • removal of makeup.
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPHM4001 Monitor and maintain Good Manufacturing Practice requirements	FDFPH3001A Monitor and maintain Good Manufacturing Practice procedures	<p>Updated to meet Standards for Training Packages</p> <p>Changes to elements and performance criteria for clarity</p> <p>Code changed to reflect AQF alignment</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPHM4001 Monitor and maintain Good Manufacturing Practice requirements

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has monitored and maintained Good Manufacturing Practice (GMP) requirements of at least one work team, including:

- communicated information on GMP requirements to others in the work area, including demonstrating:
 - two-way communication
 - active listening
 - constructive responses to feedback
- accessed and used document management systems
- demonstrated personal hygiene according to GMP requirements and workplace procedures
- monitored recorded data to meet GMP recording requirements according to workplace procedures
- documented GMP requirements for a specific work area
- provided training and support to others in the work area to implement responsibilities according to GMP requirements and to workplace procedures
- determined actions required to respond to GMP non-compliance according to workplace procedures
- participated in improvement processes, including investigating actual and potential GMP non-compliance
- participated in, or reviewed, practices and procedures to prevent or minimise the likelihood of unacceptable performance.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the role of GMP in preventing contamination, including:
 - its relationship to legal requirements of pharmaceutical manufacturers
 - potential implications of non-compliance
- GMP requirements, including:
 - relevant GMP codes of practice
 - related workplace procedures
 - organisational structures for implementing these requirements
 - quality assurance
- principles and process of effective communication and consultation
- workplace training and coaching system and responsibilities
- personal clothing use, storage and disposal requirements and hygiene requirements, including:
 - making team leader or supervisor aware of reportable illness
 - removal of jewellery
 - removal of makeup
- personal clothing and footwear requirements for working in and moving between work areas
- current technical and process knowledge required to monitor and maintain GMP and participate in investigating GMP non-compliance including:
 - common microbiological, physical and chemical contaminants
 - conditions under which types of contamination, including cross-contamination are likely to occur
 - purpose of equipment calibration
 - control methods and procedures, including the purpose of control and the consequences if not controlled
- recall and traceability procedures relevant to the work area, including:
 - reconciliation
 - line clearance
 - stored versus dedicated
- procedures followed to investigate contamination events and performance improvement processes, including:
 - root cause analysis (RCA)
 - corrective action or preventive action (CAPA)
- documentation systems and procedures, including:
 - record keeping to meet both company and legal requirements
 - responding to out-of-specification, or unacceptable, performance and outcomes
 - procedures for identifying and isolating, or quarantining, materials or products of unacceptable quality
 - processes for developing or reviewing workplace procedures
 - document control systems used in the workplace
 - responsibilities for reporting and recording information

- workplace cleaning standards and responsibilities relating to own work, including:
 - waste collection
 - recycling, safe handling and disposal for different types of waste
 - safe handling and disposal of hazardous waste.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a pharmaceutical manufacturing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment and contamination prevention clothing
 - document management system
- specifications:
 - GMP requirements
 - workplace cleaning standards
 - workplace reporting procedures
 - workplace procedures related to GMP
- relationships:
 - team members.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPHM4002 Prepare and review workplace documentation to support Good Manufacturing Practice requirements

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to develop, review and communicate workplace operations documentation to support Good Manufacturing Practice (GMP) in a pharmaceutical manufacturing facility.

The unit applies to individuals with specialised skills and knowledge of GMP requirements who manage and maintain documentation relevant to pharmaceutical manufacturing operations and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pharmaceutical (PHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review and draft workplace documentation to meet GMP requirements	1.1 Identify workplace documentation requiring development or review according to workplace documentation management process and GMP requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Initiate documentation changes according to change control process 1.3 Review workplace documentation in consultation with relevant stakeholders to support GMP 1.4 Draft workplace documentation in consultation with relevant stakeholders to support GMP 1.5 Ensure workplace documentation explains complex information in a simple and clear manner
2. Finalise workplace documentation to meet GMP requirements	2.1 Complete final version of documentation according to documentation management process 2.2 Submit final version of documentation for approval according to change control process

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information in GMP requirements and workplace procedures Review completed workplace documentation to ensure that GMP requirements are met
Writing	<ul style="list-style-type: none"> Prepare training documentation using structure, technical language and format appropriate for purpose and audience
Oral Communication	<ul style="list-style-type: none"> Demonstrate two-way communication including active listening and confirming instructions when explaining workplace documentation to team members Use appropriate vocabulary, including technical language directly relevant to role
Get the work done	<ul style="list-style-type: none"> Access and use electronic document management systems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPHM4002 Prepare and review workplace documentation to support Good Manufacturing Practice requirements	FDFPH4001A Prepare and review workplace documentation to support Good Manufacturing Practice	Updated to meet Standards for Training Packages Change to unit title Changes to element 2 and its performance criteria to remove the identification of training requirements	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPHM4002 Prepare and review workplace documentation to support Good Manufacturing Practice requirements

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has reviewed and developed workplace documentation to support the Good Manufacturing Practice (GMP) requirement of at least one workplace, including:

- identified workplace documentation requiring development or review using workplace documentation management process
- reviewed and developed workplace documentation, suitable for purpose and audience, including:
 - ensuring compliance with workplace procedures and GMP requirements
 - reporting improvements
 - reviewing and updating existing documentation
 - developing new documentation
 - applying documentation control procedures when submitting or amending documents
- accessed and used document management systems
- consulted with relevant stakeholders in the preparation and review process and ensured changes are effectively communicated
- communicated information on documentation requirements to others in the work area, including demonstrating:
 - two-way communication
 - active listening
 - constructive responses to feedback.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace procedures and GMP requirements
- types of documentation requiring development or review, including:
 - procedures
 - instructions
 - records
- situations requiring documentation development or review, including:
 - general review
 - process change
 - inspection findings
 - deviations
- procedures and responsibilities for developing and altering documents, including:
 - version control
 - good documentation design and the use of templates
 - an understanding of system security and access levels
 - controls systems, including individual roles and responsibilities
 - document authorisation requirements and responsibilities of signatories
 - systems for recording and storing data and authorised levels of access to electronic systems
- use of documentation, including documents that can be used as evidence during audit processes
- requirements for completion of workplace documentation.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a pharmaceutical manufacturing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - document management system
- specifications:
 - information about GMP requirements
 - workplace procedures related to GMP.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPHM4003 Facilitate contamination control

Modification History

Release	Comments
Release 2	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 5.0.
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to identify and implement contamination control measures in a pharmaceutical manufacturing facility.

The unit applies to individuals with specialised skills and knowledge of Good Manufacturing Practice (GMP) requirements who are responsible for overseeing the implementation of contamination control programs within pharmaceutical manufacturing operations and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pharmaceutical (PHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Review contamination risks and related control measures to meet GMP	1.1 Identify hazards that could present contamination risks by type, origin and product association

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
requirements	1.2 Review hazards and risk control measures to confirm they meet GMP requirements 1.3 Conduct risk assessment according to GMP requirements and workplace procedures 1.4 Confirm control measures
2. Implement procedures used to control risk of cross contamination	2.1 Identify effective barriers and control systems to minimise risk of contamination according to GMP requirements and workplace procedures 2.2 Conduct in-process and environmental monitoring according to GMP requirements and workplace procedures 2.3 Validate cleaning processes according to workplace procedures 2.4 Confirm line clearance procedures 2.5 Ensure personal hygiene and conduct of personnel in work area meets GMP requirements 2.6 Ensure operators have the skills and knowledge required to apply contamination control measures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information from in-process and environmental monitoring test results Interpret key information about GMP requirements in workplace procedures relevant to facilitating contamination control
Writing	<ul style="list-style-type: none"> Record contamination information in document management systems
Oral communication	<ul style="list-style-type: none"> Use appropriate language and communication skills to ensure that contamination management procedures are understood and implemented
Numeracy	<ul style="list-style-type: none"> Monitor data to determine instances of contamination according to GMP requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPHM4003 Facilitate contamination control Release 2	FBPPHM4003 Facilitate contamination control Release 1	Foundation skills table updated Minor changes to performance evidence and knowledge evidence for clarity	Equivalent

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPHM4003 Facilitate contamination control

Modification History

Release	Comments
Release 2	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 5.0.
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has facilitated contamination control in at least one process, including:

- identified and investigated occurrences that could present contamination hazards and risks by:
 - type
 - origin
 - product association
- confirmed contamination control measures, including:
 - critical limits
 - monitoring and recording requirements
- interpreted Good Manufacturing Practice (GMP) requirements and workplace procedures related to contamination control
- used document management systems to:
 - access and review documents including the Contamination Control Strategy
 - monitor and record data according to GMP requirements
 - ensure procedures are understood and implemented
- reviewed workplace documents to determine contamination control measures, including:
 - equipment drawings
 - piping and instrumentation diagrams
 - process flow charting
- monitored gowning, cleaning, access and refresher training according to workplace procedures

- provided training and support to others in work area to implement contamination control according to GMP requirements and workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of contamination, including:
 - microbiological
 - chemical
 - physical
 - product cross-contamination
- microbiological limits as per GMP Guide, monitoring methods and reporting and recording formats and requirements
- non-viable particle limits as per GMP Guide, monitoring methods and reporting and recording formats and requirements
- line clearance procedures, roles and responsibilities
- personal hygiene and clothing requirements, including:
 - informing team leader or supervisor of reportable illness
 - removal of jewellery
 - removal of makeup
 - personal clothing use, storage and disposal
 - personal clothing and footwear requirements for working in and moving between work areas
 - decontamination
 - laundering requirements
- GMP requirements and workplace procedures relevant to contamination control
- environmental issues and workplace controls relevant to contamination control, including:
 - the principles of workflow design to minimise risk of contamination
 - ventilation system requirements
 - production facility segregation requirements
 - storage requirements of raw materials prior to their use in manufacture
 - time limits and conditions for storing finished products prior to packaging
 - requirements relevant to product range
- workplace cleaning standards and responsibilities, including:
 - types of cleaning agents and what they do
 - waste collection
 - recycling, safe handling and disposal of different types of waste
 - safe handling and disposal of hazardous waste
- requirements for completion of workplace documentation
- active air samplers and particle counters used in environmental monitoring cleanrooms.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a pharmaceutical manufacturing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - document management system
 - equipment drawings, piping and instrumentation diagrams and process flow charts
- specifications:
 - recording requirements and procedures
 - workplace procedures related to contamination control
 - GMP requirements related to contamination control
 - workplace cleaning procedures
- relationships:
 - team members.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPHM4005 Participate in validation of pharmaceutical manufacturing processes

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to use qualification and validation processes to meet Good Manufacturing Practice (GMP) requirements in a pharmaceutical manufacturing facility.

The unit applies to individuals with specialised skills and knowledge of GMP requirements who participate in validation process relevant to pharmaceutical manufacturing operations as part of a multi-disciplinary team and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pharmaceutical (PHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Participate in qualification processes for facilities, systems or equipment	1.1 Identify procedures for developing and implementing qualification processes 1.2 Develop and review qualification processes and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	documentation according to workplace procedures 1.3 Implement qualification process training needs
2. Participate in validation processes for facilities, systems or equipment	2.1 Identify validation requirements according to workplace procedures and GMP requirements 2.2 Follow validation protocol to support validation activities in the work area 2.3 Evaluate and document deviations and exceptions from protocol 2.4 Maintain workplace records and documents according to workplace procedures and GMP requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information in GMP requirements and workplace procedures relevant to qualification and validation processes
Writing	<ul style="list-style-type: none"> Create qualification procedures and validation reports using relevant technical terminology and format to suit regulatory requirements
Oral Communication	<ul style="list-style-type: none"> Demonstrate two-way communication, including active listening and confirming instructions, when explaining qualification processes to team members Use appropriate vocabulary, including technical language to explain processes
Get the work done	<ul style="list-style-type: none"> Access and use electronic document management systems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPHM4005 Participate in validation of pharmaceutical manufacturing processes	FDFPH4005A Participate in validation processes	Updated to meet Standards for Training Packages Changes to the unit title and performance criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPHM4005 Participate in validation of pharmaceutical manufacturing processes

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all the elements and performance criteria of this unit.

There must be evidence that the individual has participated in the validation processes of at least one workplace, including:

- identified procedures for developing and implementing qualification processes for a:
 - design qualification
 - installation qualification
 - operational qualification, and
 - performance qualification
- applied principles of risk management to identify critical facilities, systems and equipment
- communicated information on qualification process requirements to others in the work area, including demonstrating:
 - two-way communication
 - active listening
 - constructive responses to feedback
- implemented training to support others in the work area to implement responsibilities according to qualification process requirements
- interpreted Good Manufacturing Practice (GMP) requirements and workplace procedures related to qualification and validation requirements
- managed the impact of qualification and validation procedures on:
 - related processes
 - work areas
 - personnel
- developed workplace procedures to support qualification and validation according to GMP requirements and workplace procedures
- documented qualification and validation processes according to GMP requirements and workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the procedures for developing and implementing qualification processes
- types of qualification processes, including:
 - design
 - installation
 - operational
 - performance
- validation objectives and procedures, including:
 - prospective validation
 - concurrent validation
 - re-validation
 - circumstances that justify not undertaking a validation process prior to commencing production
 - procedure updates and sampling requirements
- workplace training systems and responsibilities
- GMP requirements and workplace procedures relevant to qualification and validation processes
- documentation systems and procedures, including:
 - record keeping to meet both company and legal requirements
 - processes for developing or reviewing workplace procedures
 - document control systems used in the workplace
 - responsibilities for reporting and recording information.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a pharmaceutical manufacturing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - qualification and validation process documentation
- specifications:
 - workplace procedures relating to validation
 - GMP requirements related to validation
- relationships:
 - team members.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPHM4006 Respond to non-conformance

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to identify and respond to non-conformance and review processes to minimise risk of recurrence to meet Good Manufacturing Practice (GMP) requirements in a pharmaceutical manufacturing facility.

The unit applies to individuals with specialised skills and knowledge of GMP requirements who respond to non-conformance relevant to pharmaceutical manufacturing operations and have responsibility for the output of others. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Pharmaceutical (PHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify non-conformance	1.1 Interpret workplace procedures and documentation relevant to non-conformance 1.2 Identify nature of non-conformance 1.3 Follow non-conformance corrective and preventive action (CAPA) according to GMP requirements and workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	procedures
2. Identify causes of non-conformance	2.1 Investigate possible causes of non-conformance 2.2 Conduct root cause analysis (RCA) to determine cause of non-conformance 2.3 Conduct non-conformance risk assessment on current and previous material according to workplace procedures
3. Review processes to minimise risk of recurrence	3.1 Assess and select solutions to eliminate or minimise the risk of recurrence 3.2 Develop an implementation plan for risk minimisation solutions 3.3 Conduct CAPA effectiveness checks according to GMP requirements and workplace procedures 3.4 Establish consultative mechanisms and communicate implementation plan to support continuous improvement according to GMP requirements and workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information in workplace documentation and CAPA relevant to non-conformance Interpret key information in GMP requirements and workplace procedures relevant to non-conformance
Writing	<ul style="list-style-type: none"> Prepare RCA documentation
Oral Communication	<ul style="list-style-type: none"> Demonstrate two-way communication including active listening and confirming instructions when explaining implementation plan to team members Use appropriate vocabulary, including technical language, to explain requirements
Get the work	<ul style="list-style-type: none"> Access and use electronic document management systems

Skill	Description
done	

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPHM4006 Respond to non-conformance	FDFPH4006A Respond to non-conformance	Updated to meet Standards for Training Packages Changes to performance criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPHM4006 Respond to non-conformance

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency in this unit must satisfy all the elements and performance criteria of this unit.

There must be evidence that the individual has responded to at least one non-conformance, including:

- identified workplace procedures and documentation relating to non-conformance
- interpreted Good Manufacturing Practice (GMP) requirements and workplace procedures related to non-conformance
- identified workplace non-conformance change management procedures and responsibilities, including:
 - corrective and preventive actions (CAPA)
 - investigating possible causes of non-conformance
 - root cause analysis (RCA)
 - risk assessment
 - repeat incident
 - isolated incident
 - impact assessment
 - recording requirements
- reviewed responses to previous incidents to assess effectiveness and developed recommendations on appropriate workplace procedures
- communicated implementation plan requirements to others in the work area, including demonstrating:
 - two-way communication
 - active listening
 - constructive responses to feedback.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace non-conformance change management procedures and responsibilities, including:
 - CAPA
 - investigating possible causes of non-conformance
 - RCA
 - risk assessment
 - repeat incident
 - isolated incident
 - impact assessment
 - recording requirements
- the provisions of the Therapeutic Goods Act relating to identifying non-conformance, including customer complaints, product recalls and auditing
- consultation and communication methods used to communicate implementation plan requirements to others in the work area, including demonstrating:
 - two-way communication
 - active listening
 - providing constructive responses to feedback
- GMP requirements and workplace procedures relevant to responding to non-conformance
- documentation systems and procedures, including:
 - record keeping to meet both company and legal requirements
 - processes for developing or reviewing workplace procedures
 - document control systems used in the workplace
 - responsibilities for reporting and recording information.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a pharmaceutical manufacturing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - workplace procedures and documentation relating to non-conformance
- specifications:
 - CAPA documentation
 - workplace procedures relating to responding to non-conformance
 - GMP requirements related to responding to non-conformance
 - provisions of the Therapeutic Goods Act relating to identifying non-conformance

- relationships:
 - team members.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPPL2001 Participate in work teams and groups

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to work effectively with others in structured teams and informal work groups to complete work activities.

This unit applies to individuals who work under general supervision and whose role includes identifying and providing solutions to a limited range of predictable problems.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

People, Planning and Logistics (PPL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify team objectives	1.1 Identify and agree team tasks, responsibilities and performance measures 1.2 Discuss and agree tasks required to achieve goals and performance standards with the team
2. Participate in planning work activity	2.1 Negotiate personal work tasks and roles to ensure team goals and performance standards are met 2.2 Provide information to contribute to planning work group

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	activities 2.3 Assess personal skills to identify match with team skill needs 2.4 Plan personal workload to meet team goals and performance standards
3. Complete work tasks to meet team requirements	3.1 Undertake work to achieve team goals and performance standards 3.2 Ensure communication between team members and with other work areas is appropriate and timely 3.3 Make timely requests for assistance as required to meet team goals and performance standards 3.4 Provide assistance to other team members to achieve team goals and performance standards

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Uses clear language, concepts, tone and pace appropriate for the audience and purpose Responds to clear requests and contributes to workgroup discussions, when asking and responding to relevant questions as appropriate
Get the work done	<ul style="list-style-type: none"> Plans and implements routine tasks and workload making limited decisions on sequencing, timing and collaboration, and seeks assistance in setting priorities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPPL2001	FDFPPL2001A	Updated to meet	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
Participate in work teams and groups	Participate in work teams and groups	Standards for Training Packages Minor changes to Performance Criteria to clarify intent	

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPPL2001 Participate in work teams and groups

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively participated in work teams or groups of at least three people, on a minimum of two different occasions, including:

- actively participating in discussion about identifying team goals and expectations
- planning work to maximise outcomes for team
- applying communication skills to engage with other participants
- participating in and supporting the achievement of team goals.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- how to plan work to maximise outcomes for team
- appropriate communication skills to engage with other participants
- procedures for establishing team goals and performance standards
- methods used to measure achievement of personal and team goals
- team goals and personal role to achieving work outcomes
- common group communication processes, including:
 - basic negotiation skills
 - conflict resolution
 - giving and receiving feedback
- importance of team goals and expectations and personal role within the team
- oral communication skills and language, including:
 - questioning
 - active listening

- asking for clarification
- seeking advice from supervisor
- working in a culturally diverse workforce.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - workplace arrangements for establishing company, workplace and team goals
- relationships:
 - opportunities to participate in team processes.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPL3003 Participate in improvement processes

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to participate in performance improvement processes that involve systematic analysis of performance to identify and propose opportunities for improvement.

The unit applies to individuals who work under broad direction and have scope to investigate and participate in improvement processes, where structured analysis and investigation is required.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

People, Planning and Logistics (PPL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify opportunities for improvement	1.1 Identify barriers to good practice or optimal performance 1.2 Define scope of issue or problem to be addressed
2. Identify information requirements	2.1 Identify data required to investigate improvement opportunity 2.2 Select appropriate data collection methods

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	2.3 Identify additional resources available to support investigation
3. Analyse the issue or problem	3.1 Select and apply techniques required to investigate nature of issue or problem 3.2 Assess the detail of the issue or problem 3.3 Identify and appraise possible causes 3.4 Determine and assess options for improvement
4. Recommend options for improvement	4.1 Consolidate and clarify preferred options 4.2 Present recommendations in formats appropriate to the issue and the audience 4.3 Ensure recommendations are consistent with data collected and analyses
5. Participate in implementing improvement proposals	5.1 Support improvement trials 5.2 Evaluate and refine improvement proposals against organisational objectives 5.3 Contribute to the development of new operating procedures or processes 5.4 Implement and communicate operating procedures or processes to reflect improved practices 5.5 Monitor improvement in performance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Use clear language and concepts, and tone and pace, appropriate for the audience and purpose when discussing and communicating improvements
Get the work done	<ul style="list-style-type: none"> Respond to predictable routine problems and implement standard or logical solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPPL3003 Participate in improvement processes	FDFPPL3001A Participate in improvement processes	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPPL3003 Participate in improvement processes

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has actively participated in processes to improve work outcomes on at least two different occasions, including:

- planning investigation and data collection methods
- developing objectives and parameters for investigation
- collecting and analysing data and evidence to test ideas
- presenting improvement plans with evidence to support rationale
- implementing and monitoring improvement processes
- ensuring improvement plans reflect overall organisational objectives.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- objectives to be addressed by improvement proposals, including quality, work health and safety, environmental management, cost, efficiency and job satisfaction
- the context in which improvement occurs, including capital expenditure and labour budgets, equipment capacity and production targets
- workplace improvement processes
- data collection and analysis techniques appropriate to the nature of the improvement opportunity and the workplace
- communication techniques to support data collection, consultation and teamwork required to participate in improvement processes
- problem solving strategies
- resources required to support investigation, including:
 - internal and external resources

- negotiating access to resources
- identifying expertise
- recognising improvement requirements in team members
- the importance of providing and gaining feedback
- issues that may occur in a culturally diverse workforce.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - information storage and retrieval systems
- specifications:
 - relevant technical information and personnel resources
 - relevant workplace documentation
- relationships (internal and/or external):
 - opportunities to interact with others.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPPL3005 Participate in an audit process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required for individuals to participate in auditing, where it occurs in an area that the person is not directly responsible for and where they are required to follow a formal, structured process. It is designed to support participation in auditing a range of programs designed to identify hazards, assess risk and implement control measures.

At this level, the person would typically work under direction and may be required to operate within established audit procedures. Participation implies that the person can participate in all stages of an audit but is not responsible for negotiating audit scope, allocating audit tasks to others or reporting on audit outcomes.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

People, Planning and Logistics (PPL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Participate in planning	1.1 Establish roles and responsibilities for participating in audit

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
an audit	1.2 Determine the purpose and scope of the audit 1.3 Identify and locate information and resources required for audit
2. Participate in conducting an audit	2.1 Collect information that is adequate, representative and meets audit requirements 2.2 Analyse information to assess adequacy of performance against program 2.3 Review program records to compare with the audit compliance requirements 2.4 Observe compliance with the program in the workplace 2.5 Identify areas requiring corrective action
3. Follow up audit outcomes and prepare action plans	3.1 Assess audit outcomes that present a risk to the program objectives 3.2 Develop a corrective action plan to address the audit outcomes 3.3 Prepare adjustments to work activities to address action plan 3.4 Communicate the results of the audit and required adjustments to appropriate personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read, interpret and consolidate information from briefing notes and other data, and compare against defined criteria and requirements
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational documents using clear language and correct spelling, grammar and terminology
Oral communication	<ul style="list-style-type: none"> Clearly explain detailed information using language, tone and pace appropriate to audience
Get the work done	<ul style="list-style-type: none"> Contribute to continuous improvement of current work practices by applying basic principles of analysis

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPPL3005 Participate in an audit process	FDFPPL3005A Participate in an audit process	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarity intent Prerequisites removed	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPPL3005 Participate in an audit process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has participated in an audit process on at least one occasion, including:

- collecting, assessing and providing information as required by the audit process
- acting on risk identified in the audit process
- following up on audit outcomes by developing action plans
- communicating outcomes to work personnel.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- requirements and procedures for participating in an audit
- the purpose and scope of an audit, including the stages involved in the audit process
- roles and responsibilities of individuals involved in an audit process
- types of information required for a range of audit situations, including:
 - health and safety in the workplace
 - quality
 - environmental
- techniques for collecting information, including options, relevance and strengths and weaknesses of each method to ensure data is adequate and representative
- data analysis methods relevant to the audit process
- communication skills and techniques appropriate to the workplace to inform other personnel of audit outcomes and modified work practices
- technical knowledge relevant to the program being audited in order to:

- verify compliance
- assess adequacy of control measures
- relevance to industry standards
- purpose and responsibilities for maintaining records
- process to transition audit deficiencies into corrective action plans.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace to collect data and observe compliance
- resources, equipment and materials:
 - workplace program documentation
 - information systems and data collection technology
- specifications:
 - audit procedures and standards as applied in the workplace
 - relevant legislation, industry standards and codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPPL3006 Report on workplace performance

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to collate and maintain workplace records to enable the monitoring and reporting of workplace performance.

The unit applies to individuals who work as team leaders with responsibility for monitoring and reporting on performance of a work area or section. This includes working in a range of known contexts and completing routine activities.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

People, Planning and Logistics (PPL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Establish recording and reporting requirements	1.1 Identify the purpose of recording performance-related information 1.2 Confirm recording and reporting responsibilities with supervisor 1.3 Identify recording and reporting systems and formats
2. Maintain workplace information	2.1 Ensure records are complete, timely and accurate 2.2 Record performance information in required format to meet

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace reporting requirements 2.3 Identify and correct or notify errors or discrepancies in recording to appropriate personnel 2.4 Identify, investigate and report variances according to workplace procedure 2.5 Assess, prioritise and address requests for information to meet required timelines
3. Maintain security of workplace information	3.1 Confirm levels of access and authority according to workplace security requirements 3.2 Maintain security of workplace records and reports in accordance with security access level 3.3 Identify and report security breaches to appropriate personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational documentation using clear language, correct spelling, grammar and terminology
Oral communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges using collaborative and inclusive techniques including active listening and questioning, and reading of verbal and non-verbal signals to convey and clarify information
Get the work done	<ul style="list-style-type: none"> Understand roles and responsibilities for tasks and make basic decisions on work completion parameters

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPPL3006 Report on workplace performance	FDFPPL3002A Report on workplace performance	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPPPL3006 Report on workplace performance

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has reported on workplace performance on at least one occasion, including:

- confirming the reporting and recording systems and procedures for a specific work area
- recording information on work performance in accordance with reporting procedures
- reporting variances and inconsistencies
- maintaining security of work documentation.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the purpose and responsibilities for the information records and reports to be maintained or produced, including accuracy levels and timelines
- types of information to be recorded, including but not limited to:
 - timesheets
 - log sheets
 - recipes/specifications
 - operating procedures
 - production statistics
 - downtime
 - labour
 - materials usage levels
- techniques used to collate and assess information, including typical recording outcomes to identify unusual or incorrectly recorded information

- likely causes of variation and related reporting responsibilities
- information system access levels and codes, such as levels within software
- effective communication strategies relevant to reporting role
- relevant regulatory and licensing, legislative requirements, industrial awards and agreements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - performance data
 - recording/reporting formats and systems
- specifications:
 - workplace policies, codes of practice and procedures
 - relevant information on licensing, legislation and industrial awards and agreements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPPL3007 Support and mentor individuals and groups

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to model appropriate work practices, provide feedback to groups and individuals, and facilitate group processes.

This unit applies to individuals who work under broad direction and take responsibility for their own work, and have some formal responsibility for managing others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

People, Planning and Logistics (PPL)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Support others in the work area	1.1 Mentor individuals to meet work requirements according to workplace procedures 1.2 Compare individual work performance against expected workplace standards 1.3 Monitor performance and take appropriate action according to workplace procedures 1.4 Provide feedback to individual on performance according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures 1.5 Model good behaviour and performance consistent with workplace expectations
2. Facilitate group processes	2.1 Determine purpose of group process, and plan group involvement 2.2 Gather information and develop proposed process outcome through discussions with group 2.3 Engage members of group to ensure decisions are made and agreed according to workplace procedures 2.4 Record agreed outcomes and implement process in a timely manner

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Learning	<ul style="list-style-type: none"> Contribute to continuous improvement of current work practices by analysing issues
Writing	<ul style="list-style-type: none"> Accurately record and complete organisational documents using clear language and correct spelling, grammar and terminology
Oral communication	<ul style="list-style-type: none"> Effectively participate in verbal exchanges using collaborative and inclusive techniques, including active listening and questioning, and reading of verbal and non-verbal signals to convey and clarify information Use a range of strategies to establish a sense of connection and build rapport with co-workers Effectively deal with disagreements and misunderstandings as they arise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPPPL3007 Support and mentor individuals and groups	FBPPPL3001 Support and mentor individuals and groups	Performance Criteria added Foundation Skills refined Performance Evidence clarified Minor changes to Knowledge Evidence and Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4+>

Assessment Requirements for FBPPPL3007 Support and mentor individuals and groups

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has supported and mentored at least one individual, and at least one group (of at least three people), to achieve agreed outcomes, including:

- modelling behaviour and performance consistent with company policy and procedures
- effectively supporting others
- providing meaningful feedback on individual and group performance.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- company policies and procedures as they apply to the work area
- regulations and legislative requirements, including:
 - sexual discrimination
 - harassment and bullying
 - equal employment opportunity
 - anti-discrimination
 - racial vilification
 - work health and safety
 - food safety
 - environmental management
- industry awards and workplace agreements to develop an awareness of the main issues covered as they affect day-to-day work arrangements
- techniques for structuring and explaining work-related information to meet the needs of people in the work area

- interpersonal communication skills, including appropriate questioning, listening and feedback techniques
- communication strategies for working effectively with both individuals and groups
- workplace arrangements for training and assessment and related responsibilities
- boundaries of responsibility and related procedures for feedback, counselling and disciplinary procedures
- formal arrangements and responsibilities for mentoring others relating to work role
- meeting procedures and recording requirements relevant to the workplace
- basic group process facilitation procedures, including:
 - planning group processes
 - identifying the purpose
 - confirming the appropriate attendance
 - decision making
 - documenting basic group processes.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - systems and programs for supporting development and mentoring of others
 - resources to support mentoring role
- specifications:
 - regulatory, licensing and legislative requirements
 - industrial awards and agreements
 - workplace policies, codes of practice and procedures
 - workplace systems and procedures for consultation, feedback, counselling and discipline
 - information systems, including recording and retrieval systems
- relationships:
 - individuals and team members as specified in the performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPTEC4002 Apply principles of food packaging

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to oversee packaging operations in a food and beverage processing environment and to assess the nature, and likely causes, of packaging problems.

The unit applies to senior operators and managers who are responsible for overseeing packaging processes and work within known parameters. They provide and communicate solutions to a range of predictable or unpredictable problems.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing or certification requirements apply to this unit at the time of publication. However, legislative and regulatory requirements for food processing exist so local requirements must be checked.

Pre-requisite Unit

Nil

Unit Sector

Technical (TEC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Analyse characteristics of packaging suitable for	1.1 Identify and compare packaging materials suitable for a food or beverage product 1.2 Assess the interaction between the packaging and the food or

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
use with food products	beverage product 1.3 Determine environmental impact and handling features of packaging materials 1.4 Consider customer and legal requirements of packaging 1.5 Ensure packaging material characteristics meet the safety and quality needs of food or beverage being packaged
2. Evaluate packaging in a production environment and recommend improvements	2.1 Assess packaging material properties for quality and safety 2.2 Determine costs of packaging materials 2.3 Analyse non-conformances to identify probable causes 2.4 Identify and investigate opportunities for improvement to materials, processes or environmental impact 2.5 Establish or review procedures for safely operating a packaging process 2.6 Document evaluation and recommendations and seek approval for implementation

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Critically analyse documentation from a variety of sources and consolidate information relating to packaging materials and production to assist with analysis
Writing	<ul style="list-style-type: none"> Prepare proposal expressing ideas and exploring issues using language that is logical, succinct and accurate
Numeracy	<ul style="list-style-type: none"> Perform mathematical calculations to assist with analysis of packaging materials and costs

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPTEC4002 Apply principles of food packaging	FDFTEC4008A Apply principles of food packaging	Updated to meet Standards for Training Packages Minor changes to Performance Criteria to clarify intent	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPTEC4002 Apply principles of food packaging

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has analysed and evaluated at least two types of food packaging, including (for each):

- analysing packaging system components, including:
 - materials used and interaction with product
 - costs
 - processes
 - legal and customer requirements
 - environmental and handling implications
- analysing and confirming safety aspects of processes and equipment
- analysing non-conformances and packaging problems and determining probable cause
- proposing improvements to the packaging system.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose of packaging and the properties of packaging materials designed to protect products and extend shelf-life, including the role of packaging in providing:
 - protection of products from contamination (microbial, pest infestation and physical damage)
 - barriers (atmospheric, moisture, flavour and light)
 - package seal ability and seal integrity
 - easy-to-open access to products
 - information to consumers about products

- market appeal
- materials and their properties
- packaging interactions with food products
- costs
- features of packaging design that preserve products
- legislative requirements relating to packaged products and food safety
- requirements of products handled in the workplace, including coated packaging products, and active/interactive packaging films
- factors that influence the selection of packaging materials
- corrective actions to prevent packaging non-conformance
- characteristics of products, and their behaviour when packaged, across the shelf-life of the product
- typical problems that occur in the packaging process, and likely causes and appropriate response options including:
 - pathogens and spoilage that occur in packaged food and the conditions required for their occurrence
 - intrinsic features of food type, including pH, water activity, nutrient content, presence of microbiological compounds, respiration rate (fresh fruit and vegetables) and biological structure
 - extrinsic factors, including processing method, temperature, water loss and humidity, maturity (applies to maturity of fruit and vegetables when harvested), handling, cleaning, sanitation and personal hygiene practices, and gaseous composition of storage atmosphere
 - food spoilage indicators, including microbial contamination, enzymic browning and sensory degradation of characteristics, such as flavour, aroma, colour and texture
 - the effect of gas composition for modified atmosphere packaging processes, including knowledge of the role of the most commonly used gases in food packaging (carbon dioxide, oxygen, nitrogen), reactions between gases, packaged products and packaging materials
- quality assurance systems to ensure that packaged products meet customer and legal requirements
- relevant sources of technical expertise and related authority levels to address packaging issues.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - product, packaging components and consumables
 - packaging process equipment

- specifications:
 - relevant standard operating procedures
 - packaging specifications
 - workplace information recording systems, requirements and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2001 Bench graft vines

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to select appropriate vine material, prepare cuttings, graft and undertake post-graft treatment and storage.

The unit applies to individuals in wine grape nurseries who work under general supervision, with limited autonomy and accountability for their own work.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to bench graft vines	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select, fit and use appropriate personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Ensure work area meets workplace requirements 1.5 Ensure materials are available to meet grafting requirements 1.6 Select and prepare cuttings for grafting 1.7 Check and set equipment to meet grafting specifications
2. Bench graft vines	2.1 Disbud cuttings according to workplace procedures 2.2 Bench graft cuttings according to workplace procedures 2.3 Treat graft union according to specifications and workplace procedures 2.4 Monitor grafting process and equipment to ensure results are maintained within specifications 2.5 Identify and address non-conformance according to workplace procedures
3. Complete bench grafting activities	3.1 Identify appropriate shutdown procedures 3.2 Pack, label and store grafted vines according to workplace procedures 3.3 Collect, treat and dispose of waste according to workplace waste procedures 3.4 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Numeracy	<ul style="list-style-type: none"> Count and record numerical information related to labelling and storage of grafted vines
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities

Skill	Description
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2001 Bench graft vines	FDFWGG2001A Bench graft vines	Updated to meet Standards for Training Packages Code changed to reflect industry sector Minor changes to Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2001 Bench graft vines

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared to bench graft vines, bench grafted vines and completed the bench grafting activities at least once, including:

- identifying health and safety hazards and controls in the workplace
- selecting, fitting and using personal protective equipment according to job requirements
- selecting and preparing appropriate vine material for grafting, including disbudding
- performing bench grafting of vines according to workplace practices
- following workplace requirements for grafting and post-grafting treatment and packing of vines
- monitoring grafted vines by identifying, rectifying or reporting out-of-specification vine grafts
- identify and address non-conformance
- cleaning up and storing equipment according to workplace requirements
- disposing of waste according to environmental policies and workplace procedures
- maintaining records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in the workplace
- purpose and principles of grafting and disbudding
- criteria for successful grafting:
 - variety and clone
 - matching cambium
 - matching bevels and sizes
 - wood diameters
 - customer or workplace requirements

- importance of selection and use of rootstock and vinifera
- advantages of using clonal and registered vine improvement rootstock material
- criteria for selecting parent vines for scion material
- procedures and optimum conditions for the storage of grafting material
- preparing vine material for grafting, including:
 - removal from cold storage
 - soaking
 - heat treatment
 - disbudding
 - hydration
 - grading
- procedures for monitoring the grafting process and equipment operation to identify non-conformance
- purpose and components of grafting equipment and cleaning equipment
- packing, labelling and storing grafted vines relevant to:
 - cold room layout
 - cold room temperature variations
 - customer requirements
 - storage time requirements
 - care of vines to minimise damage by moisture and disease
- procedures and responsibility for reporting problems
- environmental issues and controls, including:
 - identifying, rectifying and reporting environmental non-conformance
 - sorting, collecting, treating, recycling or disposing of waste
- cleaning requirements and procedures for work area and equipment
- reporting and recording required information.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a plant nursery workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - appropriate personal protective equipment
 - equipment, services and corresponding information
 - products and materials
 - cleaning procedures, materials and equipment
 - documentation and recording requirements and procedures
- specifications:

- work procedures, including advice on company practices, safe work practices, quality and environmental requirements
- workplace grafting specifications
- work instructions and schedules
- legislative and local quarantine regulations and codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2002 Carry out potting operations

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to carry out potting operations in wine grape nurseries.

The unit applies to individuals who work in wine grape nurseries and are required to follow workplace procedures in completing tasks.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for potting operations	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select, fit and use personal protective equipment relevant to job

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.4 Ensure potting materials are available 1.5 Blend potting media to ensure consistency 1.6 Clean and treat pots and work areas to minimise risk of pest and pathogen contamination 1.7 Prepare grafted cuttings ready for potting 1.8 Check, maintain and set equipment according to workplace procedures
2. Pot propagated material	2.1 Identify and collect callused cuttings requiring potting 2.2 Place soil in pots according to job requirements 2.3 Plant cuttings according to job requirements 2.4 Label potted cuttings according to workplace procedures
3. Carry out post-potting treatments	3.1 Transfer potted cuttings to growing environment according to workplace procedures 3.2 Hydrate potted cuttings according to workplace procedures 3.3 Prepare and apply treatments according to health and safety in the workplace requirements 3.4 Collect and dispose of waste according to workplace procedures
4. Complete potting operations	4.1 Identify and report non-conformances 4.2 Clean, maintain and store equipment according to workplace procedures 4.3 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents accurately

Skill	Description
Numeracy	<ul style="list-style-type: none"> Calculate numerical information relating to volume of material requirements
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2002 Carry out potting operations	FDFWGG2002A Carry out potting operations	Updated to meet Standards for Training Packages Code changed to reflect industry sector Minor changes to Elements and Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2002 Carry out potting operations

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has carried out at least two potting operations involving potting propagated material and post-potting treatment including:

- using personal protective equipment (PPE), safety data sheets (SDS) and following health and safety requirements in the workplace
- ensuring materials are available and ready for potting process
- selecting and mixing potting media and treatments according to workplace procedures
- cleaning pots and work surfaces according to workplace procedures
- preparing cuttings before potting including waxing or grading methods
- potting cuttings and labelling trays according to workplace procedures
- transferring potted cuttings to a growing environment
- maintaining hydration requirements
- disposing of waste according to workplace procedures
- completing records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in the workplace, including:
 - purpose and application of PPE
 - SDS
 - operating equipment according to workplace procedures
 - safe handling and preparation of equipment, potting media and chemicals
- process for preparing cuttings for potting, including:
 - grading

- waxing
- dipping in hormones
- hydrating
- potting process and standards of potting, including:
 - resources and materials used for the potting process
 - selecting, operating, maintaining and storing equipment according to workplace procedures
 - planting cuttings, according to workplace procedures
 - labelling trays according to workplace procedures
 - watering potted cuttings
- process of transferring and placing potted cuttings to growing environment
- report and address non-conformances according to workplace procedures
- principles of nursery hygiene, including:
 - cleaning requirements and techniques for work area and equipment
- maintenance of work area and equipment according to workplace procedures including:
 - report and address environmental non-compliance
 - waste disposal requirements and procedures
- processes for reporting, recording and maintaining workplace records.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - nursery shed or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment
 - equipment, services and corresponding information
 - potting products and materials
 - cleaning procedures, materials and equipment
 - system for recording information
- specifications:
 - work procedures, including advice on company practices, safe work practices, and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2003 Hand prune vines

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to hand prune vines using a variety of hand-operated or handheld equipment.

The unit applies to individuals who are required to follow workplace procedures in completing tasks associated with hand pruning of vines.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative, or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for hand pruning	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select and fit personal protective equipment relevant to the job

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.4 Ensure pruning equipment is ready for use according to workplace procedures
2. Hand prune vines	2.1 Start and operate pruning equipment safely and according to workplace procedures 2.2 Monitor equipment performance 2.3 Prune vines according to workplace procedures 2.4 Identify and address non-conformance according to workplace procedures 2.5 Maintain equipment in good working order according to workplace procedures
3. Complete hand pruning operations	3.1 Shut down equipment safely according to workplace procedures 3.2 Clean and store equipment 3.3 Dispose of vine cuttings according to environmental and workplace procedures 3.4 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Oral Communication	<ul style="list-style-type: none"> Converse clearly to confirm job requirements and seek assistance where required
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities Follow clear instructions within defined level of responsibility
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2003 Hand prune vines	FDFWGG2003A Hand prune vines	Updated to meet Standards for Training Packages Code changed to reflect industry sector Minor changes to Elements and Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2003 Hand prune vines

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively prepared for hand pruning, hand pruned vines and completed hand pruning operations at least once including:

- identifying health and safety hazards and controls in the workplace
- using personal protective equipment (PPE)
- following pruning equipment safety procedures
- starting and operating hand pruning equipment safely according to workplace procedures
- pruning correctly according to workplace procedures
- identify and address non-conformances
- performing shut down procedures according to workplace procedures
- following environmental procedures
- disposing of cuttings according to workplace procedures
- maintaining records according to workplace guidelines.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic components of and the purpose for pruning vines, including:
 - basic difference between cane and spur pruning
 - pruning requirements
 - different parts of the vine, including vine trunk and permanent framework, canes and cordons, tendrils and buds
- techniques and principles of pruning vines:
 - selecting the best possible spurs and canes
 - positioning spurs or canes
 - cleanly removing sucker shoots
 - leaving the correct quantity of spurs, rods and buds

- making cuts correctly and cleanly
- recognising and removing unwanted growth
- rolling and securing extension canes onto trellis wire
- health and safety hazards and controls in the workplace including purpose and application of PPE
- correct operating procedures for pruning equipment, including:
 - handling pruning equipment safely
 - oiling moving parts and sharpening procedures
 - safe handling of pruning equipment
 - starting up and operating automatic pruning equipment as required
 - monitoring and recognising performance problems with pruning equipment
 - cleaning and storage requirements of pruning equipment
 - using appropriate cleaning techniques
- shut down procedures
- processes for the routine preventive maintenance of equipment
- identifying, rectifying and reporting environmental non-compliance
- processes for maintaining work area:
 - environmental issues and controls
 - disposal requirements of vine cuttings
- procedures and responsibility for reporting problems and anomalies
- recording workplace information.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a vineyard workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - pruning equipment, services and corresponding information
 - products and materials
 - cleaning procedures, materials and equipment
 - documentation and recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices, quality and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2005 Maintain callusing environment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to maintain a callusing environment in a vineyard.

The unit applies to individuals who are required to follow workplace procedures to complete tasks associated with callusing operations.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare callusing environment	1.1 Identify and confirm job requirements 1.2 Select, fit and use personal protective equipment according to job requirements 1.3 Ensure materials required are available and ready

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Select and use equipment according to workplace procedures</p> <p>1.5 Prepare, clean and sanitise work area, equipment and boxes according to workplace procedures</p> <p>1.6 Prepare pre-mixed callusing media according to workplace procedures</p>
2. Prepare cuttings for callusing	<p>2.1 Prepare cuttings for callusing according to workplace procedures</p> <p>2.2 Apply pre-callusing treatments according to workplace procedures and safety guidelines</p> <p>2.3 Count, bundle and label cuttings according to workplace procedures</p> <p>2.4 Place cuttings into boxes according to workplace procedures</p>
3. Maintain cuttings in callusing room	<p>3.1 Place cuttings into callusing environment according to workplace procedures</p> <p>3.2 Maintain callusing environment according to workplace procedures</p> <p>3.3 Monitor cuttings for potential health problems and report or apply treatments according to workplace procedures</p> <p>3.4 Apply post-callusing treatments to maintain plant health according to workplace procedures</p>
4. Carry out post-callusing operations	<p>4.1 Remove callused cuttings from callusing room</p> <p>4.2 Collect and dispose of waste according to workplace environmental and workplace procedures</p> <p>4.3 Clean and sanitise facilities according to workplace procedures</p> <p>4.4 Undertake work in accordance with workplace environmental guidelines</p> <p>4.5 Record workplace information according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Oral Communication	<ul style="list-style-type: none"> Converse clearly using industry-specific language
Numeracy	<ul style="list-style-type: none"> Calculate numerical information relating to counting, labelling and storing
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2005 Maintain callusing environment	FDFWGG2005A Maintain callusing environment	<p>Updated to meet Standards for Training Packages</p> <p>Code changed to reflect industry sector</p> <p>Minor changes to Elements and Performance Criteria for clarity</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2005 Maintain callusing environment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared cuttings for callusing and maintained the callusing environment on at least two separate occasions including:

- identifying health and safety hazards and controls in the workplace
- selecting, fitting and using personal protective equipment (PPE)
- observing hygiene and housekeeping standards including cleaning and sanitising of work area, equipment and boxes
- preparing callusing media and boxes to specification
- preparing cuttings and applying pre-callusing treatment
- placing cuttings into callusing boxes
- monitoring and maintaining callusing environment to specification
- monitoring cuttings for correct callusing and reporting problems according to procedures
- applying post-callusing treatments
- removing callused cuttings
- recording appropriate information.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in the workplace, including:
 - purpose of PPE
 - correct operating procedures for equipment
 - safe and effective handling of equipment
 - safe preparation and handling of chemicals
- cleaning requirements and procedures for work area and equipment
- principles of nursery hygiene

- environmental considerations and required controls
- waste disposal requirements and procedures
- correct procedures for preparing cuttings for callusing
- correct procedures for placing cuttings into boxes
- effects of variety, clone and source of cuttings on the placement and labelling of cuttings in boxes
- purpose and benefit of carrying out pre- and post-callusing treatments
- procedures used to carry out pre- and post-callusing treatments
- procedures for preparing pre-mixed callusing media
- factors in a controlled callusing environment that affect the vine cutting:
 - methods of pasteurising and treating callusing media
 - temperature
 - relative humidity
 - moisture levels of growing medium
- methods for setting, monitoring and maintaining the required temperature and relative humidity
- correct procedures for preparing callusing boxes
- quality control process in the callusing environment
- common problems that occur during callusing and how to resolve them
- procedures and responsibilities for reporting problems and anomalies
- procedures for maintaining workplace records
- procedures for selecting, operating, maintaining and storing the required equipment
- correct procedures for removing and transferring callused cuttings.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a plant nursery workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - equipment, services and corresponding information relevant to callusing
 - products and materials for callusing
 - cleaning procedures, materials and equipment
 - documentation, recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices, quality and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2006 Obtain and process rootlings

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to dig and process vine rootlings.

The unit applies to individuals who are required to follow workplace procedures in completing tasks associated with obtaining and processing rootlings.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to process rootlings	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select and fit appropriate personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Clean and sanitise facilities to minimise risk of contamination according to workplace procedures 1.5 Check, maintain and set equipment to meet job requirements
2. Obtain rootlings	2.1 Check requirements for rootlings from field nurseries, sand beds or callusing against workplace procedures 2.2 Dig rootlings from field nurseries using tractor-mounted or trailed digging machines or hand-held tools according to workplace procedures 2.3 Obtain rootlings from sand beds or callusing room according to workplace procedures
3. Process rootlings	3.1 Treat and bundle rootlings according to workplace procedures 3.2 Grade, label, pack and store bundles according to workplace procedures 3.3 Collect and dispose of waste according to waste management procedures 3.4 Identify and address non-conformances
4. Prepare rootlings for dispatch	4.1 Prepare and pack rootlings for dispatch according to job requirements 4.2 Load and check orders for dispatch according to workplace procedures 4.3 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Numeracy	<ul style="list-style-type: none"> Count and record numerical information related to rootling orders and dispatch
Navigate the world of	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities

Skill	Description
work	
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2006 Obtain and process rootlings	FDFWGG2006A Obtain and process rootlings	<p>Updated to meet Standards for Training Packages</p> <p>Code changed to reflect industry sector</p> <p>Minor changes to Performance Criteria for clarity</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2006 Obtain and process rootlings

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has demonstrated the following for obtaining and processing rootlings from a field nursery, a sand bed and a callusing room, including:

- identifying health and safety hazards and controls in the workplace
- using personal protective equipment (PPE) according to job requirements
- handling and using treatments and disinfectants
- selecting and mixing treatments to required concentrations
- sanitising equipment and work surfaces according to workplace procedures
- set up and operate equipment according to workplace procedures
- treating, bundling, storing and labelling rootling according to workplace procedures
- preparing, packing and loading rootling for dispatch according to workplace procedures
- identifying and reporting non-conformances
- treating and disposing of waste according to workplace procedures
- maintaining records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in the workplace
- purpose and application of PPE
- safe equipment operation, storage and maintenance requirements according to workplace procedures
- principles of nursery hygiene for equipment and cleaning requirements
- methods for handling rootlings in different environments
- processes for treating rootlings:
 - hydration of all rootlings

- chemical treatment of all rootlings
- common features of vine rootlings health
- procedures for monitoring the standard of rootlings, and grading and sorting them for:
 - diameter of stem
 - appearance
 - length and number of shoots
 - strength of graft union
- package, storage requirements and procedures for rootlings ready for sale, including:
 - cold room layout and temperature variations
 - customer requirements
 - storage time requirements
- procedures for checking stock against orders, including:
 - quantity of stock
 - varieties and clones
 - quality of stock is within specifications
 - procedures and responsibilities for reporting problems and anomalies
- procedures for dispatching stock, including:
 - correct manual handling
 - correct use of mechanical transfer equipment
- procedures for collecting and disposing of waste
- environmental issues and controls
- recording workplace information.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a plant nursery workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - equipment, services and corresponding information
 - products and materials
 - cleaning procedures, materials and equipment
 - system for recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2007 Tend containerised nursery plants

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to tend containerised nursery plants.

The unit applies to individuals in wine grape nurseries who complete nursery activities such as treating plants and maintaining nursery facilities.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Maintain nursery facilities	1.1 Confirm job requirements 1.2 Identify potential health and safety hazards and controls according to workplace procedures 1.3 Select, fit and use personal protective equipment according to the job requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Undertake work according to safety data sheets and workplace environmental procedures 1.5 Maintain irrigation system according to workplace procedures 1.6 Check temperature controls according to workplace procedures
2. Treat plants to maintain growth	2.1 Select and prepare materials, equipment and tools according to job requirements 2.2 Select, mix and apply chemical treatments according to workplace procedures 2.3 Apply irrigation according to workplace procedures 2.4 Recognise and report non-conformances according to workplace procedures
3. Carry out post-treatment operations	3.1 Collect and dispose of waste according to workplace procedures 3.2 Shut down, clean and store equipment according to workplace procedures 3.3 Clean and sanitise facilities according to workplace procedures 3.4 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Numeracy	<ul style="list-style-type: none"> Calculate numerical information relating to preparing treatments and environmental conditions
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures and legislative responsibilities to own role
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures Plan and organise tasks to achieve job requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2007 Tend containerised nursery plants	FDFWGG2007A Tend containerised nursery plants	Updated to meet Standards for Training Packages Code changed to reflect industry sector Minor changes to Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2007 Tend containerised nursery plants

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has tended to containerised nursery plants by treating plants to maintain growth and maintaining nursery facilities and demonstrating the following on at least one occasion:

- using personal protective equipment (PPE)
- identifying and following safety data sheets and health and safety in the workplace procedures
- sanitising equipment and following hygiene procedures
- selecting, mixing and applying chemical treatments according to workplace procedures
- monitoring irrigation system
- irrigating and monitoring plants according to workplace procedures
- identifying and reporting non-conformances
- maintaining workplace records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in the workplace
- purpose and application of PPE
- principles and operations of irrigation systems used in tending plants in nurseries
- maintaining irrigation system:
 - fixing blockages, leaking heads and hoses
 - servicing irrigation system components
 - identifying and reporting non-compliances
- recognising underperformance of the irrigation system, including:
 - dry spots

- water dumping
- abnormal water flow
- principles and practices of tending nursery plants:
 - weed control
 - removing dead or diseased plant materials
- workplace procedures for operating equipment:
 - calibrating and adjusting equipment
 - carrying out pre-operational checks
 - applying particular settings
 - shut down procedures
- environmental issues and controls including waste disposal
- workplace procedures for reporting non-conformances
- procedures for maintaining workplace records.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a plant nursery workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - irrigation and maintenance equipment, services and corresponding information
 - products and materials
 - cleaning materials and equipment
 - system for recording information
- specifications:
 - workplace procedures, including advice on company practices, safe work practices, quality and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2008 Train vines

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to train growing vines by hand.

The unit applies to individuals who are required to follow workplace procedures in completing tasks associated with training vines.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for vine training	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select and fit personal protective equipment relevant to the job

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.4 Ensure equipment is available and ready for safe use according to workplace procedures 1.5 Check and set equipment to meet the job requirement 1.6 Ensure materials are available to meet vine training requirements
2. Train vines	2.1 Train vines according to vine variety 2.2 Identify and address non-conformance according to workplace procedures
3. Complete training activities	3.1 Clean, maintain and store equipment according to workplace requirements 3.2 Collect, treat, dispose of waste according to workplace procedures 3.3 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Oral Communication	<ul style="list-style-type: none"> Converse clearly to confirm job requirements and seek assistance where required
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities Follow clear instructions within defined level of responsibility
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title	Code and title	Comments	Equivalence status

current version	previous version		
FBPVIT2008 Train vines	FDFWGG2008A Train vines	Updated to meet Standards for Training Packages Code changed to reflect industry sector Minor changes to Elements and Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2008 Train vines

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared for vine training, trained vines and completed vine training activities on at least one occasion including:

- identifying health and safety hazards and controls in the workplace
- using personal protective equipment (PPE) according to job requirements
- setting up and operating equipment according to workplace procedures
- training vines according to instructions, including heading height, selection of appropriate laterals, positioning of laterals, securing of laterals, removing unwanted laterals from trunk and crown
- identifying and addressing non-conformances
- cleaning up and storing equipment according to workplace procedures
- maintaining records according to workplace procedures
- disposing of waste according to environmental guidelines.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in the workplace
- purpose and application of PPE
- safe and effective handling of equipment
- maintenance and storage of equipment according to workplace procedures
- range of vine training techniques, features, benefits and procedures
- different parts of the grapevine, including vine trunk and permanent framework, laterals, canes and cordons, tendrils and buds, and fruit
- how to report and address non-conformances according to workplace procedures
- responsibilities for identifying and controlling environmental issues
- cleaning and storage requirements and procedures for equipment

- workplace procedures and responsibility for:
 - reporting problems
 - cleaning up
 - maintenance
 - handling and disposing of waste
 - reporting required information.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a vineyard workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - vine training equipment, services and corresponding information
 - range of grape vine varieties
 - cleaning procedures, materials and equipment
 - system for recording information
- specifications:
 - work procedures, including advice on company practices, safe work practices, and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2010 Take and process vine cuttings

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to take and process vine cuttings using a variety of hand-operated equipment.

The unit applies to individuals who are required to follow workplace procedures in completing tasks associated with taking and processing vine cuttings.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Take vine cuttings	1.1 Confirm job requirements 1.2 Identify health and safety hazards and environmental controls according to workplace procedures and regulations 1.3 Select, fit and use personal protective equipment according to job requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Select and prepare materials and equipment according to workplace procedures 1.5 Select and take vine cuttings according to job requirements 1.6 Identify and address non-conformances according to workplace procedures
2. Complete vine cutting operations	2.1 Collect and grade vine cuttings according to job requirements 2.2 Clean and store equipment according to workplace procedures 2.3 Collect and dispose of waste according to environmental and workplace procedures
3. Prepare to process cuttings	3.1 Clean and sanitise facilities to minimise risk of contamination 3.2 Ensure materials are ready to meet requirements 3.3 Select and prepare materials and equipment according to workplace procedures
4. Process cuttings	4.1 Treat and bundle cuttings according to workplace procedures 4.2 Label, pack and store bundles according to workplace procedures 4.3 Collect and dispose of waste according to environmental and workplace procedures 4.4 Recognise and address and non-conformances according to workplace procedures 4.5 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Writing	<ul style="list-style-type: none"> Produce workplace documents using industry-based vocabulary, grammar and conventions

Skill	Description
Numeracy	<ul style="list-style-type: none"> Calculate numerical information relating to estimating materials, labelling and storing
Navigate the world of work	<ul style="list-style-type: none"> Follow clear instructions within defined level of responsibility Apply workplace procedures to own role and responsibilities
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2010 Take and process vine cuttings	FDFWGG2022A Take and process vine cuttings	Updated to meet Standards for Training Packages Code changed to reflect industry sector Minor changes to Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2010 Take and process vine cuttings

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively taken and processed vine cuttings using hand-operated equipment on at least two separate occasions including:

- following health and safety procedures in the workplace
- selecting, fitting and using personal protective equipment (PPE)
- selecting cuttings and cutting according to workplace procedures
- using a variety of hand-operated or handheld cutting equipment
- treating, bundling, and labelling cuttings according to workplace procedures
- identifying and addressing non-conformances in cutting propagation of grape vines
- disposing of waste according to workplace procedures
- maintaining records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and environmental controls in the workplace
- purpose and application of PPE
- selection, setup and maintenance of vine cutting equipment
- vine components:
 - vine trunk and permanent framework
 - canes and cordons
 - tendrils and buds
- procedures for selecting and taking vine cuttings:
 - correct length and diameter
 - correct number of buds on the cutting

- degree of straightness
- cuts made correctly and cleanly
- top cut at 45° angle or bottom bud flat, 1-2 cm from nearest bud
- number of buds left on the vine
- treating cuttings procedures:
 - hydration of all cuttings
 - removing unwanted plant material
 - mixing treatments
- collecting and storing vine cuttings procedures:
 - numbers per bundle
 - all lying the same way in the bundle (basal and distal ends)
 - secure tying and labelling of bundles
 - maintaining hydration of cuttings
- cutting propagation techniques for grape vines:
 - identification of vine cuttings
 - cutting collection and storage requirements, including hydration
- features of healthy and unhealthy vine cuttings used to grade cuttings
- packing and storing cuttings:
 - cold room layout and temperature variations
 - storage time requirements
- cleaning requirements and environmental procedures for work area and equipment
- identifying and addressing non-compliances
- maintaining workplace records
- legislation, regulations and codes of practice related to handling of vine cuttings.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a vineyard workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - equipment, services and corresponding information
 - cuttings and treatments
 - cleaning procedures, materials and equipment
 - system for recording information
- specifications:
 - work procedures, including advice on company practices, safe work practices and environmental requirements
 - legislative and local quarantine regulations and codes of practice

- work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2011 Operate vineyard equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to operate a range of general vineyard equipment that does not require specialised calibration.

The unit applies to individuals who are required to follow workplace procedures to operate general vineyard equipment.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare equipment for operation	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select, fit and use personal protective equipment relevant to the

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	job requirements 1.4 Check, maintain and set equipment for use according to workplace procedures
2. Operate equipment	2.1 Start up and operate equipment according to workplace procedures 2.2 Adjust operation of equipment to meet yard safety requirements, weather conditions and workplace terrain 2.3 Monitor equipment performance to confirm performance is maintained according to workplace procedures 2.4 Identify and address non-conformance of equipment according to workplace procedures
3. Complete operation of equipment	3.1 Shut down equipment according to workplace procedures 3.2 Clean and store equipment according to workplace procedures 3.3 Sort, collect, treat and dispose of waste generated by the work activities according to workplace procedures 3.4 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Oral Communication	<ul style="list-style-type: none"> Converse clearly with workplace personnel to ensure safety of self and others when operating vineyard equipment
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2011 Operate vineyard equipment	FDFWGG2018A Operate vineyard equipment	Updated to meet Standards for Training Packages Code changed to reflect industry sector Minor changes to Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2011 Operate vineyard equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively operated at least three different types of vineyard equipment and for each type has demonstrated the following:

- identifying health and safety hazards and controls in the workplace
- using personal protective equipment (PPE)
- selecting and confirming availability of equipment, and preparing according to workplace procedures
- setting up, starting up, operating and shutting down equipment according to workplace procedures
- adjusting equipment operation to meet workplace conditions including yard, weather and terrain
- identifying and addressing non-conformances
- sorting, collecting, treating and disposing of waste according to environmental and workplace procedures
- maintaining records according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in all operating conditions
- selecting, fitting and using appropriate PPE
- basic equipment used and operated in a vineyard environment
- purpose, features, components and operational safety requirements of equipment:
 - all-terrain vehicles
 - tractor-mounted forklift
 - front-end loader

- towed equipment (e.g. gondola)
- three-point linkage equipment (e.g. discs)
- power take-off driven equipment (e.g. slasher)
- equipment with hydraulics (e.g. tipping trailer)
- confirming equipment status and condition, including:
 - fuel
 - water
 - oil (e.g. engine, gearbox and hydraulics)
 - belts
 - air intake
 - tyre pressure
 - metal fatigue or wear and tear
- following equipment shut down procedures
- identify and address non-conformances
- required weather conditions for equipment operation
- types of workplace terrain
- significance and methods of monitoring equipment performance
- procedures and responsibility for reporting problems and maintaining workplace records
- environmental issues and controls
- identifying, rectifying and reporting environmental non-compliance
- cleaning and storing according to workplace procedures
- collecting, treating and recycling or disposing of waste
- routine maintenance procedures for equipment
- recording requirements and procedures
- legislation and quarantine codes of practice related to vineyard operations.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a vineyard workplace or simulated environment that accurately reflects performance in a real workplace setting
- resources, equipment and materials:
 - appropriate PPE
 - vineyard equipment and associated attachments
 - cleaning materials and equipment
- specifications:
 - work procedures, including advice on company practices, safe work practices and environmental requirements
 - legislative and local quarantine regulations and codes of practice
 - system for recording requirements and procedures

- work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2012 Identify and treat nursery plant disorders

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0

Application

This unit of competency describes the skills and knowledge required to recognise common nursery plant disorders, monitor and record the severity of the disorder, and apply a range of treatments.

The unit applies to individuals who are required to follow workplace procedures in completing tasks to identify and treat nursery plant disorders.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify and prepare to treat plant disorders	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select, fit and use appropriate personal protective equipment according to workplace procedures 1.4 Collect and check equipment for serviceability according to workplace procedures 1.5 Identify, record and report details of disorder according to workplace procedures 1.6 Select treatment method according to workplace procedures 1.7 Ensure materials are ready to meet job requirements
2. Treat disorders	2.1 Undertake work in accordance with relevant safety data sheets and workplace environmental guidelines 2.2 Prepare treatments according to workplace procedures 2.3 Prepare equipment according to workplace procedures 2.4 Apply treatments according to workplace procedures 2.5 Identify and address non-conformances
3. Carry out post-treatment operations	3.1 Collect and dispose of waste according to workplace procedures and environmental regulations 3.2 Shut down, clean and store equipment according to workplace procedures 3.3 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents accurately
Oral Communication	<ul style="list-style-type: none"> Converse clearly using industry-specific language
Numeracy	<ul style="list-style-type: none"> Calculate numerical information relating to estimating, measuring and mixing materials for vine treatment
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities Follow clear instructions within defined level of responsibility
Get the work done	<ul style="list-style-type: none"> Respond to routine problems using step-by-step instructions and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2012 Identify and treat nursery plant disorders	FDFWGG2012A Identify and treat nursery plant disorders	<p>Updated to meet Standards for Training Packages</p> <p>Code changed to reflect industry sector</p> <p>Minor changes to Performance Criteria for clarity</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2012 Identify and treat nursery plant disorders

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has identified and treated at least two different plant disorders including:

- complying with health and safety and environmental policies and procedures
- selected and fitted personal protective equipment (PPE)
- reading and interpreting safety data sheets (SDS)
- following other specified health and safety procedures, including safe handling of chemicals
- identifying common plant disorders and implementing corrective actions
- selecting, mixing and applying treatments according to instructions
- taking corrective action in response to non-conformances
- conducting work according to environmental and health and safety requirements
- disposing of waste according to environmental policies and workplace procedures
- recording treatments according to workplace requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in the workplace
- purpose and application of PPE
- safe preparation and handling of chemicals
- correct workplace procedures for equipment used to treat disorders:
 - safe and effective handling of equipment
 - preparing equipment
 - calibrating equipment
 - cleaning equipment

- applying particular settings
- health and safety in the workplace and environmental regulations affecting the use of chemicals for treating disorders:
 - environmental issues and controls
 - using appropriate cleaning techniques
 - identifying, rectifying and reporting environmental non-compliance
- characteristics of common vine disorders:
 - common plant disorders occurring in vine nurseries
 - life cycles of common vine disorders
- different types of control measures and their uses, including integrated pest management
- implementing appropriate control measures
- procedures for preparing treatments:
 - setting up application equipment
 - measuring treatment rates
 - mixing treatments to ensure homogenous mix
 - interpreting treatment label information
 - interpreting SDS information
- procedures and responsibilities for reporting problems and anomalies
- reporting and recording requirements and procedures
- principles of nursery hygiene
- cleaning requirements and procedures for work area and equipment
- waste disposal requirements and procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a plant nursery workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE used for treating vine disorders
 - equipment, services and corresponding information
 - products and materials to be treated
 - equipment cleaning procedures and materials
 - documentation and recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices, quality and environmental requirements
 - legislative and local quarantine regulations and codes of practice
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2016 Carry out hot water treatment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to treat grape vine cuttings with hot water to meet industry standards.

The unit applies to individuals who are required to follow workplace procedures to use hot water treatment for cuttings in a vineyard.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for hot water treatment	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select, fit and use appropriate personal protective equipment relevant to the job requirements 1.4 Ensure cuttings are available and ready for use 1.5 Clean and set up the hot water treatment (HWT) tank and cool down tank to remove foreign matter and contaminants according to industry standard 1.6 Prepare water for hot water treatment, hydration and cool down according to specifications 1.7 Check, maintain and calibrate equipment to meet production specifications
2. Treat cuttings	2.1 Load cuttings into treatment basket and lower into HWT according to workplace procedures 2.2 Monitor temperature and control parameters according to workplace procedures 2.3 Lower cuttings into the cool down tank according to workplace procedures 2.4 Identify and address non-conformances
3. Carry out post-treatment procedures	3.1 Unload treatment basket according to workplace procedures 3.2 Store and label treated cuttings according to workplace procedures 3.3 Check chlorine levels and sanitation requirements for water quality according to workplace procedures 3.4 Collect and dispose of waste according to workplace environmental and waste management procedures 3.5 Record treatment information and complete logs or batch information according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Writing	<ul style="list-style-type: none"> Record hot water treatment information in required format
Numeracy	<ul style="list-style-type: none"> Monitor temperature gauges and interpret numerical information relevant to the hot water treatment process
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2016 Carry out hot water treatment	FDFWGG2020A Carry out hot water treatment	<p>Updated to meet Standards for Training Packages</p> <p>Code changed to reflect industry sector</p> <p>Minor changes to Performance Criteria for clarity</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2016 Carry out hot water treatment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has prepared hot water treatments, treated cuttings and carried out the post-treatment procedures on at least two separate occasions and demonstrated the following:

- identifying health and safety hazards and controls in the workplace
- selecting, fitting and using personal protective equipment according to job requirements
- applying current viticulture industry standards to heat treatment of cuttings
- handling and treating cuttings according to workplace procedures
- monitoring treatment processes and responding according to workplace procedures
- disposing of waste according to instructions and workplace procedures
- maintaining records according to industry and workplace requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose and process of hot water treatment
- how to set up equipment for hot water treatment according to workplace procedures
- how to prepare cuttings for treatment or re-hydration
- how to prepare water for cool down, hot water treatment and hydration:
 - testing and adjusting chlorination levels
 - checking and adjusting temperature levels
- current industry standards, legislation and workplace specifications for hot water treatments
- reasons for using different specifications for hot water treatments
- how to monitor the dipping process to ensure compliance according to workplace procedures including:

- monitoring critical control points for compliance with specifications
- analysing readouts from data logging devices
- maintaining level of agitation in the tanks
- maintaining chlorine level
- recalibrating thermometers
- procedures for storing treated cuttings:
 - separating from untreated cuttings to prevent contamination
 - covering with clean covers
 - placing cuttings in vented plastic bags to prevent dehydration
 - placing cuttings in the cold room
- workplace health and safety hazards and controls when undertaking hot water treatments
- principles of nursery hygiene
- cleaning requirements and procedures for work area and equipment
- environmental issues and controls:
 - identifying, rectifying and reporting environmental non-compliance
 - waste disposal requirements and procedures
- reporting and recording workplace procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a plant nursery workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment used for heat treatment of vines
 - equipment, services and corresponding information
 - products and materials to be treated
 - equipment cleaning procedures and materials
 - system for recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices and environmental requirements
 - legislative and local quarantine regulations and codes of practice and industry standards for heat treatment of grape vines
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2017 Operate nursery cold storage facilities

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to prepare, operate, monitor and maintain nursery cold storage facilities.

The unit applies to individuals who are required to follow workplace procedures in completing tasks associated with nursery cold storage facilities.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare cold room for storage	1.1 Confirm work instructions, relevant regulations and identify potential health and safety hazards and controls according to job requirements 1.2 Select and fit personal protective equipment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Clean and sanitise cold room facilities according to workplace procedures 1.4 Set cold room environment specifications for temperature, humidity and air flow according to workplace procedures
2. Operate and monitor cold room storage	2.1 Move and store stock to minimise loss according to workplace procedures 2.2 Apply storage layout and stock movement to meet cold room plan according to workplace procedures 2.3 Operate manual and mechanical transport according to workplace procedures 2.4 Monitor environmental controls for non-conformances 2.5 Monitor stock for signs of dehydration and fungal infection 2.6 Identify and address non-conformances according to workplace procedures
3. Maintain cold room	3.1 Start up and shut down cold room to meet manufacturers specifications 3.2 Clean, sanitise and secure cold room to maintain required hygiene 3.3 Collect and dispose of waste to maintain work area and meet environmental guidelines 3.4 Record cold room information accurately to ensure data is up to date

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Numeracy	<ul style="list-style-type: none"> Calculate numerical information relating to measuring and adjusting equipment controls
Navigate the world of	<ul style="list-style-type: none"> Follow clear instructions within defined level of responsibility

Skill	Description
work	<ul style="list-style-type: none"> Apply workplace procedures to own role and responsibilities
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2017 Operate nursery cold storage facilities	FDFWGG2021A Operate nursery cold storage facilities	<p>Updated to meet Standards for Training Packages</p> <p>Code changed to reflect industry sector</p> <p>Minor changes to Elements and Performance Criteria for clarity</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2017 Operate nursery cold storage facilities

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively operated, monitored and maintained nursery cold storage facilities at least once and demonstrated the following including:

- following health and safety procedures in the workplace
- applying workplace procedures to cold room operations
- selecting and fitting personal protective equipment (PPE)
- monitoring cold storage and stock conditions according to workplace procedures
- identifying and reporting on anomalies
- shutting down, cleaning, sanitising and securing cold storage facilities
- identifying and addressing non-conformances
- maintaining records according to workplace procedures

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls when working in a cold room, including:
 - PPE
 - health and safety procedures
- accessing workplace information required to operate cold storage facilities
- principles and practices of cold room planning and operation, including:
 - purpose and components of a cold room
 - operating cold room equipment according to workplace procedures
- principles and practices of maintaining cold room performance including:
 - packing and monitoring a cold room including temperature, humidity and air flow

- common non-conformances and the corrective action required
- effect of cold storage on cuttings
- post-storage treatment of cuttings
- applying cold room plan
- moving material in and out of cold room
- using manual and mechanical transfer methods
- monitoring the health of cuttings during storage and checking for signs of:
 - dehydration
 - fungal infection
- starting up and shutting down equipment
- cold room nursery hygiene, including:
 - workplace environmental procedures and regulations
 - cleaning and sanitising requirements
 - waste collection and disposal
 - maintaining work area according to workplace procedures
- types of workplace records.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a plant nursery workplace or an environment that accurately represents workplace cool room conditions
- resources, equipment and materials:
 - PPE used for operating a cold storage facility
 - equipment, services and materials for use in a cold storage facility
 - manual and mechanical cold storage transport
 - system for recording information
- specifications:
 - workplace procedures, including advice on company practices and safe work practices
 - equipment instructions and operation specifications
 - quarantine regulations and relevant codes of practice
 - industry standard procedures for cold storage of grape vines
 - cold room storage plan.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT2018 Support mechanical harvesting operations

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to collect grapes from a mechanical harvester and deliver them to the receival point.

The unit applies to individuals who are required to follow workplace procedures in supporting operations for mechanical harvesting.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Prerequisite unit of competency for this unit is:

- AHCMOM202 Operate tractors

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for harvest support activities	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Select and fit personal protective equipment relevant to the job requirements 1.4 Check, maintain and set equipment to meet workplace procedures
2. Collect grapes from harvester	2.1 Operate machinery and equipment safely with trailer or gondola attached alongside mechanical harvester 2.2 Monitor collection activities to confirm performance is maintained according to workplace procedures 2.3 Recognise and address non-conformances according to workplace procedures 2.4 Maintain equipment in good working order according to workplace procedures
3. Transfer grapes to despatch location	3.1 Add treatments to grapes according to workplace procedures 3.2 Comply with relevant legislation and quarantine codes of practice 3.3 Deliver grapes to receipt point to meet workplace procedures
4. Complete harvest support activities	4.1 Shut down equipment safely and according to operator instructions 4.2 Clean equipment according to workplace procedures 4.3 Collect, sort and dispose of waste generated by the process or cleaning procedures according to workplace practices 4.4 Record workplace information accurately in the appropriate format

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Oral Communication	<ul style="list-style-type: none"> Converse clearly with workplace personnel to ensure safety of self and others when supporting harvesting operations
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures to own roles and responsibilities

Skill	Description
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT2018 Support mechanical harvesting operations	FDFWGG2015A Support mechanical harvesting operations	<p>Updated to meet Standards for Training Packages</p> <p>Code changed to reflect industry sector</p> <p>Changes to Performance Criteria for clarity</p> <p>One prerequisite unit removed</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT2018 Support mechanical harvesting operations

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has demonstrated the following on at least two separate occasions when supporting mechanical harvesting operations including:

- accessing workplace information to identify job requirements
- identifying health and safety hazards and controls in the workplace
- selecting, fitting and using personal protective equipment (PPE)
- checking and confirming readiness of equipment before operation
- starting and operating equipment according to instructions
- monitoring harvesting operation to achieve job requirements
- identify and address non-conformances
- treating and delivering grapes according to task requirements
- shutting down equipment according to workplace procedures
- cleaning and storing equipment according to workplace procedures
- sorting, collecting, treating and disposing of waste according to environmental and workplace procedures
- maintaining appropriate records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- key factors that will affect grape and wine quality, including:
 - temperature
 - oxidation
 - material other than grapes collected
 - speed of processing
 - treatment requirement

- health and safety hazards and controls in the workplace
- how to select, fit and use appropriate PPE
- procedures for identifying and addressing environmental issues
- procedures for carrying out pre-operational checks of equipment
- procedures for selecting, attaching, setting up and operating harvesters and tractor trailers used in the workplace
- procedures for collecting grapes to avoid damage to grapes, equipment, vines, trellises or fences
- procedures for shutting down, cleaning and maintaining equipment
- common problems during grape collection activities and methods for avoiding addressing and reporting them, including:
 - equipment breakages or malfunction
 - vine or trellis damage
 - grape quality and quantity
 - matter other than grapes collected
 - load weight
 - treatment application to fruit loads
 - collection accuracy of grapes
 - tipping accuracy of grapes at receival point
 - congestion or backlog at receival point
- recording requirements and procedures
- legislation and quarantine codes of practice related to vineyard products.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a vineyard workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - appropriate PPE
 - equipment with attached gondola or trailer
 - products and materials to be collected and delivered
 - cleaning procedures, materials and equipment
 - system for recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices and environmental requirements
 - legislative and local quarantine regulations and codes of practice.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT3001 Coordinate vineyard operations

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to coordinate vineyard operations in a range of day-to-day activities in areas such as harvesting, nursery, pruning or canopy management.

The unit applies to individuals who coordinate operations within a vineyard. They work under broad direction and exercise autonomy and judgement where required.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to coordinate vineyard activities	1.1 Interpret and confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Select and fit personal protective equipment according to the job requirements 1.4 Identify and clarify activity goals and job requirements with supervisor 1.5 Ensure appropriate personnel required are available 1.6 Ensure materials and equipment are available and ready
2. Coordinate vineyard activities	2.1 Confirm work targets, timelines and processes to achieve activity goals and job requirements 2.2 Allocate individual work tasks and roles to ensure activity goals and job requirements are met 2.3 Instruct workers and contractors according to workplace procedures 2.4 Monitor activities to ensure quality, timelines and job requirements are maintained according to workplace procedures 2.5 Identify and address barriers to achieving targets and job requirements
3. Complete coordination of vineyard activities	3.1 Monitor activities to ensure compliance with relevant workplace procedures on completion, shutdown and waste disposal 3.2 Debrief personnel according to workplace procedures 3.3 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Writing	<ul style="list-style-type: none"> Record workplace information in required format
Oral Communication	<ul style="list-style-type: none"> Converse clearly with workplace personnel to confirm job requirements, monitor activities and provide feedback on performance of daily tasks

Skill	Description
Numeracy	<ul style="list-style-type: none"> Timetable and schedule vineyard work tasks according to required timeframes
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures and legislative requirements relevant to own role
Interact with others	<ul style="list-style-type: none"> Use required communication mode to report operational information to relevant personnel
Get the work done	<ul style="list-style-type: none"> Identify and solve problems by referring to workplace procedures Plan and organise tasks to achieve job requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT3001 Coordinate vineyard operations	FDFWGG3002A Coordinate canopy management activities	Redesigned unit that includes content from the previous unit	No equivalent unit
FBPVIT3001 Coordinate vineyard operations	FDFWGG3003A Coordinate crop harvesting activities	Redesigned unit that includes content from the previous unit	No equivalent unit
FBPVIT3001 Coordinate vineyard operations	FDFWGG3004A Coordinate nursery activities	Redesigned unit that includes content from the previous unit	No equivalent unit
FBPVIT3001 Coordinate vineyard operations	FDFWGG3006A Coordinate hand pruning activities	Redesigned unit that includes content from the previous unit	No equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT3001 Coordinate vineyard operations

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively coordinated operations in a vineyard involving day-to-day activities in areas of harvesting, nursery, pruning or canopy management at least once, including:

- complying with health and safety requirements in the workplace
- selecting and fitting personal protective equipment (PPE)
- determining activities required of the vineyard processes and individuals in order to meet job targets
- allocating activities and monitoring their implementation
- providing team leadership and instruction for vineyard personnel
- identifying and addressing non-conformances
- completing workplace records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace planning processes:
 - planning and scheduling vineyard activities
- personnel requirements:
 - equipment and materials required
 - location
 - transport
 - timing
 - environmental conditions
 - other vineyard activities

- quality and quantity requirements
- vineyard health and safety hazards and controls in the workplace
- vineyard environmental issues and controls
- team leadership communication principles and strategies
- procedures for monitoring and reporting on individual and team performance
- vineyard activities to be monitored:
 - compliance with workplace, environmental and quality procedures
 - individual and team performance
 - achievement of targets, timelines and performance requirements
 - team members' learning needs
 - instructing individuals and groups
 - providing feedback to individuals and groups
 - resolving conflicts
- how to recognise, correct and report non-conformances
- how to maintain workplace records.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a vineyard workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - vineyard equipment, services and corresponding information
 - products and materials required for vineyard work
 - system for recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices, people management, quality and environmental requirements
 - work instructions and schedules
- relationships (internal and/or external):
 - small work groups or teams to coordinate.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT3002 Maintain field nursery

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to plant, maintain and process field nursery vines.

The unit applies to individuals who carry out workplace procedures in completing tasks associated with maintaining a field nursery.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for field nursery planting	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select, fit and use personal protective equipment according to job requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Prepare field nursery bed for planting according to workplace procedures 1.5 Prepare equipment and materials according to workplace procedures
2. Perform field nursery activities	2.1 Plant field nursery according to workplace procedures 2.2 Apply vine protection methods according to workplace procedures 2.3 Carry out field nursery activities according to workplace procedures 2.4 Monitor young vine growth and health according to workplace procedures 2.5 Identify and address non-conformances
3. Process field nursery rootlings for removal	3.1 Undercut and lift vine rootlings according to workplace procedures 3.2 Prepare rootlings for transport according to workplace procedures 3.3 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Writing	<ul style="list-style-type: none"> Produce workplace documents in required format
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures and legislative responsibilities relevant to own role
Interact with others	<ul style="list-style-type: none"> Use required communication mode to report operational information to relevant personnel
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures Plan and organise tasks to achieve job requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT3002 Maintain field nursery	FDFWGG3005A Perform field nursery activities	Updated to meet Standards for Training Packages Code and title changed to reflect industry sector Minor changes to Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT3002 Maintain field nursery

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively undertaken activities to maintain a field nursery at least once including planting, maintaining and processing field nursery vines and:

- following health and safety in the workplace procedures
- selecting and fitting personal protective equipment (PPE)
- planting in field nursery according to workplace procedures
- following vine protection procedures
- preparing for, implementing and monitoring nursery activities
- preparing vine rootlings for transport
- monitoring the health of rootlings
- Identify and addressing non-conformances.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and controls in the workplace
- PPE
- preparation of field nursery bed for planting:
 - treatment of weeds
 - soil cultivation and nutrition
 - planning vine planting
 - application of weed matting
 - herbicide and fertiliser treatments
 - positioning irrigation pipes and points

- methods of planting in field nursery
- selection and application of vine protection methods, including:
 - weather conditions
 - vineyard pests
 - orientation of vineyard
 - irrigation or fertilisation schedule
- maintenance of health of growing vines
- common causes and signs of growth disorders and corrective action required:
 - soil moisture
 - signs of disease and pests and nutrient deficiency
 - water stress
 - growth rate
- procedures for lifting vine rootlings from the nursery bed:
 - ensuring minimal plant damage
 - roots undercut
- procedures for transporting rootlings:
 - trimming
 - counting and bundling
 - labelling, grading and packing
- procedures for taking corrective action in response to out-of-specification growth or appearance
- procedures and responsibility for reporting problems
- environmental issues and controls
- reporting and recording requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a field plant nursery workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - field nursery equipment
 - products and materials required for field nursery work
 - a system for recording information
- specifications:
 - work procedures, including advice on company practices, safe work practices and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT3003 Operate spreading and seeding equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to attach, set up and detach spreading and seeding equipment that requires calibration.

The unit applies to individuals who complete spreading and seeding activities such as planting cover crops and ensuring deep incorporation of ameliorants and fertilisers.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for operation	1.1 Interpret and confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select and fit personal protective equipment according to job

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.4 Prepare and ensure seeding or spreading materials are available to meet job requirements 1.5 Select, maintain, set and calibrate equipment to meet workplace procedures
2. Operate equipment	2.1 Start up and operate equipment safely according to workplace procedures 2.2 Apply materials according to job requirements 2.3 Monitor equipment performance 2.4 Recognise and address non-conformances with equipment operation in accordance with workplace procedures
3. Complete operation	3.1 Shut down equipment according to workplace procedures 3.2 Clean and store equipment according to workplace procedures 3.3 Collect, treat, and dispose of waste generated by the process according to workplace procedures 3.4 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Oral Communication	<ul style="list-style-type: none"> Converse clearly to confirm job requirements
Writing	<ul style="list-style-type: none"> Record workplace information using industry-based vocabulary, grammar and conventions
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures and legislative responsibilities relevant to own role
Get the work done	<ul style="list-style-type: none"> Plan and organise tasks required to achieve job requirements Identify and solve problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT3003 Operate spreading and seeding equipment	FDFWGG3013A Operate spreading and seeding equipment	Updated to meet Standards for Training Packages Code changed to reflect industry sector Minor changes to Elements and Performance Criteria for clarity Prerequisites removed	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT3003 Operate spreading and seeding equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively set up, operated and shut down seed spreading equipment at least once and demonstrated the following, including:

- recognising health and safety hazards and applying controls in the workplace
- selecting and using personal protective equipment (PPE)
- ensuring availability of specified materials and preparing according to workplace requirements
- selecting, attaching, setting up and calibrating equipment to meet job requirements
- starting, operating and shutting down equipment in accordance with workplace procedures
- monitoring spreading or seeding operations to achieve specified result
- shutting down the equipment according to workplace procedures
- taking corrective action in response to non-conformance results
- disposing of waste materials according to workplace and environmental policies
- recording information accurately.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the purpose and application of spreading and seeding operations within the vineyard growing system, including:
 - soil ameliorants
 - inter-row cropping species and varieties
 - inter-row cropping practices and techniques
 - inorganic and organic fertilising materials
 - process specifications, procedures and operating parameters
- application parameters for seed or spreading materials:

- correct variety or type of seed and fertiliser
- correct soil ameliorant and treatment
- application rate
- volume
- application depth
- density
- coverage
- required weather conditions for activity
- soil characteristics as they apply to spreading and seeding operations
- purpose and operation of seeding and spreading equipment and instrumentation components:
 - common causes of non-conformance and corrective action required
 - significance and methods of monitoring equipment performance
 - storage procedures for equipment and materials
 - routine maintenance procedures for equipment
 - start up and shutdown sequence
- equipment status and condition:
 - belts and chains
 - lubricants
 - hydraulics
 - air intake
 - tyre pressure and wear
 - wear and tear
- how to select, attach, set up and calibrate equipment to meet job requirements
- how to select, prepare and load materials according to job requirements
- how to start up, operate and monitor equipment
- how to conduct routine maintenance of equipment according to workplace procedures
- local environment and operating conditions
- health and safety hazards and controls in the workplace
- PPE
- procedures and responsibility for reporting non-conformances
- procedures for collecting, sorting, treating, disposing of and recycling waste to meet environmental compliance
- equipment cleaning requirements and procedures
- storage requirements associated with temporary or seasonal breaks in activity
- procedures for maintaining workplace records.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:

- an agricultural or horticultural workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - spreading and seeding equipment, services and corresponding information
 - spreading and seeding products and materials
 - cleaning procedures, materials and equipment
 - documentation and recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices, equipment calibration and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT3004 Monitor and maintain nursery plants

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to monitor and maintain containerised nursery plants.

The unit applies to individuals who carry out workplace procedures in completing tasks associated with maintaining nursery plants.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Prerequisite unit of competency for this unit is:

- FBPVIT2012 Identify and treat nursery plants and disorders

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Monitor environmental parameters	1.1 Confirm job requirements 1.2 Identify potential health and safety hazards and controls according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Select and fit personal protective equipment according to the job requirements 1.4 Monitor environmental parameters against the production plan 1.5 Alter environmental parameters to meet the needs of the plants 1.6 Maintain nursery hygiene to comply with industry and workplace procedures
2. Determine daily water requirements	2.1 Identify plant water requirements to maintain required health and growth according to workplace procedures 2.2 Irrigate plants according to workplace procedures 2.3 Monitor water requirements according to workplace procedures 2.4 Maintain nursery irrigation system to meet plant production plan
3. Implement treatments to promote plant growth	3.1 Test potting media according to workplace procedures 3.2 Monitor overall health of plants according to workplace procedures 3.3 Implement plant treatments according to production plans 3.4 Identify and address non-conformances according to workplace procedures
4. Monitor the dispatch of stock	4.1 Confirm availability of stock and timing of dispatch with customers according to workplace procedures 4.2 Prepare plants for dispatch in line with customer requirements 4.3 Check stock to ensure it meets quality specifications 4.4 Check orders against stock being dispatched to ensure compliance 4.5 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
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Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Numeracy	<ul style="list-style-type: none"> Calculate numerical information relating to measuring quantities, adjusting equipment controls and stock operations
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures and legislative responsibilities relevant to own role
Interact with others	<ul style="list-style-type: none"> Use required communication mode to report operational information to relevant personnel
Get the work done	<ul style="list-style-type: none"> Respond to routine problems by referring to workplace procedures Plan and organise tasks to achieve job requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT3004 Monitor and maintain nursery plants	FDFWGG3009A Monitor and maintain nursery plants	<p>Updated to meet Standards for Training Packages</p> <p>Code changed to reflect industry sector</p> <p>Minor changes to Performance Criteria for clarity</p> <p>One prerequisite unit removed</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT3004 Monitor and maintain nursery plants

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively monitored and maintained three different containerised nursery plants and demonstrated the following:

- identifying and following health and safety in the workplace procedures
- selecting and using personal protective equipment (PPE)
- identifying environmental factors and their effect on plant growth and health
- monitoring and controlling irrigation and treatments to meet production outcomes
- identifying and addressing non-conformances
- confirming available stock levels to meet customer requirements
- preparing stock for dispatch
- dispatching nursery plant stock to meet customer requirements
- completing documentation to workplace requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- basic vine physiology, as it applies to:
 - transpiration
 - water intake
 - nutrient uptake
 - photosynthesis
 - respiration
 - translocation
- parts of the root, trunk, shoot and fruit systems of the grapevine, their role in how the vine works and their contribution to fruit quality:

- buds, nodes and tendrils
- cambium, epidermis, phloem and xylem
- leaf blade, bract and petiole
- bunch, berries and flowers
- key grape varieties and their distinguishing features:
 - berry and bunch characteristics
 - frost and disease resistance
 - flavour and style
- annual grapevine growth stages:
 - budburst
 - flowering
 - on set of ripening
 - maturity
- irrigation systems and methods including:
 - methods of calculating daily water needs
 - methods for monitoring water use
 - relationship between water needs of nursery plants and environmental parameters
- maintenance of irrigation systems:
 - fixing blockages
 - servicing irrigation system components
 - identifying and reporting faults in the irrigation system
 - fixing leaking heads and hoses
 - monitoring water requirements
 - using soil moisture devices
- checking plants for physical signs of water stress or waterlogging
- types of potting media, their characteristics and effect on plant growth
- tests to determine quality of potting media:
 - pH, drainage, aeration
 - salinity
 - nitrate levels
 - water repellence
- maintenance of work area to meet workplace hygiene standards:
 - removing weeds
 - removing dead or diseased plant materials
 - washing work area on transfer of plants
 - disinfecting tools, equipment and work areas
 - using foot baths on entry to different work areas
- procedures for applying treatments to vines:
 - fungicides
 - fertilisers

- insecticides
- hormones
- pruning
- hardening off
- preparing, mixing and using chemicals
- quality parameters for nursery plants
- treatments required by plants at different growth stages
- health and safety hazards and controls in the workplace:
 - selecting, fitting and using appropriate PPE
 - identifying potential and existing hazards in the work area and implementing safe work procedures to minimise hazards
- procedures for monitoring and preparing stock for dispatch:
 - packing, dispatching and handling techniques of nursery plants
 - labelling containers
 - checking orders against stock prepared
 - hydrating stock
- procedures and responsibility for reporting problems and anomalies
- procedures for liaising with customers
- procedures for maintaining workplace records.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a plant nursery or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - equipment, services and corresponding information
 - nursery stock
 - hygiene procedures, materials and equipment
 - system for recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices, plant quality and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT3005 Install and maintain vine trellis

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to install and maintain vine trellising.

The unit applies to individuals who are required to follow workplace procedures in completing tasks associated with installing and maintaining a vine trellis and take responsibility for their own work using discretion and judgement in the selection and use of available resources.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for trellising activities	1.1 Confirm work instructions and identify potential health and safety hazards and controls according to workplace procedures 1.2 Select, fit and use personal protective equipment according to job

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements 1.3 Check existing trellises for signs of disrepair according to workplace procedures 1.4 Check, maintain and set equipment according to workplace procedures 1.5 Select materials for trellis installation or repair 1.6 Lay out posts and supports according to workplace procedures 1.7 Run out wire according to workplace procedures
2. Erect and maintain trellises	2.1 Operate trellis equipment according to workplace procedures 2.2 Erect trellis ends and posts and strain assemblies 2.3 Attach and tension foliage and trellis wires according to workplace procedures 2.4 Identify and address non-conformances 2.5 Carry out trellis maintenance and repair activities according to workplace procedures
3. Complete trellising activities	3.1 Shut down equipment according to workplace procedures 3.2 Clean and store equipment and materials according to workplace procedures 3.3 Collect and dispose of waste according to workplace and environmental procedures 3.4 Undertake work in accordance with workplace environmental guidelines 3.5 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents

Skill	Description
Writing	<ul style="list-style-type: none"> Complete workplace documents in required format
Oral Communication	<ul style="list-style-type: none"> Communicate clearly to confirm vine trellis installation requirements
Numeracy	<ul style="list-style-type: none"> Calculate numerical information relating to estimating and measuring materials
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures and legislative responsibilities to own role
Interact with others	<ul style="list-style-type: none"> Use required communication mode to report operational information to relevant personnel
Get the work done	<ul style="list-style-type: none"> Plan, sequence and implement tasks according to set routines and procedures Problem solve issues as they arise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT3005 Install and maintain vine trellis	FDFWGG2016A Install and maintain vine trellis	<p>Updated to meet Standards for Training Packages</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Code changed to reflect AQF level and industry sector</p>	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT3005 Install and maintain vine trellis

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively installed and maintained a vine trellis at least twice and demonstrated the following:

- identifying health and safety hazards and controls in the workplace
- using and fitting personal protective equipment (PPE)
- carrying out trellis repairs according to workplace procedures
- laying out posts and supports according to workplace procedures
- cutting, securing, positioning and tensioning wires according to workplace procedures
- storing unused materials according to workplace procedures
- collecting and disposing of waste according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose, features and components of the trellis system:
 - trellis installation process
 - maintenance requirements of vineyard trellising and how to repair them
 - addressing non-conformances in trellis installation
 - selecting appropriate materials, including type and quantity
- health and safety hazards and controls in the workplace:
 - safe handling of materials and equipment
 - purpose and application of PPE
- how to repair a trellis, including:
 - positioning and depth of posts and strainers
 - positioning and number of wires

- tightness and grade of wire
- practices to lay out posts and supports, including:
 - spacing
 - type
 - numbers
 - positioning
- practices to run out wire including:
 - positioning
 - cutting correct length
 - erecting trellis ends and assemblies
 - securing of ends
- methods of attaching foliage and trellis wires including:
 - spacing
 - alignment
 - height
 - tension
 - fixing method
 - joining systems
- operation of trellising equipment:
 - checking equipment
 - using hand tools
- environmental issues, controls and reporting requirements
- cleaning and storage requirements and procedures for equipment and materials.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a grape growing workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - trellising equipment, services and corresponding information
 - trellising materials
 - cleaning and storing procedures, materials and equipment
 - documentation and recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT3006 Field graft vines

Modification History

Release 2	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to select appropriate vine material and graft vines in the field.

The unit applies to individuals are required to follow workplace procedures in completing tasks associated with a grape growing workplace and take responsibility for their own work using discretion and judgement in the selection and use of available resources.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to field graft vines	1.1 Confirm work instructions and identify potential health and safety hazards and controls according to job requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Select, fit and use personal protective equipment 1.3 Check and set equipment to meet job requirements 1.4 Ensure materials are available to meet grafting requirements according to workplace procedures 1.5 Select and prepare vine material for grafting according to workplace procedures
2. Graft vines in the field	2.1 Graft vines in the field according to workplace procedures 2.2 Treat vine graft unions according to workplace procedures 2.3 Treat vines post grafting and pack according to workplace procedures 2.4 Monitor grafting process and equipment to ensure results are maintained according to workplace procedures 2.5 Identify and address non-conformances
3. Complete field grafting activities	3.1 Clean and store equipment according to workplace procedures 3.2 Dispose of or store unused grafting material according to workplace procedures 3.3 Collect, treat and dispose waste according to workplace environmental procedures 3.4 Complete documentation according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Comprehend information from a variety of workplace documents
Writing	<ul style="list-style-type: none"> Complete workplace documents in required format
Oral Communication	<ul style="list-style-type: none"> Communicate clearly to confirm grafting requirements
Navigate the world of	<ul style="list-style-type: none"> Apply workplace procedures and legislative responsibilities to

Skill	Description
work	own role
Interact with others	<ul style="list-style-type: none"> Use required communication mode to report operational information to relevant personnel
Get the work done	<ul style="list-style-type: none"> Plan, sequence and implement tasks according to set routines and procedures Problem solve issues as they arise

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT3006 Field graft vines Release 2	FBPVIT3006 Field graft vines Release 1	Minor changes to Knowledge Evidence	Equivalent

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT3006 Field graft vines

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively grafted vines in the field on at least two separate occasions including:

- selecting and preparing vine material for grafting, including disbudding
- using and fitting personal protective equipment (PPE)
- carrying out grafting of vines in the field according to workplace procedures
- conducting post-grafting treatment and packing of vines
- monitoring grafted vines, identifying and reporting non-compliances
- disposing of waste according to environmental workplace procedures
- recording and reporting results of grafting according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose of grafting
- various methods of budding and grafting
- criteria for successful grafting
- criteria for selecting parent vines for scion material:
 - variety and clone
 - matching cambium
 - matching bevels and sizes
 - viable buds
 - achievement of tight unions
- preparing vine material for grafting:
 - soaking buds
 - working appropriate incisions

- hot water treatment of cuttings
- virus tests
- compatibility tests
- hydration of cuttings
- cutting to size
- grafting vines in the field:
 - bud location to graft
 - cohesion of graft union
- vine treatments after grafting:
 - securing with tape
 - painting
- waxing
- storing unused grafting material
- correct procedure and optimum conditions for the storage and handling of vine material until required for grafting
- advantages of using clonal and registered vine improvement material
- importance of selection and use of rootstock
- stages of the grafting procedure and their purpose
- procedures for monitoring the process and equipment operation to identify out-of-specification results or non-compliance:
 - percentage take
 - weather conditions
 - pests and diseases
 - common problems and corrective action required
- purpose, components and operation of grafting equipment:
 - routine maintenance procedures for equipment
- methods of callusing vine cuttings and the criteria for best callus development
- procedures and responsibilities for reporting problems
- work health and safety (WHS) hazards and controls:
 - selecting, fitting and using appropriate personal protective clothing and equipment
- environmental issues and controls
- cleaning requirements for work area and equipment
- recording requirements and procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a grape growing workplace or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - PPE
 - field grafting equipment and services
 - grape vines
 - cleaning procedures, materials and equipment
 - system for recording information
- specifications:
 - workplace procedures, including advice on company practices, safe work practices, and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT3007 Operate specialised canopy management equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to attach, set up, operate and detach canopy management equipment.

The unit applies to vineyard workers who carry out the operation of specialised equipment used in grape growing and take responsibility for their own work using discretion and judgement in the selection and use of available resources.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Prerequisite unit of competency for this unit is:

- AHCMOM202 Operate tractors

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for canopy management activities	1.1 Interpret and confirm job requirements 1.2 Confirm environmental guidelines and identify potential health

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>and safety hazards and controls according to workplace procedures</p> <p>1.3 Select and fit personal protective equipment according to job requirements</p> <p>1.4 Identify and plan canopy management requirements</p> <p>1.5 Select and ensure canopy management equipment is available and suitable according to workplace procedures</p> <p>1.6 Set, maintain and attach equipment to meet production requirements according to workplace procedures</p>
2. Operate canopy management equipment	<p>2.1 Start up equipment safely according to workplace procedures</p> <p>2.2 Apply canopy management techniques according to vine vigour, capacity and local conditions</p> <p>2.3 Monitor equipment performance to confirm canopy management is maintained within job requirements</p> <p>2.4 Identify and address non-conformances</p>
3. Shut down canopy management equipment	<p>3.1 Shut down, detach and clean canopy management equipment according to workplace procedures</p> <p>3.2 Clear, tidy and store materials and equipment from site on completion of canopy management activities according to workplace procedures</p> <p>3.3 Collect and dispose of waste generated by canopy management activities according to environmental and workplace practices</p> <p>3.4 Record workplace information according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information from a variety of workplace documents
Writing	<ul style="list-style-type: none"> Record workplace information using industry-based vocabulary, grammar and conventions

Skill	Description
Oral Communication	<ul style="list-style-type: none"> Converse clearly to confirm job requirements
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures and legislative responsibilities relevant to own role
Get the work done	<ul style="list-style-type: none"> Identify and solve problems by referring to workplace procedures Plan and organise tasks to achieve job requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT3007 Operate specialised canopy management equipment	FDFWGG2009A Operate specialised canopy management equipment	<p>Updated to meet Standards for Training Packages</p> <p>Minor changes to Performance Criteria for clarity</p> <p>Code changed to reflect industry sector and AQF level</p>	No equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT3007 Operate specialised canopy management equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has safely and effectively set up, operated and shut down specialised canopy management equipment on at least one occasion including:

- recognising health and safety hazards in the workplace and applying controls
- selecting and using personal protective equipment (PPE)
- attaching and setting up equipment to meet job requirements
- starting, operating, and shutting down equipment safely and according to workplace procedures
- taking corrective action according to non-conformances
- disposing of waste according to workplace procedures
- recording information according to workplace procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- key factors affecting the canopy management technique, including:
 - climate, forecast and current weather conditions
 - vineyard aspect and terrain
 - grape variety and vigour
 - grape quality and characteristics required
 - trellis design
 - harvesting techniques
 - disease risk and occurrence
 - stage of maturity and development
- canopy management equipment, operating parameters and procedures

- factors influencing vine vigour:
 - grape variety
 - trellis design
 - vine spacing
 - fertilisers
 - irrigation
 - rootstock
- features and benefits of a range of canopy management styles and techniques and their respective effect on grape quality, cropping yield and wine production requirements, including techniques to manage:
 - light penetration and shading
 - air circulation and disease reduction
 - annual growth stages of vine development
 - crop quality and quantity
- significance and method of monitoring canopy management activities
- purpose and basic components of canopy management equipment
- operational procedures for equipment:
 - attaching equipment to tractor
 - setting up equipment to meet requirements
 - confirming equipment status and condition
 - operating equipment to meet requirements
 - starting and shutting down equipment
 - recognising equipment performance problems and rectifying and reporting
 - cleaning and storing equipment
 - detaching equipment from tractor
 - using appropriate cleaning techniques
 - carrying out routine maintenance of equipment
- monitoring canopy management activities:
 - width of canopy
 - speed of tractor and power take-off rpm
 - density of foliage
 - air circulation
 - light penetration or shade
 - bud numbers, spur length
 - vine damage
 - rate of progress
- health and safety hazards and controls in the workplace
- selecting, fitting and using PPE
- environmental issues and controls
- basic vine canopy problems or anomalies

- taking corrective action in response to non-conformances
- system for reporting problems
- cleaning and storage requirements and procedures for equipment
- maintaining workplace records.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a vineyard or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - canopy management equipment, services and corresponding information
 - vines requiring canopy management
 - cleaning procedures, materials and equipment
 - documentation and recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices, canopy management and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT3008 Operate a mechanical harvester

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to set up and operate a mechanical harvester to meet harvesting requirements.

The unit applies to individuals who are required to follow workplace procedures in completing tasks associated with the operation of a mechanical harvester.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for mechanical harvesting	1.1 Confirm job requirements 1.2 Identify potential health and safety hazards and environmental controls according to workplace procedures 1.3 Select, fit and use personal protective equipment according to job requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Ensure materials and equipment are ready for use according to workplace procedures 1.5 Set up and maintain equipment according to workplace procedures
2. Operate mechanical harvester	2.1 Start up and operate equipment according to workplace procedures 2.2 Monitor equipment performance 2.3 Adjust equipment operation according to workplace procedures 2.4 Identify and address non-conformances
3. Complete mechanical harvesting operations	3.1 Shut equipment down according to workplace procedures 3.2 Clean and store equipment according to workplace procedures 3.3 Collect, treat, dispose of waste according to environmental and workplace procedures 3.4 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information from a variety of workplace documents
Oral Communication	<ul style="list-style-type: none"> Converse clearly to confirm job requirements
Writing	<ul style="list-style-type: none"> Record workplace information using industry-based vocabulary, grammar and conventions
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures and legislative responsibilities relevant to own role
Get the work done	<ul style="list-style-type: none"> Plan and organise tasks to achieve job requirements Identify and solve problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT3008 Operate a mechanical harvester	FDFWGG3008A Operate a mechanical harvester	Updated to meet Standards for Training Packages Code changed to reflect industry sector Minor changes to Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT3008 Operate a mechanical harvester

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has set up and safely operated a mechanical harvester to meet harvesting requirements on at least one occasion including:

- following health and safety in the workplace procedures
- selecting, fitting and using personal protective equipment (PPE)
- preparing, attaching and setting up equipment according to workplace procedures
- starting, operating and shutting down equipment according to workplace procedures
- adjusting operation to suit weather and terrain conditions
- identifying and addressing non-conformances
- managing the disposal of waste according to environmental workplace procedures
- recording information according to procedures.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and environmental controls in the workplace
- PPE
- key grape varieties and their distinguishing features for harvesting:
 - berry and bunch characteristics
 - frost and disease resistance
 - flavour and style as it applies to harvest
 - factors that affect grape ripening
 - effect of fruit quality on wine
- purpose of mechanical harvester components and operation including:
 - crop level

- grape variety
- vine age
- row height, width and trellis design
- slope, angle of row
- visibility
- monitoring mechanical harvester operation:
 - vine damage
 - grape quality and maturity
 - harvesting effectiveness (amount of fruit left in fruiting zone)
 - matter other than grape (MOG) collected
- maintenance procedures for equipment
- procedures and responsibility for non-conformances
- cleaning and storage procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a wine agricultural or horticultural workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - equipment, services and corresponding information
 - cleaning procedures, materials and equipment
 - a system for recording information
- specifications:
 - work procedures, including advice on equipment operations, company practices, safe work practices and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FBPVIT3011 Perform shed nursery activities

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to treat and prepare vine cuttings and freshly dug rootlings for sale or planting in the vineyard.

The unit applies to individuals who carry out workplace procedures in completing tasks associated with shed nursery activities.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare cuttings for callusing	1.1 Confirm job requirements 1.2 Confirm environmental guidelines and identify potential health and safety hazards and controls according to workplace procedures 1.3 Select, fit and use personal protective equipment according to job requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Count, bundle and label cuttings according to workplace procedures 1.5 Treat and store cuttings according to workplace procedures
2. Prepare and maintain callusing environment	2.1 Prepare sand bed or callusing room according to workplace procedures 2.2 Place cuttings into callusing environment according to workplace procedures 2.3 Maintain callusing environment according to workplace procedures
3. Prepare rootlings for customer or planting	3.1 Trim, grade, pack and store rootlings according to according to workplace procedures 3.2 Collect and dispose of waste according to environmental and workplace procedures 3.3 Identify and address non-conformances 3.4 Record workplace information according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information from a variety of workplace documents
Numeracy	<ul style="list-style-type: none"> Calculate numerical information relating to specifications, treatments and schedules
Navigate the world of work	<ul style="list-style-type: none"> Apply workplace procedures and legislative responsibilities relevant to own role
Get the work done	<ul style="list-style-type: none"> Plan and organise work to achieve job requirements Respond to routine problems by referring to workplace procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPVIT3011 Perform shed nursery activities	FDFWGG3011A Perform shed nursery activities	Updated to meet Standards for Training Packages Code changed to reflect industry sector Minor changes to Performance Criteria for clarity	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT3011 Perform shed nursery activities

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has effectively treated and prepared vine cuttings and freshly dug rootlings on at least two separate occasions including:

- identifying and using personal protective equipment (PPE)
- following health and safety and environmental procedures in the workplace
- conducting cuttings treatment and callusing activities according to workplace procedures
- preparing rootlings for packing and storage
- maintaining nursery environment to optimise plant health
- identifying and addressing non-conformances
- completing documentation.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- health and safety hazards and environmental controls including selecting, fitting and using PPE
- procedures and responsibilities for reporting problems
- common features of healthy vine cuttings or rootlings:
 - thickness of original cane
 - no evidence of pests and diseases
 - number, strength and distribution of new roots
 - number, maturity and distribution of shoots
 - visually complete and robust graft union
- common features of unhealthy vine cuttings or rootlings:
 - galls on stem and roots

- no shoots or roots
- damaged or destroyed buds
- excessive disease staining or spots on canes
- immature wood
- shoots on incorrect nodes
- faulty or broken graft unions
- too few or unevenly distributed root development
- pre-callusing treatment requirements:
 - purpose and benefit of treatments
 - fungicide treatment
 - re-hydration
 - scoring
 - root promoter treatment
 - cutting just below basal bud
 - assimilation after cool storage
- storage requirements of cuttings prior to callusing:
 - preparation requirements of callusing environment
 - callusing options
 - optimum callusing environment and its effect on the vine cutting
 - common problems that occur during callusing and how they should be resolved
- preparation requirements for rootlings and procedures for sales or transfer to vineyard
- package or storage requirements and procedures for rootlings ready for sale or transfer:
 - handling cuttings or rootlings to minimise damage
 - counting, bundling and labelling cuttings as required
- factors that influence how a cutting should be graded:
 - rootling preparation
 - packing preparation
 - packaging and storage requirements
- how to prepare sand bed or callusing room including:
 - packing sand or vermiculite
 - lining boxes
 - ensuring heaters and ventilators are working correctly to required temperature
- how to plant or place cuttings in callusing environment as required:
 - feeling into ground or sand
 - packing into boxes with vermiculite
 - watering in
 - correct number of cuttings per box
 - spacing (not too tight)
 - correct way up (basal end at bottom)
 - arranging according to variety, clone and source

- labelling and mapping of beds
- adding hormone mixes
- how to monitor callusing environment to maintain optimum conditions:
 - temperature
 - relative humidity
 - moisture levels of growing medium
 - weed and pest prevention
- how to pack rootlings to comply with customer requirements and standards:
 - maintenance of rootling health
 - minimisation of vine damage
 - mode of transport
 - destination time
 - storage time and method
 - prevention of dehydration
- how to trim rootlings (top growth and roots) ready for planting
- how to grade rootlings to comply with customer requirements
- waste disposal requirements and procedures
- hygiene requirements and procedures for work area and equipment, and considerations handling different batches and varieties
- environmental issues and controls:
 - identifying, rectifying and reporting environmental non-compliance
 - collecting, sorting, grading, treating and disposing of waste as required
- reporting and recording requirements
- how to prepare and mix chemicals safely
- how to recognise problems and anomalies with vines, equipment and materials.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a shed nursery workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - shed nursery equipment, services and corresponding information
 - cuttings, rootlings, materials and resources required for shed nursery work
 - documentation and recording requirements and procedures
- specifications:
 - work procedures, including advice on company practices, safe work practices, workplace hygiene, plant quality and environmental requirements
 - work instructions and schedules.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guides are found in VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

FDFFS1001A Follow work procedures to maintain food safety

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to maintain food safety when carrying out work tasks. Basic food safety practices include personal hygiene and conduct, food handling, housekeeping and waste disposal related to work tasks and responsibilities where work involves routine manual processes and/or operation of simple automated equipment.
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Application of the Unit

Application of the unit	This unit is based on and equivalent to the guideline food safety unit GFSBFSPA Follow basic food safety practices. Note that this unit does not apply to the pharmaceutical industry. Refer to FDFPH1001A Follow work procedures to maintain Good Manufacturing Practice.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Handle food safely	<p>1.1. Food handling requirements are identified</p> <p>1.2. Food handling is carried out according to the food safety program</p> <p>1.3. The workplace is maintained in a clean and tidy order to meet workplace standards</p> <p>1.4. Work is conducted in accordance with workplace environmental guidelines</p>
2. Identify, control and report food safety hazards	<p>2.1. Work area, materials, equipment and product are routinely monitored to ensure compliance with food safety requirements</p> <p>2.2. Processes, practices or conditions which are not consistent with the food safety program are identified and corrective action is taken within the level of responsibility</p>
3. Comply with personal hygiene standards	<p>3.1. Personal hygiene meets the requirements of the food safety program</p> <p>3.2. Health conditions and/or illness are reported as required by the food safety program</p> <p>3.3. Clothing and footwear worn is appropriate for the food handling task and meets the requirements of the food safety program</p> <p>3.4. Movement around the workplace complies with the food safety program</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Ability to:

- locate and follow workplace information relating to food safety responsibilities
- monitor own work and implement any controls as required by the food safety program, such as visual inspection and checks
- follow workplace procedures to maintain food safety as required by the food safety program relating to own work
- identify and correct or report situations that do not meet the requirements of the food safety program and/or could result in unsafe food
- handle, clean and store equipment, utensils, packaging materials and similar items according to the requirements of the food safety program as required by work role
- maintain personal hygiene consistent with the food safety program
- take necessary precautions when moving around the workplace and/or from one task to another to maintain food safety
- wear and maintain appropriate clothing/footwear as required by work tasks and consistent with the requirements of the food safety program
- report health conditions and illness as appropriate according to the food safety program
- handle and/or dispose of out-of-specification or contaminated materials, ingredients and product, waste and recyclable material according to food safety program as required by work responsibilities
- maintain the work area in a clean and tidy state
- identify and report signs of pest infestation
- clean and sanitise equipment according to enterprise procedures
- record food safety information according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

Required knowledge

Knowledge of:

- food safety requirements related to work responsibilities, including personal hygiene, requirements and procedures to report illness and safe food handling practices for own work, as well as an awareness of the possible consequences of

REQUIRED SKILLS AND KNOWLEDGE

not following these procedures

- common types and sources of contamination that occur in the work area, such as cross contamination
- control methods and procedures used in the , such as reporting non-compliance and following instructions
- storage and handling requirements for ingredients, materials and product used related to work role
- housekeeping requirements and responsibilities relating to own work, and use and storage of housekeeping/cleaning equipment where required
- purpose and importance of cleaning and sanitation procedures
- suitable standard for materials, equipment and utensils used in the work area
- waste collection, recycling and handling procedures relevant to own work responsibilities
- procedures to follow in the event of pest sighting or discovery of infestation
- clothing and footwear requirements for working in and/or moving between food handling areas
- personal clothing maintenance, laundering and storage requirements
- appropriate bandages and dressings to be used when undertaking food handling
- cleaning procedures where relevant
- recording requirements and responsibilities where relevant

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of ability to:

- identify food safety handling requirements in the workplace
- apply and monitor own compliance with food safety standards
- maintain required standards of personal hygiene

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • maintain clean and tidy work area • report non-compliances • apply safe work practices and identify OHS hazards and controls.
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> • food safety information relating to the workplace, including a food safety program outlining food safety hazards and control methods. It may also include company policies, procedures and codes of practice, such as Good Manufacturing Practice (GMP) • related work instructions and procedures • work tasks and responsibilities • cleaning and sanitation policies and procedures • appropriate clothing and related apparatus • reporting and monitoring systems.
Method of assessment	<p>This unit should be assessed together with core and other units of competency relevant to the work role. Examples could be:</p> <ul style="list-style-type: none"> • FDFOP2004A Clean and sanitise equipment <p>Where the company operates a combined quality/food safety system, assessment of this unit should be combined with assessment of:</p> <ul style="list-style-type: none"> • FDFOP1009A Follow work procedures to maintain quality.
Guidance information for assessment	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work

RANGE STATEMENT	
situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Food safety program	A food safety program is a written document that specifies how a business will control all food safety hazards that may be reasonably expected to occur in all food handling operations of the food business. The food safety program and related procedures must comply with legal requirements of the food safety standards and must be communicated to all food handlers. Where no food safety program is in place, food safety requirements may be specified in general operating procedures
Food safety information	Food safety information may be provided in: <ul style="list-style-type: none"> • food safety program • standard operating procedures (SOPs) • specifications • log sheets • written or verbal instruction
Food handling	Food handling refers to: <ul style="list-style-type: none"> • food receipt and storage • food preparation, cooking, holding, cooling, chilling and reheating • packaging • disposal
Products/materials handled and stored	Products/materials handled and stored can include: <ul style="list-style-type: none"> • raw materials • ingredients • consumables • part-processed product • finished product • cleaning materials
Breach of food safety procedures	Examples of a breach of food safety procedures could include: <ul style="list-style-type: none"> • failure to check delivery temperatures of potentially hazardous chilled food • failure to place temperature-sensitive food in temperature controlled storage conditions

RANGE STATEMENT	
	<p>promptly</p> <ul style="list-style-type: none"> • failure to wash hands when required • use of cloths for unsuitable purposes
Responsibility for monitoring food safety	Responsibility for monitoring food safety, identifying breaches in food safety procedures and taking corrective action relates to own tasks and responsibilities and occurs in the context of the food safety program in the workplace
Food safety hazard	A food safety hazard is a biological, chemical or physical agent in, or condition of, food that has the potential to cause an adverse health effect
Personal hygiene requirements	Minimum personal hygiene requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in the Food Safety Standard 3.2.2, Division 4:14 and/or state or territory legislation/regulations
Reporting of health conditions and illness requirements	Reporting of health conditions and illness requirements are specified by the food safety program. At a minimum this must meet legal requirements as set out in Food Safety Standard 3.2.2, Division 4:13 and/or state or territory legislation/regulations
Appropriate clothing and footwear	<p>Appropriate clothing and footwear depends on work requirements. It should be designed to ensure that the body and clothing itself does not contaminate food or surfaces likely to come into contact with food. Examples of clothing designed to prevent contamination by the body include:</p> <ul style="list-style-type: none"> • purpose designed overalls or uniforms • hair-nets • beard snoods • gloves • overshoes

Unit Sector(s)

Unit sector	Food safety
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

FDFGR3002A Demonstrate knowledge of animal nutrition principles

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the animal nutrition knowledge required by stockfeed milling operators who are required to liaise with nutritionists, other technical and professional staff and customers.
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Application of the Unit

Application of the unit	This unit applies to stockfeed operators who are required to have knowledge of animal nutrition principles and the effect of stockfeed on animal performance. This knowledge would be applied in liaison with professional and technical staff on customer requirements and in liaison directly with customers.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify nutrition purpose of stockfeed product	<p>1.1. Target species, animal type and phase of animal growth supported by stockfeed product are identified</p> <p>1.2. Production purpose of animal raising and range of desired products are identified</p> <p>1.3. Particle size, pellet quality and other factors affecting palatability for target animals are identified</p> <p>1.4. Impact of stockfeed on animal performance is identified</p>
2. Identify key quality factors affecting stockfeed performance	<p>2.1. Feed safety requirements for target species and phase of animal production are identified</p> <p>2.2. Type and proportion of raw materials in stockfeed and their effect on animal performance are identified</p> <p>2.3. The purpose of additives on animal performance and stockfeed quality are identified</p> <p>2.4. Effects of processing on stockfeed nutrition quality and animal performance are identified</p> <p>2.5. Substitution guidelines, including the effect of substitution on stockfeed performance, are understood</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Ability to:

- access and interpret workplace information, including standard operating procedures (SOPs), labels, recipes, customer supplied information and material data safety sheets (MSDS)
- use and application of workplace terminology
- sequence information against production processes
- assess quality standards
- identify resources in the enterprise for further information, including nutritionists, other technical and professional specialist and reference materials

Required knowledge

Knowledge of:

- typical nutrition requirements of animals supported by stockfeed, including horses, beef cattle, dairy cattle, pigs, sheep, poultry (both meat and egg production) and marine animals (aquaculture). Knowledge would be restricted to standard daily requirements of main food groups (proteins, carbohydrates etc), typical daily volume of feed required and type of feed (e.g. solid, liquid, plant or animal based)
- how nutritional needs of target animal may vary according to species, gender, health, pregnancy, lactation, age, season, geography, production purpose and form of production and feeding, e.g. feedlot, free range, use of stock feed for supplementary or full feeding
- factors affecting animal acceptance of stockfeed, including palatability and presentation
- range of raw materials typically used in stockfeed, including grains, molasses/liquids, proteins (vegetables and animal), additives (vitamins, minerals and medications) and fibre
- impact of operator controlled factors on stockfeed quality, including temperatures, moisture, sizing, sieving and liquid additions
- impacts of stockfeed on animal performance, including positive effects on animal performance and effects of incorrect feed on animal safety, animal performance and export contamination

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	<p>Evidence is required of animal nutrition and performance requirements that are affected by stockfeed related factors, such as ingredients, recipe, processing and presentation.</p> <p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed.</p> <p>Competence in this unit must be achieved in accordance with food safety standards and regulations</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> • identify and interpret customer requirements from stockfeed • relate stockfeed type to animal nutrition and production requirements • liaise with nutritionist and other professional and technical staff on animal nutrition requirements of stockfeed.
Context of and specific resources for assessment	The candidate is to be assessed on animal nutrition and production knowledge relevant to the stockfeed products and processes in the workplace.
Method of assessment	Evidence may include third party report, portfolio, work documentation, response to questions, and so on, that address the performance criteria and critical aspects for assessment.
Guidance information for assessment	Performance against this standard must be assessed in an industry context. For valid and reliable assessment the activity should closely replicate the work environment, circumstances and equipment likely to be encountered in a workplace.

Range Statement

RANGE STATEMENT

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Stockfeed production

Stockfeeds commercially produced by enterprises as well as customer provided formulations.

The range of stockfeed can include:

- pellets
- liquids
- mashes
- blocks

Target species

Target species may include:

- land and marine animals raised commercially for meat, skin products and milk

Unit Sector(s)

Unit sector	Grain processing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

FDFOP2038A Operate a grinding process

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down processes, such as grinding, rolling and breaking to reduce the particle size of grains and pulses.
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Application of the Unit

Application of the unit	<p>This unit has application in a food production environment. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of grinding equipment and processes.</p> <p>When batch or product changeover procedures are part of this work process, the procedures should be used to customise the application of this unit. Where more detailed changeovers are carried out, FDFOP2011A Conduct routine maintenance, should be considered.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the grinding equipment and process for operation	<p>1.1. Materials are confirmed and available to meet production requirements</p> <p>1.2. Cleaning and maintenance requirements and status are identified and confirmed</p> <p>1.3. Machine components and related attachments are fitted and adjusted to meet operating requirements</p> <p>1.4. Processing/operating parameters are entered as required to meet safety and production requirements</p> <p>1.5. Equipment performance is checked and adjusted as required</p> <p>1.6. Pre-start checks are carried out as required by workplace requirements</p>
2. Operate and monitor the grinding process	<p>2.1. The process is started and operated according to workplace procedures</p> <p>2.2. Equipment is monitored to identify variation in operating conditions</p> <p>2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements</p> <p>2.4. The process is monitored to confirm that specifications are met</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification</p> <p>2.6. The work area is maintained according to housekeeping standards</p> <p>2.7. Work is conducted according to environmental standards</p> <p>2.8. Workplace records are maintained according to workplace recording requirements</p>
3. Shut down the grinding process	<p>3.1. The appropriate shutdown procedure is identified</p> <p>3.2. The process is shut down according to workplace procedures</p> <p>3.3. Maintenance requirements are identified and reported</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Ability to:

- access workplace information to identify processing requirements
- select, fit and use personal protective clothing and/or equipment
- confirm supply of necessary materials and services to the grinding process
- conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate settings and/or related parameters, cancelling isolation or lock outs as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational
- operate stockfeed control panel to transfer and grind product
- monitor and adjust the grinding process and equipment operation to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, and running adjustments to hammer mills and roller mills
- monitor supply and flow of materials to and from the grinding process
- take corrective action in response to out-of-specification results
- respond to and/or report equipment failure within level of responsibility

REQUIRED SKILLS AND KNOWLEDGE

- locate emergency stop functions on equipment
- follow isolation and lock out/tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility
- complete workplace records as required
- demonstrate batch/product changeovers
- sort, collect, treat, recycle or dispose of waste
- maintain work area to meet housekeeping standards
- collect samples and conduct tests according to enterprise procedures
- conduct routine maintenance according to enterprise procedures
- clean and sanitise equipment according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

Required knowledge

Knowledge of:

- purpose and basic principles of the grinding process, including the characteristics of materials, which can be reduced to a suitable form for product such as stockfeed
- basic operating principles of equipment, such as main equipment components, bulk materials transfer systems and equipment, dust collection equipment, grinding equipment operating capacities and applications, and the purpose and location of magnets, sensors and related feedback instrumentation
- services required and action to take if services are not available
- basic operating principles of process control, including the relationship between control panels and systems and the physical equipment
- the flow of the grinding process and the effect of product output on downstream processes
- quality characteristics and uses of grinding process outputs
- effect of the grinding process on the end product
- effect of raw material characteristics on grinding process performance
- operating requirements and parameters and corrective action required where operation is outside specified operating parameters
- typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems
- techniques used to monitor the production process, such as inspecting, measuring and testing as required by the process
- inspection or test points (control points) in the process and the related procedures and recording requirements
- contamination/food safety risks associated with the grinding process and related control measures

REQUIRED SKILLS AND KNOWLEDGE

- common causes of variation and corrective action required
- operational health and safety (OHS) hazards and controls, including the risk of dust explosion and an understanding of the limitations of protective clothing and equipment relevant to the work process
- requirements of different shutdowns as appropriate to the process and workplace production requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage
- product/process changeover procedures and responsibilities
- isolation, lock out and tag out procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process
- sampling and testing associated with process monitoring and control where relevant
- routine maintenance procedures where relevant
- cleaning and sanitation procedures where relevant

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of ability to:

- conduct pre-start checks on machinery used for grinding
- start, operate, monitor and adjust process equipment to achieve required quality outcomes
- take corrective action in response to typical faults and inconsistencies
- complete workplace records as required
- apply safe work practices and identify OHS hazards

EVIDENCE GUIDE	
	<p>and controls</p> <ul style="list-style-type: none"> • safely shut down equipment • apply food safety procedures to work practices.
Context of and specific resources for assessment	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> • personal protective clothing and equipment • work procedures including advice on safe work practices, food safety, quality and environmental requirements, stock flow systems, production schedules, batch/recipe instructions • specifications, control points and processing parameters • production schedule/batch instructions • information on equipment capacity and operating parameters • grinding and related equipment and services • stock required for the grinding process • sampling schedules and test procedures and equipment as required • documentation and recording requirements and procedures • cleaning procedures, materials and equipment as required.
Method of assessment	<p>This unit should be assessed together with core units and other units of competency relevant to the function or work role. Examples could be:</p> <ul style="list-style-type: none"> • FDFOP2004A Clean and sanitise equipment • FDFOP2011A Conduct routine maintenance • FDFOP2013A Apply sampling procedures • FDFOP2030A Operate a process control interface • MSL973001A Perform basic tests.
Guidance information for assessment	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Policies and procedures	Work is carried out according to company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements
Legislative requirements	<p>Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes:</p> <ul style="list-style-type: none"> • the Food Standard Code, including the labelling, weights and measures legislation • legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity
Workplace information	<p>Workplace information may include:</p> <ul style="list-style-type: none"> • standard operating procedures (SOPs) • specifications • production schedules and instructions • manufacturers' advice • standard forms and reports
Equipment	<p>Equipment may include:</p> <ul style="list-style-type: none"> • conveyors/elevators • augers • magnets • fans • sieves • hammer mills • roller mills • breaker bars • cyclones
Materials	<p>Materials include:</p> <ul style="list-style-type: none"> • grains

RANGE STATEMENT	
	<ul style="list-style-type: none"> • pulses Pulses are legumes typically include: <ul style="list-style-type: none"> • peas • beans • lentils
Shutdown procedures	Shutdown procedures may include: <ul style="list-style-type: none"> • cleaning(in some cases cleaning may be carried out by a dedicated cleaning crew)
Services	Services may need to be confirmed. These depend on the nature of the process. Typical examples include: <ul style="list-style-type: none"> • power • steam • water • vacuum • compressed and instrumentation air

Unit Sector(s)

Unit sector	Operational
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

FNSFMK512 Apply knowledge of emissions markets

Modification History

Release	Comments
Release 1	This version first released with FNS Financial Services Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to participate in and provide specialist advice on defined financial products in the emissions markets.

It applies to individuals who use specialised knowledge (including the mandatory knowledge outlined in ASIC RG146 Appendix A2.11), analytical skills and systematic approaches to manage the provision of advice to clients.

Work functions in the occupational areas where this unit may be used are subject to regulatory requirements. Refer to the FNS Implementation Guide Companion Volume or the relevant regulator for specific guidance on requirements.

Unit Sector

Financial markets

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Comply with regulatory framework unique to emissions markets	1.1 Identify domestic and international regulatory framework within which emissions reduction schemes are placed 1.2 Identify key legislation, regulation and industry codes of practice relevant to operating within Australian emissions markets 1.3 Comply with relevant legal and regulatory principles when operating in emissions markets 1.4 Discuss regulatory risk for both voluntary and regulated

ELEMENT	PERFORMANCE CRITERIA
	emissions markets, and determine possible impacts of pending regulatory or legislative change
2. Evaluate scope and impact of emissions markets	2.1 Identify regulated and voluntary carbon markets and outline how they operate 2.2 Distinguish respective supply and demand drivers for voluntary and regulated markets 2.3 Describe price drivers for emissions products 2.4 Differentiate participants in carbon markets and motivations for their participation 2.5 Distinguish functions of primary and secondary emissions markets 2.6 Discuss auction types and processes 2.7 Describe functions, requirements and rules for registries
3. Identify types of emissions products, their characteristics and liabilities	3.1 Compare different types of emissions products and instruments traded in compliance and voluntary markets 3.2 Identify key features of compliance market products 3.3 Describe risks inherent within each product and their potential impact in given context 3.4 Describe transactional processes for each product, including acquiring, transferring and surrendering 3.5 Describe tax treatment of emissions products, including deductibility of costs where relevant
4. Apply knowledge of emissions products	4.1 Determine relevant information influencing the market 4.2 Analyse relevant information when selecting products for emissions markets transaction 4.3 Devise strategies for using emissions market products 4.4 Seek advice, guidance and specialist expertise when required 4.5 Apply knowledge of financial market transactional processes when operating in emissions markets 4.6 Complete relevant documentation and complete any additional organisational processes
5. Maintain emissions market knowledge	5.1 Review relevant emissions trading markets sources regularly and apply any changes in daily work 5.2 Maintain professional competence in market knowledge in accordance with codes of conduct and/or organisational

ELEMENT	PERFORMANCE CRITERIA
	requirements 5.3 Implement processes for maintaining up-to-date knowledge of relevant aspects of emissions trading markets

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Learning	4.4, 5.2, 5.3	<ul style="list-style-type: none"> Actively updates and maintains knowledge of changes to regulation, markets and emissions
Reading	1.1, 1.2, 2.1, 2.4-2.7, 3.1-3.3, 4.1, 4.2	<ul style="list-style-type: none"> Accurately interprets and analyses complex information from a range of sources and consolidates information relevant to requirements
Writing	3.3-3.5, 4.6	<ul style="list-style-type: none"> Prepares documents, incorporating clear and detailed information organised sequentially for internal reference
Oral Communication	3.3-3.5	<ul style="list-style-type: none"> Uses language, terminology and concepts appropriate to the audience and purpose Participates in verbal exchanges to share, convey and clarify information
Numeracy	2.3	<ul style="list-style-type: none"> Uses mathematical equations to perform calculations to interpret pricing information
Navigate the world of work	1.3, 1.4, 2.5-2.7, 5.2	<ul style="list-style-type: none"> Identifies and follows relevant legislative requirements, and explicit and implicit protocols, policies and procedures, and meets expectations associated with own role Keeps up to date on changes to legislation or regulations and considers implications on work outcomes
Interact with others	4.4	<ul style="list-style-type: none"> Liaises with others, shares information, and seeks advice and guidance
Get the work done	4.3, 4.5, 4.6, 5.1	<ul style="list-style-type: none"> Plans and sequences complex tasks, and monitors and adapts work to incorporate changes in compliance issues

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FNSFMK512 Apply knowledge of emissions markets	FNSFMK512A Apply knowledge of emissions markets	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c7200cc8-0566-4f04-b76f-e89fd6f102fe>

Assessment Requirements for FNSFMK512 Apply knowledge of emissions markets

Modification History

Release	Comments
Release 1	This version first released with FNS Financial Services Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- research, analyse and update information, including regulatory changes impacting on emissions markets and operations
- provide and apply specialist knowledge relating to emissions markets to daily work.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- analyse and describe types of products and their characteristics including:
 - types of emissions units, and their characteristics (encompassing carbon units, Australian carbon credit units and eligible international emissions units)
 - characteristics of emissions units including their status as personal property, and how they are typically derived from inception to the point of acquiring status as a financial product
 - risks associated with each type of emission unit, including rating, restrictions on their use, transfer and bankability for future use
 - processes for acquiring, transferring and surrendering emissions units, including compliance with the requirements of the Australian National Registry of Emissions Units
- outline the operation of regulated and voluntary carbon markets including:
 - geopolitical context of carbon markets, including the influence of political and economic factors and corporate social responsibility
 - main participants in carbon markets, and their key objectives and participation behaviours as factors influencing market activity

- emissions unit supply and demand factors and regulated price factors influencing market activity and prices
- issue of carbon units via auction, and auction types
- types of transactions in carbon markets, including transactions relating to the carbon pricing mechanism and in voluntary markets, and the function of financial markets facilitating such trading (including internationally)
- potential trading strategies and their implementation in carbon markets (e.g. hedging and investment strategies)
- risks associated with carbon markets, including liquidity, pricing, credit, operational and regulatory risks
- carbon market transaction documentation, including documentation used for different types of counterparties and transactions, their key terms and conditions, and advantages and disadvantages
- explain the regulated emissions legal environment including disclosure and compliance, covering:
 - domestic regulatory framework for the carbon pricing mechanism, including the role of the Clean Energy Regulator and the Australian National Registry of Emissions Units
 - domestic regulatory framework for the Carbon Farming Initiative, including the role of the Clean Energy Regulator and the Australian National Registry of Emissions Units
 - international regulatory framework for carbon trading, including the Clean Development Mechanism
 - relevant legal principles (e.g. Corporations Act, ASIC Act, Privacy Amendment (Private Sector) Act, Australian National Registry of Emissions Units Act, National Greenhouse and Energy Reporting Act, Carbon Credits (Carbon Farming Initiative) Act, Clean Energy Act)
 - the relationship between ethical and regulatory requirements (e.g. good faith, utmost good faith, full disclosure of remuneration and/or fees and any other conflicts of interest that may influence the adviser's recommendation), and the application of these requirements in professional practice
 - relevant industry standards and codes of conduct
 - regulators' guidelines, including ASIC Regulatory Guide (RG)146 requirements
 - dispute resolution procedures (external and internal)
- outline the taxation obligations in the emissions market including:
 - taxation treatment of emissions units and taxation issues relating to emissions units
 - deductibility of costs associated with emissions units.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in the financial markets field of work and include access to:

- office equipment, technology, software and consumables
- emissions markets information.

Assessors must satisfy NVR/AQF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c7200cc8-0566-4f04-b76f-e89fd6f102fe>

FSKNUM23 Estimate, measure and calculate measurements for work

Modification History

Release	Comments
Release 1	This streamlined version first released with <i>FSK Foundation Skills Training Package version 1.0</i> .

Application

This unit describes the skills and knowledge to estimate and measure quantities, to convert units within the metric system and between metric and non-metric units, to calculate area and volume including compound shapes and to use Pythagoras' theorem.

This unit applies to individuals who need numeracy skills at Australian Core Skills Framework (ACSF) level 4 to undertake a vocational training pathway or workplace tasks.

This unit is designed for integration and contextualisation with vocational units to support achievement of vocational competency.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Numeracy

Elements and Performance Criteria

Element	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Estimate and make measurements for work	1.1 Extract and interpret measurement information embedded in workplace texts and tasks 1.2 Identify and select appropriate workplace measuring equipment

Element	Performance Criteria
	1.3 Estimate and make accurate measurements
2. Undertake mathematical calculations involving measurement	2.1 Calculate the area of 2D shapes including compound shapes 2.2 Calculate the volume of 3D shapes using relevant formulas 2.3 Calculate sides of right angled triangles using Pythagoras' theorem 2.4 Perform conversions between units of measurement 2.5 Use problem solving processes to undertake the task
3. Check and communicate results	3.1 Review and check the measurement outcomes 3.2 Record the information using mathematical language and symbols appropriate for the task

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Learning		<ul style="list-style-type: none"> Sequencing multi-step calculations
Technology		<ul style="list-style-type: none"> Using a scientific calculator

Mapping Information

Not applicable

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=f572fe10-a855-4986-9295-3852c771f178>

Assessment Requirements for FSKNUM23 Estimate, measure and calculate measurements for work

Modification History

Release	Comments
Release 1	This streamlined version first released with <i>FSK Foundation Skills Training Package version 1.0</i> .

Performance Evidence

Evidence of the ability to:

- make accurate measurements
- calculate area and volume of shapes including compound shapes
- calculate sides of triangles using Pythagoras' theorem
- make conversions between units.

Note: Where a specific volume and/or frequency is not specified, evidence must be provided at least once.

Knowledge Evidence

Evidence of the following knowledge must be demonstrated:

- units of measurement for specific workplace tasks
- names and basic properties of a range of 2D and 3D shapes
- Pythagoras' theorem.

Assessment Conditions

Assessment texts and tasks reflect those typically found in the workplace.

Individuals can access a range of established support resources.

Culturally appropriate processes and techniques suited to the language, literacy and numeracy capacity of individuals and the work being performed must be used.

Reasonable adjustments can be made to ensure equity in assessment for people with disabilities.

Assessors must satisfy NVR/AQTF assessor requirements, have a sound knowledge of the ACSF and have demonstrable expertise in the vocational contextualisation and assessment of the core skill - numeracy.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=f572fe10-a855-4986-9295-3852c771f178>

FSKRDG03 Read and respond to basic workplace instructions

Modification History

Release	Comments
Release 1	This streamlined version first released with <i>FSK Foundation Skills Training Package version 1.0</i> .

Application

This unit describes the skills and knowledge required to identify and respond appropriately to information in basic workplace instructions in printed or digital format, such as instructions for safe lifting, emergency evacuation procedures and basic operating procedures.

The unit applies to individuals who need reading skills at Australian Core Skills Framework (ACSF) level 1 to undertake a vocational training pathway or workplace tasks.

This unit is designed for integration and contextualisation with vocational units to support achievement of vocational competency.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Reading

Elements and Performance Criteria

Element	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to read basic workplace instructions	1.1 Identify audience and purpose of instructions 1.2 Identify the text features
2. Identify information in basic workplace	2.1 Use navigation skills to locate relevant information

Element	Performance Criteria
instructions	2.2 Recognise high-frequency vocabulary 2.3 Use reading strategies to identify relevant information
3. Confirm and respond to basic workplace instructions	3.1 Check that instructions have been correctly understood 3.2 Follow instructions as appropriate

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Oral Communication		<ul style="list-style-type: none"> Checks with trainer or supervisor that information is correct and response appropriate

Mapping Information

Not applicable

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=f572fe10-a855-4986-9295-3852c771f178>

Assessment Requirements for FSKRDG03 Read and respond to basic workplace instructions

Modification History

Release	Comments
Release 1	This streamlined version first released with <i>FSK Foundation Skills Training Package version 1.0</i> .

Performance Evidence

Evidence of the ability to:

- identify information in basic workplace instructions
- respond appropriately to basic workplace instructions.

Evidence must be collected using basic instructions typically found in the workplace.

Note: Where a specific volume and/or frequency is not specified, evidence must be provided at least once.

Knowledge Evidence

Evidence of the following knowledge must be demonstrated:

- purpose and features of basic workplace instructions
- high-frequency vocabulary in basic workplace instructions
- reading strategies for identifying information in basic workplace instructions.

Assessment Conditions

Assessment texts and tasks reflect those typically found in the workplace.

Advice and support is available.

Culturally appropriate processes and techniques suited to the language, literacy and numeracy capacity of individuals and the work being performed must be used.

Reasonable adjustments can be made to ensure equity in assessment for people with disabilities.

Assessors must satisfy NVR/AQTF assessor requirements, have sound knowledge of the ACSF and have demonstrable expertise in the vocational contextualisation and assessment of the core skill - reading.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=f572fe10-a855-4986-9295-3852c771f178>

FWPCOT2236 Fall trees manually (basic)

Modification History

Release	Comment
1	Replaces equivalent unit FPICOT2236 Fall trees manually (basic), which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to assess and manually fall small trees with a low level of complexity and to complete operator maintenance.

Basic trees typical to the scope of this unit may include the following characteristics:

- lean and distribution of the crown weight does not create a complex situation to assess or fell
- small dimensions relative to local forest size distribution
- no excessive lean
- no visible damage or defect
- species that are not prone to free splitting and adverse reactions during felling
- single stem or non-complex multi-stems
- diameter of tree is less than chainsaw bar length
- grown on terrain and slope that does not add significant complexity to the operation

The unit applies to those in a forest, agricultural, local council, emergencies services and other government agency environment. With the exception of minor forest produce, it is not relevant to commercial harvesting operations.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states & territories at the time of publication, and may differ according to jurisdiction.

Pre-requisite Unit

Nil

Unit Sector

Common Technical

Elements and Performance Criteria

ELEMENTS <i>Elements describe the essential outcomes.</i>	PERFORMANCE CRITERIA <i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Prepare for felling	1.1 Identify and adhere to work specifications and site environmental protection measures relevant to felling basic trees in line with organisational requirements and relevant regulations 1.2 Review and check job requirements with appropriate personnel 1.3 Select tools and equipment appropriate to work requirements and check for operational effectiveness according to manufacturer recommendations 1.4 Identify trees to be retained and felled 1.5 Establish and maintain communication with others according to WHS requirements
2. Prepare for felling	2.1 Review location and stability for conditions likely to affect felling activities 2.2 Identify and report site environmental conditions to appropriate personnel 2.3 Identify and control potential and existing risks and hazards 2.4 Monitor and exclude location and activity of other personnel on the work site
3. Assess tree and plan felling	3.1 Assess limitations of own skills in safely felling trees, identify trees considered outside own skill level and seek assistance from appropriate personnel where required 3.2 Confirm that tree is safe to fell 3.3 Visually assess tree for felling characteristics, defects and stresses 3.4 Assess and check required falling direction and possible deviation 3.5 Plan sequence of cuts to fell tree according to standard felling procedures 3.6 Select suitable escape route and clear of growth and other obstacles according to environmental care principles and statutory requirements
4. Apply tree felling techniques	4.1 Fell individual trees using selected cutting techniques according to WHS and job requirements 4.2 Adjust cutting technique in response to movement and condition of tree

ELEMENTS	PERFORMANCE CRITERIA
	<p>4.3 Use planned escape route when tree starts to fall and monitor the fall and movement of tree on ground until determined stable</p> <p>4.4 Delay movement back into the felling area until all tree material, including from adjacent tree crowns, has fallen</p> <p>4.5 Identify and implement procedures for removal of trees that are hung-up</p> <p>4.6 Dispose of waste materials in line with environmental and operational requirements</p>
5. Maintain equipment	<p>5.1 Inspect equipment on completion of trimming and cutting activities</p> <p>5.2 Identify damaged saws and cutting attachments for repair or replacement according to organisational requirements and manufacturer recommendations</p> <p>5.3 Remove, clean, adjust or replace chain and other components according to manufacturer recommendations</p> <p>5.4 Maintain tools and equipment according to WHS requirements and manufacturer recommendations</p>

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.	
Numeracy skills to:	<ul style="list-style-type: none"> • estimate tree dimensions, including height, length, diameter and volume • complete routine calculations and report on size, length, diameter of felled trees.
Oral communication skills to:	<ul style="list-style-type: none"> • select and use appropriate spoken communication strategies with work colleagues and other personnel on site when felling trees • interpret hand signals with other operators to ensure safe tree felling
Reading skills to:	<ul style="list-style-type: none"> • interpret: <ul style="list-style-type: none"> • workplace health and safety and other organisational procedures • work orders • manufacturers' maintenance recommendations.
Writing skills to:	<ul style="list-style-type: none"> • complete accurate basic records for tree felling process, equipment faults and maintenance requirements.

Planning and organising skills to:	<ul style="list-style-type: none">• identify an unsafe tree• efficiently and logically sequence the stages of preparation for and felling of trees using work order to guide activities.
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Range of Conditions

Not Applicable

Unit Mapping Information

FPICOT2236 Fall trees manually (basic)

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT2236 Fall trees manually (basic)

Modification History

Release	Comment
1	<p>Replaces equivalent unit FPICOT2236 Fall trees manually (basic), which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including Required Skills and Knowledge, Evidence Guide and Range Statement.</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- comply with applicable federal, state or territory legislative and regulatory requirements and codes of practice including WHS, environmental and organisational policies and procedures relevant to felling trees at a basic level
- comply with organisational policies and procedures relevant to felling trees manually at a basic level
- comply with applicable licensing or certification requirements relevant to felling trees manually
- effectively communicate and use safe working practices, including maintaining an awareness of activity by other personnel in the work area
- assess site conditions, by applying environmental protection measures, detecting hazards and own skill level for felling trees at a basic level
- conduct a tree assessment
- identify structural defects and stresses in trees and the impact on felling, including exclusion of trees from hand felling due to hazardous and difficult situations for assessment, monitoring and safe falling including a crown that contains dead or broken material, entanglement or malformation
- plan a felling sequence for individual trees and preparing surroundings including escape route

- fell basic trees using a appropriate cuts safely without damage to personnel, equipment and surrounding environment
- identify trees that are hung up
- select, prepare and maintain chainsaw equipment including recognising faults, problems and malfunctions
- assess, plan and safely operate chainsaw equipment to manually fell trees at a basic level in forest, rural and community environments
- use tree felling techniques including scarf cutting , back cutting to provide hinge-wood and the use of wedges to assist in controlling falling direction.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- Workplace health and safety (WHS) requirements including:
 - PPE and clothing
 - safety equipment
 - first aid equipment
 - firefighting equipment
 - hazard and risk control procedures
 - fatigue management procedures
 - appropriate signage
 - elimination of hazardous materials and substances procedures
 - safe forest practices, including required actions relating to fire
 - techniques for manual handling, including shifting, lifting and carrying
- types and purposes of cuts to fell trees, including scarf cutting and back cutting to provide hinge-wood and maintain control of tree
- typical tree defects and how these affect tree felling activities:
 - shakes
 - insect defects
 - knots and resin pockets
 - pipe
 - drysides
- identifying trees:
 - that contain hazards and are deemed unsafe to fell
 - considered outside own skill level
 - trees where cuts made may lead to loss of control of tree in felling
- hazards and related risks and the impact on felling trees of:
 - uneven and unstable terrain
 - unsafe trees
 - fires
 - overhead and underground services

- excavations
- traffic
- structures
- hazardous materials
- insects and animals
- other personnel and machinery
- methods used to remove trees that are hung up and procedures for removal
- methods for assessing chain condition
- environmental protection measures to follow when felling trees related to:
 - native vegetation
 - soil and water
 - heritage and archeological artefacts
 - flora and fauna
 - geomorphologic features
 - landscape
 - external site pollution
 - recreational opportunities
 - regeneration opportunities
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing timber and other waste
- key features of these varying environmental conditions and their effects on basic tree felling activities:
 - general forest lean
 - ground growth
 - ground hazards and obstacles
 - ground slope
 - gullies
 - presence and density of seed and habitat trees
 - water courses
 - wet and adverse weather conditions
 - wind speed and direction
- the use of types of tools and equipment for felling trees manually, and the procedures for their safe use, operation and maintenance including:
 - warning signs
 - chainsaw and components
 - PPE and clothing
 - first aid equipment
 - maintenance requirements
 - support tools.

Assessment Conditions

The following resources must be made available:

- workplace location or simulated workplace of a forest environment that contains small trees with a low level of falling complexity
- PPE and clothing including:
 - safety helmet
 - safety gloves
 - protective footwear
 - eye protection
 - hearing protection
 - high visibility clothing
 - leg protection (trousers or chaps)
- materials and equipment including:
 - warning signs
 - chainsaw and components
 - first aid equipment
 - maintenance tools and equipment
 - support tools
 - manufacturers' instructions for use and maintenance of equipment
 - radio or communication device
 - fire fighting equipment (if prescribed)
- specifications and work instructions, including
 - information and instructions relevant to tree-felling operations, including processing location details and trees to be felled and retained
 - policy and procedures for work health and safety (WHS)
 - risk assessment plan
 - general and specific environmental requirements
 - relevant state or territory logging code of practice
 - emergency and evacuation procedures
 - fire protocols
- relevant personnel for the purposes of communicating information

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT2237 Maintain chainsaws

Modification History

Release	Comment
1	Replaces equivalent unit FPICOT2237A Maintain chainsaws, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to maintain engine or electrically operated hand-held chainsaws. It includes sharpening chains and completing routine and frequently required service requirements as well as periodic servicing. Work is completed in a variety of work settings including a forest environment, agricultural, workshop, arboretum and horticultural settings.

The unit applies to chainsaw operators.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Common Technical

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Prepare for chainsaw maintenance	1.1 Select appropriate personal protective, maintenance and repair equipment and check for operational effectiveness in line with manufacturer's recommendations.

ELEMENTS	PERFORMANCE CRITERIA
	1.2 Plan repair and maintenance activities in line with manufacturer's instructions and recommendations and organisational requirements
2. Complete chainsaw maintenance	2.1 Follow organisational safety procedures to lock out equipment. 2.2 Complete routine and frequently required service requirements on chainsaws in line with manufacturer's instructions and organisational requirements 2.3 Complete periodic service requirements on chainsaws in line with manufacturer's recommendations and organisational requirements 2.4 Check chain for bluntness or damage. 2.5 Remove, sharpen, adjust and replace chain and other components in line with manufacturer's recommendations. 2.6 Identify, diagnose, tag and report chainsaw faults, malfunctions or irregular operation for repair or replacement. 2.7 Reassemble serviced chainsaw components, check for operational effectiveness, tag and store.
3. Complete maintenance records and clean up	3.1 Complete, process and maintain records and reports in line with organisational procedures. 3.2 Clear and clean work area and tools, and dispose of and recycle waste materials in line with environmental protection practices.

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	<ul style="list-style-type: none"> • calculate ratios and measure quantities of oils and fuels.
Reading skills to:	<ul style="list-style-type: none"> • interpret: <ul style="list-style-type: none"> • workplace health and safety procedures • work orders • manufacturer's instructions and maintenance recommendations.
Writing skills to:	<ul style="list-style-type: none"> • complete basic accurate records of repairs, maintenance activities and equipment faults.
Planning and organising skills to:	<ul style="list-style-type: none"> • efficiently and logically sequence stages of repair and maintenance work.

Range of Conditions

Not Applicable

Unit Mapping Information

FPICOT2237A Maintain chainsaws

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT2237 Maintain chainsaws

Modification History

Release	Comment
1	<p>Replaces equivalent unit FPICOT2237A Maintain chainsaws, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including Required Skills and Knowledge, Evidence Guide and Range Statement. This is the first release of this unit in the new standards format.</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- complete these routine and frequently required service requirements on chainsaws in line with manufacturer's instructions:
 - removing, checking and cleaning air filter for damage and penetration of foreign material
 - cleaning saw body, air intake vents and cooling fins
 - cleaning chain brake
 - inspecting chain and guide bar
 - checking screws and nuts for tightness
 - checking safety devices
 - filling fuel tanks and chain oil tanks
- complete these types of periodic service requirements on chainsaws in line with manufacturer's instructions:
 - replacing drive sprocket
 - cleaning or replacing and setting spark plug
 - checking and replacing fuel filter
 - checking chain brake, oil system, flywheel assembly, anti-vibration system, muffler and spark arrestor
 - inspecting and replacing starter cord and starter spring

- matching pitches and gauges of cutting components
- dressing and cleaning cutter bar
- cleaning fly wheel
- removing and cleaning exhaust and fire screen
- complete these activities to check and sharpen chain saw chains in line with manufacturer's instructions:
 - inspecting and adjusting chain
 - inspecting and replacing chain that is worn, damaged or incorrectly sharpened
 - sharpening chain types and setting of depth gauges.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- types, purpose, features and operation of chainsaws for which repairs are completed
- features and names of different parts of chainsaws
- purpose, features and operation of tools and equipment used to repair and maintain chainsaws
- specifications and types of bars, chains and sprockets
- differences between frequent and periodic chainsaw maintenance requirements
- techniques for:
 - removing chains and other chainsaw components
 - assessing chain condition
 - sharpening chains to specified requirements
 - reassembling chainsaw components
- hazards for maintaining chainsaws and methods to minimise associated risks:
 - loud noise and exhaust fumes
 - mechanical vibration
 - handling hazardous substances
 - cuts and hot surfaces
 - rotating parts
- organisational procedures specific to repairing and maintaining chainsaws:
 - workplace health and safety with particular emphasis on equipment lock out and use of personal protective equipment
 - communication reporting lines
 - recording and reporting repairs, maintenance activities and equipment faults
- environmental protection practices for repairing and maintaining chainsaws:
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing materials
 - disposing of hazardous substances.

Assessment Conditions

The following resources must be made available:

- engine or electrically operated hand-held chainsaws
- tools and equipment used to repair and maintain chainsaws
- consumable chainsaw parts, oil and fuel
- personal protective equipment suitable for repairing and maintaining chainsaws including:
 - Safety boots
 - Safety helmet
 - Cut resistant leg protection
 - First aid kit
 - Hearing protection
 - High visibility clothing
 - Eye protection
 - Apron
 - Chain mesh gloves
- manufacturers' instructions and recommendations for repair and maintenance of chainsaws
- template documents for recording repairs, maintenance activities and equipment faults.
- organisational procedures for repairing and maintaining chainsaws.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT2239 Trim and cut felled trees

Modification History

Release	Comments
Release 3	This version released with FWP Forest and Wood Products Training Package Version 5.0.
Release 2	This version released with FWP Forest and Wood Products Training Package Version 3.0.
Release 1	This version released with FWP Forest and Wood Products Training Package Version 2.0.

Application

This unit describes the outcomes required to trim and cut felled trees with a chainsaw and to complete operator maintenance. It applies to situations where the production of timber is not the primary focus of the activity.

The unit applies to a forestry worker, chainsaw operator, forest harvester, harvesting technician and arboriculture worker.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for trimming	1.1 Review work order and where required check with appropriate

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
and cutting	<p>personnel</p> <p>1.2 Select appropriate personal protective and other equipment and check for operational effectiveness</p> <p>1.3 Plan trimming and cutting activities in line with work order and environmental conditions</p>
2. Visually assess felled trees	<p>2.1 Assess tree location and stability for conditions likely to affect safety of trimming and cutting activities</p> <p>2.2 Visually assess tree for defects and identify stresses within tree</p> <p>2.3 Mark trees too dangerous to cut safely and refer to appropriate personnel</p>
3. Plan cutting	<p>3.1 Move or stabilise tree for safe cutting in line with site procedures</p> <p>3.2 Select cutting pattern to optimise time and manageable removal of sections</p> <p>3.3 Identify options for utilisation of product</p> <p>3.4 Plan cutting sequence to maintain control of cut sections and minimise cutting problems</p> <p>3.5 Select cutting positions considering tree stresses</p> <p>3.6 Clear debris from work area to allow safe access and prevent saw damage and personal injury</p>
4. Use chainsaw to trim and cut trees	<p>4.1 Monitor location and movement of other personnel and modify work to ensure safety</p> <p>4.2 Establish and maintain communication to ensure safety</p> <p>4.3 Secure tree section on each side of planned cut; evaluate and control potential movement</p> <p>4.4 Operate chainsaw to cut tree and limbs and adjust cutting technique in response to movement and condition of tree and limbs</p> <p>4.5 Prepare cut sections for removal from the site</p>
5. Complete equipment maintenance	<p>5.1 Follow organisational safety procedures to lock out equipment</p> <p>5.2 Check chain for bluntness or damage</p> <p>5.3 Remove, sharpen, adjust and replace chain and other components in line with manufacturer recommendations</p> <p>5.4 Record and report trimming and cutting records, equipment faults</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	and maintenance requirements to appropriate personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Plan time-efficient cutting patterns and sequences Complete routine calculations and report on size, length and diameter of cut trees
Oral communication	<ul style="list-style-type: none"> Ask open and closed questions and actively listen to clarify contents of work plans
Reading	<ul style="list-style-type: none"> Interpret: <ul style="list-style-type: none"> workplace health and safety and other organisational procedures work orders manufacturers maintenance recommendations
Writing	<ul style="list-style-type: none"> Complete accurate basic records for tree trimming and cutting processes, equipment faults and maintenance requirements
Get the work done	<ul style="list-style-type: none"> Efficiently and logically sequence the stages of preparation for and cutting of trees using work order to guide activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT2239 Trim and cut felled trees Release 3	FWPCOT2239 Trim and cut felled trees Release 2	Minor edits to achieve consistency with wording in another FWPHAR unit; and enable flexibility of the unit application	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT2239 Trim and cut felled trees

Modification History

Release	Comments
Release 3	This version released with FWP Forest and Wood Products Training Package Version 5.0.
Release 2	This version released with FWP Forest and Wood Products Training Package Version 3.0.
Release 1	This version released with FWP Forest and Wood Products Training Package Version 2.0.

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit.

There must be evidence that, on at least one occasion, the individual has:

- safely and efficiently used a chainsaw to complete these activities:
 - trim and cut hardwood or softwood trees
 - delimb trees
 - trim branches
 - trim burls and other small growths
- used the following cutting techniques:
 - bridging cuts
 - swinging cuts
 - side bind cuts
 - boring
 - wedge cut
 - ripping cuts
- trimmed and cut trees in varied weather conditions
- completed the following maintenance activities on a chainsaw:
 - sharpening
 - refuelling
 - inspection, identification and replacement of bar, chain, drive sprockets
 - bar oil checks and top up

- air filter, check, clean and replacement
- cleaning of saw body, air intake vents and cooling fans
- fitting spare chain and tension chain.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental protection measures including:
 - action to limit the impact of noise, wind speed and direction, fallen trees, ground slope, ground hazards and obstacles, general forest lean
 - action to limit the impact to ground growth, canopy, density of trees
 - action to limit the impact on flora, fauna and habitat
 - soil and water protection
- cleaning plant, tools and equipment
- disposing of, recycling and reusing timber and other waste
- key features of these varying site conditions and effects on tree cutting and trimming activities:
 - ground growth
 - ground hazards and obstacles
 - ground slope
- key features of these varying weather conditions and effects on tree cutting and trimming activities:
 - dry, wet and adverse weather conditions
 - low and moderate wind speed and direction
- typical tree defects and how they affect tree cutting activities:
 - splits
 - falling damage
 - fire damage
 - insect infestation
 - pipe
 - shake
 - twist
 - knots and resin pockets
 - the presence of foreign bodies such as stakes and nails
- typical tree stresses and how they affect tree cutting activities:
 - tension (fibres being stretched)
 - compression (fibres being squashed)
 - neutral fibres
- range of chainsaw cutting techniques:
 - bridging cuts

- swinging cuts
- side bind cuts
- delimiting
- boring
- wedge cut
- ripping cuts
- cutting patterns used to optimise time and recovery of product from trees
- cutting sequences used to maintain control of cut sections and minimise cutting problems
- purpose, features, operation and basic non-specialist repair and maintenance of chainsaws
- methods for assessing chain condition
- organisational procedures specific to tree trimming and cutting activities:
 - workplace health and safety with particular emphasis on equipment lock out and use of personal protective equipment
 - communication reporting lines
 - recording and reporting tree cutting outcomes, equipment faults and maintenance requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting
- resources, equipment and materials:
 - chainsaws
 - chainsaw fuel and oil containers
 - support tools appropriate for work tasks (hammer, wedges, logging tape, cant hook and/or breaking bar)
 - mobile plant and equipment appropriate for work tasks (wood chipper and/or loaders)
 - maintenance tools and equipment for chainsaws
 - personal protective equipment suitable for cutting trees and maintaining chainsaws
- specifications:
 - manufacturer's instructions for use and maintenance of equipment
 - work order with specific instructions for tree cutting activities
 - template reports for recording tree cutting outcomes, equipment faults and maintenance requirements
 - organisational procedures for tree trimming and cutting activities.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT2254 Maintain chainsaws

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Application

This unit of competency describes the knowledge and skills required to maintain fuel or electrically powered hand-held chainsaws. The unit includes completing routine maintenance service as well as periodic maintenance servicing and chain sharpening.

The unit applies to individuals who maintain chainsaws for or as part of arboriculture, forestry, horticulture, agriculture, conservation and land management, local government, emergency services and other government agency operations.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for chainsaw maintenance	1.1 Determine maintenance requirements from work order or instruction and, where required, seek clarification from appropriate personnel

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.2 Confirm safety and environmental requirements for the task according to workplace procedures</p> <p>1.3 Identify, assess and take actions to mitigate risks and hazards associated with chainsaw maintenance activities</p> <p>1.4 Plan chainsaw maintenance activities according to manufacturer and workplace requirements</p> <p>1.5 Consult with team members and other appropriate personnel to ensure that chainsaw maintenance activities are coordinated effectively with others in the workplace</p> <p>1.6 Obtain tools and equipment needed for the chainsaw maintenance activities, and check for correct operation and safety</p> <p>1.7 Select, fit and use personal protective equipment</p>
2. Complete chainsaw maintenance	<p>2.1 Follow workplace safety procedures and manufacturer instructions to lock out equipment</p> <p>2.2 Complete routine and frequently required service requirements on chainsaws according to manufacturer instructions and workplace requirements</p> <p>2.3 Complete periodic service requirements on chainsaws according to manufacturer recommendations and workplace requirements</p> <p>2.4 Check chain for bluntness or damage</p> <p>2.5 Remove, sharpen, adjust and replace chain and other components according to manufacturer requirements</p> <p>2.6 Identify, diagnose, tag and report chainsaw faults, malfunctions or irregular operation for repair or replacement</p> <p>2.7 Reassemble serviced chainsaw components, check for operational effectiveness, apply lock-out tag as required and store</p>
3. Complete maintenance records and clean up	<p>3.1 Clear and clean work area according to workplace procedures</p> <p>3.2 Clean, inspect for serviceability and store tools and equipment</p> <p>3.3 Dispose of, recycle or reuse waste materials according to workplace requirements and environmental protection practices</p> <p>3.4 Complete, process and maintain records and reports according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace documentation to determine requirements
Writing	<ul style="list-style-type: none"> Use technical and workplace specific vocabulary to accurately and legibly complete workplace records and forms
Oral communication	<ul style="list-style-type: none"> Ask questions and actively listen to clarify contents of work plans
Numeracy	<ul style="list-style-type: none"> Calculate ratios and measure quantities of oils and fuels

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT2254 Maintain chainsaws	FWPCOT2237 Maintain chainsaws	Clarified Application Updated and added new Performance Criteria Added new knowledge items Updated Foundation Skills, Performance Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT2254 Maintain chainsaws

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on one occasion, the individual has:

- completed the routine and frequently required service requirements for one chainsaw according to manufacturer instructions
- completed the periodic service requirements for one chainsaw according to manufacturer instructions
- checked and sharpened at least two chains according to manufacturer instructions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types, purpose, features and operation of chainsaws
- features and names of different parts of fuel powered and electrically powered chainsaws
- purpose, features and operation of tools and equipment used in chainsaw maintenance activities
- specifications and types of bars, chains and sprockets
- differences between frequent and periodic chainsaw maintenance requirements
- techniques for:
 - removing chains and other chainsaw components
 - assessing chain condition
 - sharpening chains to specified requirements
 - reassembling chainsaw components
 - assessing battery condition, if applicable, and visually inspecting state of electrical cords and plugs for electrically powered chainsaws
- hazards associated with maintaining chainsaws, and methods to minimise associated risks:
 - noise
 - fumes

- mechanical vibration
- hazardous substances
- cuts
- burns
- rotating parts
- electric shock for electrically powered chainsaws
- workplace procedures specific to maintaining chainsaws:
 - workplace health and safety, with particular emphasis on equipment lock-out, use of personal protective equipment (PPE) and safe manual handling
 - communication reporting lines
 - recording and reporting repairs, maintenance activities and equipment faults
- environmental protection practices relevant to maintaining chainsaws:
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing materials
 - disposing of hazardous substances.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace location or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - fuel or electrically powered hand-held chainsaws
 - tools and equipment used to maintain chainsaws
 - consumable chainsaw parts, oil and fuel
 - PPE required in chainsaw maintenance activities
- specifications:
 - access to work order or instruction detailing chainsaw maintenance activities to be carried out by operator
 - access to workplace safety and environmental policies and procedures applicable to chainsaw maintenance activities
 - access to workplace standard operating procedures or operator manual for chainsaws.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT2256 Trim and cut felled trees

Modification History

Release	Comments
Release 2	This version released with FWP Forest and Wood Products Training Package Version 6.3.
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to trim and cut felled trees with a chainsaw and complete operator maintenance.

The unit applies to individuals who trim and cut felled trees as part of arboriculture, forestry, agriculture, conservation and land management, local government, emergency services and other government agency operations. With the exception of minor forest produce, this unit does not apply to commercial harvesting operations.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation, standards and industry codes of practice that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for trimming and cutting felled trees	1.1 Determine job requirements from work order or instruction and, where required, seek clarification from appropriate personnel 1.2 Confirm safety and environmental requirements for the task according to workplace procedures 1.3 Identify, assess and take actions to mitigate risks and hazards associated with trimming and cutting felled trees 1.4 Plan trimming and cutting activities according to work order or instruction and environmental conditions 1.5 Consult and maintain communication with team members and other appropriate personnel to ensure that work is coordinated effectively with others in the workplace 1.6 Obtain tools and equipment needed for the work, and check for correct operation and safety 1.7 Select, fit and use personal protective equipment
2. Assess felled trees visually	2.1 Inspect site for conditions likely to affect safe implementation of trimming and cutting activities 2.2 Identify and report site environmental conditions to supervisor 2.3 Assess felled tree visually to identify defects and stresses within felled tree 2.4 Mark felled trees too dangerous to cut safely, and refer to appropriate personnel
3. Plan cutting felled trees	3.1 Move or stabilise felled tree for safe cutting according to workplace procedures 3.2 Select cutting pattern to optimise time and ensure efficient removal of sections 3.3 Identify options for utilisation of product 3.4 Plan cutting sequence to maintain control of cut sections and minimise cutting problems 3.5 Select cutting positions, considering felled tree stresses 3.6 Clear debris from work area to allow safe access and prevent saw damage and personal injury
4. Use chainsaw to trim and cut felled trees	4.1 Monitor location and movement of other personnel, and modify work to ensure safety 4.2 Establish and maintain communication with team members to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>ensure safety</p> <p>4.3 Secure felled tree section on each side of planned cut as required, and evaluate and control potential movement</p> <p>4.4 Operate chainsaw to cut felled tree and limbs, and adjust cutting technique in response to movement and condition of felled tree and limbs</p> <p>4.5 Apply retrieval techniques for stuck, pinched or jammed part of chainsaws</p> <p>4.6 Prepare cut sections for removal from site</p>
5. Complete equipment maintenance	<p>5.1 Follow workplace safety procedures and manufacturer instructions to lock out equipment</p> <p>5.2 Check chain for bluntness or damage</p> <p>5.3 Remove, sharpen, adjust or replace chain and other components according to manufacturer recommendations</p> <p>5.4 Report trimming and cutting records, equipment faults and maintenance requirements to appropriate personnel</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace documentation to determine requirements
Writing	<ul style="list-style-type: none"> Use technical and workplace specific vocabulary to accurately and legibly complete workplace records and forms
Oral communication	<ul style="list-style-type: none"> Ask questions and actively listen to clarify contents of work plans

Unit Mapping Information

Code and title	Code and title	Comments	Equivalence status
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current version	previous version		
FWPCOT2256 Trim and cut felled trees Release 2	FWPCOT2239 Trim and cut felled trees Release 1	Minor change to Performance Evidence to correct an editorial error	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT2256 Trim and cut felled trees

Modification History

Release	Comments
Release 2	This version released with FWP Forest and Wood Products Training Package Version 6.3.
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- assessed, planned and conducted the trimming and cutting on six felled trees using a chainsaw and demonstrated three or more cut types from the list below:
 - bridging cuts
 - swinging cuts
 - side bind cuts
 - boring cuts
 - wedge cuts
 - ripping cuts
 - step cuts.

In performing this work, there must be evidence that the individual has:

- followed workplace policies and procedures, current workplace health and safety legislation, regulations and related industry standards and codes of practice applicable to trimming and cutting felled tree operations
- checked and sharpened or changed a saw chain post trimming and cutting operation on one occasion according to manufacturer instructions.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental protection measures suitable for a worksite where trimming and cutting operations are performed:

- noise control
- protection of flora, fauna and habitat
- protection of soil
- protection of water
- disposal, recycling and reuse of waste
- cleaning of plant, equipment and tools
- protection of adjacent land uses and fixed assets
- vehicle control
- access restrictions
- fire prevention
- protection of cultural heritage
- hazard control measures suitable for a worksite where trimming and cutting operations are performed, related to:
 - trees and other vegetation
 - ground conditions
 - noise
 - fire and other emergency situations
 - vehicle and traffic access
 - foot access
 - plant, tools and equipment
 - weather conditions
 - adjacent land uses
 - dangerous goods
- tree defects and how they affect tree cutting activities:
 - splits
 - falling damage
 - fire damage
 - insect infestation
 - pipe
 - shake
 - twist
 - knots and resin pockets
 - the presence of foreign bodies such as stakes and nails
- felled tree stresses and how they affect tree cutting activities:
 - tension (fibres being stretched)
 - compression (fibres being squashed)
 - neutral fibres
- chainsaw cutting techniques:
 - bridging cut
 - swinging cut

- side bind cut
- boring cut
- wedge cut
- ripping cut
- step cut
- cutting patterns used to optimise time and recovery of product from felled trees
- cutting sequences used to maintain control of cut sections and minimise cutting problems
- purpose and procedures for routine operator maintenance of chainsaws
- procedures used to free a pinched or stuck chainsaw
- methods for assessing chain condition
- workplace procedures specific to felled tree trimming and cutting activities:
 - workplace health and safety, with particular emphasis on equipment lock-out and use of personal protective equipment (PPE)
 - communication reporting lines
 - reporting felled tree cutting outcomes, equipment faults and maintenance requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting
- resources, equipment and materials:
 - chainsaw and accessories
 - suitable felled trees to trim and cut
 - PPE required in trimming and cutting felled trees
 - communication system
- specifications:
 - access to workplace safety and environmental policies and procedures applicable to trimming and cutting operations and chainsaw use
 - access to workplace standard operating procedures or operator manual for chainsaws.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT3202 Navigate in remote or trackless areas

Modification History

Release	Comments
Release 2	This version released with FWP Forest and Wood Products Training Package Version 3.0.
Release 1	This version released with FWP Forest and Wood Products Training Package Version 2.0.

Application

This unit of competency describes the outcomes required to navigate in untracked, remote areas in situations where difficult environmental conditions and poor visibility are likely to occur. The unit includes interpretation and use of maps and other navigation aids.

The unit applies to a Forestry Worker, Plantation Worker, Forest Harvester, Harvesting Technical Forestry Technician, Tree Planter, Mobile Equipment Operator and Arboriculture Technician.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Forest Growing and Management

Harvesting and Haulage

Sawmilling and Processing

Elements and Performance Criteria

Element	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>

1. Prepare for navigation	<p>1.1 Identify and gather information and relevant factors and check with appropriate personnel.</p> <p>1.2 Select suitable maps, equipment and navigation aids and check for accuracy, currency and operational effectiveness.</p> <p>1.3 Detect and correct faults or errors in maps and equipment.</p> <p>1.4 Establish communication with others in line with WHS and organisational requirements</p>
2. Plan the route	<p>2.1 Plan route in line with work instructions and WHS requirements.</p> <p>2.2 Examine maps to identify relevant symbols, information, navigation data and environmental requirements.</p> <p>2.3 Calculate accurate grid and magnetic bearings using maps and equipment in line with assignment instructions.</p> <p>2.4 Plan emergency exit routes and contingencies to combat other risks.</p>
3. Conduct navigation	<p>3.1 Undertake navigation in line with planned route and schedule.</p> <p>3.2 Orientate maps are correctly to surroundings in line with planned route.</p> <p>3.3 Use equipment and navigation aids in line with manufacturer recommendations.</p> <p>3.4 Navigate alternative routes to bypass obstacles and improve efficiency of course.</p> <p>3.5 Minimise impact on the environment as a result of navigation.</p> <p>3.6 Record and report navigation activities.</p>

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	<ul style="list-style-type: none"> • interpret scales, symbols, grid references, distance and data included on maps and navigation equipment • estimate travel time and distances • locate own position on a map.
Planning and organising skills to:	<ul style="list-style-type: none"> • estimate resource and equipment requirements • effectively bypass obstacles.
Problem solving skills to:	<ul style="list-style-type: none"> • identify and solve problems with equipment and navigation route.

Range of Conditions

Not Applicable

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3202 Navigate in remote or trackless areas Release 2	FWPCOT3202 Navigate in remote or trackless areas Release 1	Minor typographical errors corrected	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3202 Navigate in remote or trackless areas

Modification History

Release	Comments
Release 2	This version released with FWP Forest and Wood Products Training Package Version 3.0.
Release 1	This version released with FWP Forest and Wood Products Training Package Version 2.0.

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- follow organisational policies and procedures for navigating in a remote or trackless area
- select, interpret, and use maps and other written and diagrammatic information for navigation
- use maps, compass and navigation aids to plan routes and navigate in remote or trackless area which must be either:
 - standard magnetic compass using latitude/longitude and Universal Transverse Mercator (UTM) coordinate systems
 - global positioning system (GPS)
 - cadastral maps (maps that show the boundaries and ownership of land parcels)
 - topographic maps
 - general maps
- plan and conduct an efficient navigation, effectively bypassing obstacles within designated timeframes
- maintain navigation tools and equipment
- establish and maintain effective communication with appropriate personnel as required
- record navigation activities.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- regulations, standards, codes of practice and established safe practices for navigating in a remote or trackless area

- environmental protection requirements, including the safe disposal of waste material and returning the environment to its original or near to original condition on completion of activity
- organisational and site standards, requirements, policies and procedures for navigating in remote or trackless areas
- factors that may affect navigation, including:
 - types of terrain and gradient
 - weather conditions
 - obstacles
 - distance
 - estimated travelling time
 - availability of resources, including water, rest stops, camp sites
 - access and exit routes
- use and features of various maps, images and charts including:
 - cadastral and topographic maps
 - charts
 - guide books
 - photographs and other digital imagery
 - sketches
 - diagrams
- representation of topographic features on maps and plans, including:
 - grid lines and numbers
 - contour lines
 - magnetic variation
 - scale
 - map legend
 - local features
 - markers and beacons
 - water depth
- common scales and reference information used on maps and plans
- features and uses of environmental navigation aids:
 - survey markers
 - track markers and beacons
 - signs
 - arrows
 - natural landmarks and reference points
- purpose, features and operation of navigation equipment, and procedures for their safe use and maintenance, including
 - global positioning system (GPS) device
 - magnetic compass, including adjustment for local magnetic variation
 - locator beacons

- personal protective equipment and clothing
- techniques for estimating distance travelled within a particular activity context
- established communication modes, methods and protocols
- procedures for recording and reporting workplace information.

Assessment Conditions

The following resources must be made available:

- site to navigate
- navigation equipment
- work order, workplace requirements and site standards for navigating in remote or trackless areas.
- communication devices.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT3238 Operate a pole saw

Modification History

Release	Comments
Release 2	This version released with FWP Forest and Wood Products Training Package Version 3.0.
Release 1	This version released with FWP Forest and Wood Products Training Package Version 2.0.

Application

This unit of competency describes the outcomes required to trim high branches reachable with a power driven pole saw and to promote tree growth by trimming and felling excess branches.

Power driven pole saw in this unit refers to professional standard pole-mounted chain saws that are typically fuel types, but may be battery powered, and generally telescopic.

It applies to those who operate a pole saw in a forest environment and includes equipment maintenance.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Forest Growing and Management

Harvesting and Haulage

Elements and Performance Criteria

Element	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Prepare for	1.1 Identify and follow WHS, environmental, legal and organisational

trimming	<p>requirements for operating a pole saw.</p> <p>1.2 Review work order and clarify with appropriate personnel.</p> <p>1.3 Select equipment appropriate to work requirements and check for serviceable condition in line with manufacturer recommendations.</p> <p>1.4 Carry out pre-startup checks of pole saw in line with site requirements.</p> <p>1.5 Establish and maintain communication with others to ensure safety.</p>
2. Assess trees	<p>2.1 Identify and assess tree type, location and stability for safe working conditions.</p> <p>2.2 Plan the trim of a tree in line with site procedures and environmental conditions.</p> <p>2.3 Identify trees unable to be trimmed safely and refer to appropriate personnel.</p> <p>2.4 Determine whether the height of the branch is within safe reach when using the pole saw</p> <p>2.5 Establish general falling direction of branches and limbs to be trimmed and identify clear escape route.</p>
3. Trim trees	<p>3.1 Trim accessible branches and knots to specifications in line with manufacturer recommendations and organisational safe work practices for angle and height allowances.</p> <p>3.2 Monitor movement and whereabouts of other personnel to ensure work site is safe.</p> <p>3.3 Undertake sequence of cuts to trim tree branches.</p> <p>3.4 Operate pole saw in line with safety regulations, adjusting technique in response to condition of the tree.</p> <p>3.5 Diagnose unexpected characteristics of a tree during trimming operations and review tree assessment if required.</p> <p>3.6 Complete cutting once initiated, to minimise splitting.</p> <p>3.7 Clear cut branches from the site in line with standard operating procedures and environmental requirements.</p> <p>3.8 Record and report trimming activity.</p>
4. Conduct operator maintenance	<p>4.1 Follow lock-out procedures in line with WHS legislation and site procedures.</p> <p>4.2 Inspect condition of saw and other equipment on completion of trimming activities.</p> <p>4.3 Remove, sharpen, adjust or replace chain and other components, in line with manufacturer recommendations.</p> <p>4.4 Recycle, re-use or dispose of blunt or damaged chain and other</p>

	<p>components in line with environmental requirements.</p> <p>4.5 Clear pole saw of dust, shavings and debris and check to make sure it meets relevant operational standards.</p> <p>4.6 Record and report equipment faults and maintenance activity.</p>
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Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	<ul style="list-style-type: none"> sharpen chain with files set to correct angles.
Writing skills to:	<ul style="list-style-type: none"> record trimming activity and maintenance records.
Problem solving skills to:	<ul style="list-style-type: none"> to identify problems and equipment faults and select treatments identify appropriate branches to be trimmed assess the capacity and suitability of equipment to the task of trimming trees.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3238 Operate a pole saw Release 2	FWPCOT3238 Operate a pole saw Release 1	Minor typographical errors corrected.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3238 Operate a pole saw

Modification History

Release	Comments
Release 2	This version released with FWP Forest and Wood Products Training Package Version 3.0.
Release 1	This version released with FWP Forest and Wood Products Training Package Version 2.0.

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- undertake trimming with a pole saw to correctly and safely demonstrate competency in the following:
 - assess trees and site conditions to work safely
 - correct use of safety attire and protective equipment
 - conduct pre-operational checks of pole saw
 - trim trees at safe height and angle in line with manufacturer recommendations and organisational safe working practices
 - select/adjust trimming sequence and cutting techniques in response to various tree characteristics and site conditions
 - conduct operator maintenance.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- workplace requirements and site standards for carrying out pole saw operations
- environmental risks and hazards associated with trimming trees with a pole saw
- characteristics of trees and timber defects
- Branch Bark Ridge (BBR) and Bark Branch Collar (BBC)
- appropriate trimming sequence and cutting techniques
- manufacturer recommendations and organisational safe working practices for operating a pole saw at safe height and angle limits
- methods for assessing condition of pole saw chain
- established communication channels and protocols

- problem identification and resolution strategies, and common fault finding techniques
- procedures for recording and reporting workplace information.
-

Assessment Conditions

The following resources must be made available:

- a professional standard fuel or battery powered pole-mounted chain saw with telescopic extension
- work order, workplace requirements and site standards for conducting pole saw operations
- relevant personnel for the purposes of communicating information.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT3259 Operate a four wheel drive on unsealed roads

Modification History

Release	Comment
1	Replaces equivalent unit FPICOT3259 Operate a four wheel drive on unsealed roads, which was first released with FPI11 Forest and Forest Products Training Package Version 1.0. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to safely operate a four wheel drive (4x4) vehicle on unsealed roads.

The unit applies to operating a 4x4 vehicle in a variety of work settings with different terrains.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction.

Pre-requisite Unit

Nil

Unit Sector

Forest Growing and Management

Harvesting and Haulage

Sawmilling and Processing

Timber Manufactured Products

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Identify four-wheel	1.1 Access, interpret and apply information relevant to

ELEMENTS	PERFORMANCE CRITERIA
drive specific terms and terminology	<p>operating a four-wheel drive vehicle on unsealed roads.</p> <p>1.2 Identify the structural and handling differences between a conventional two-wheel drive vehicle and a four-wheel drive vehicle.</p> <p>1.3 Identify four-wheel drive techniques.</p>
2. Conduct checks of 4x4 vehicle and equipment	<p>2.1 Perform pre-start checks.</p> <p>2.2 Secure loads in line with organisational, workplace safety and environmental requirements.</p> <p>2.3 Select suitable navigation aids where necessary.</p> <p>2.4 Advise passengers of any special safety precautions to be taken when traversing rough terrain.</p> <p>2.5 Check that tyre pressure is suitable for terrain and that it is changed as required in line with organisational procedures.</p> <p>2.6 Select and access maintenance equipment prior to departure after considering the contextual issues.</p>
3. Prepare for 4x4 operations	<p>3.1 Identify and follow work health and safety (WHS), environmental, and organisational requirements relevant to operating a 4x4 vehicle.</p> <p>3.2 Determine type of operation and ensure safe operating conditions.</p> <p>3.3 Establish communication with others and choose the required safety mechanisms in line with organisational requirements.</p>
4. Operate 4x4 vehicle on unsealed terrain types	<p>4.1 Continually monitor the track to identify hazards, assess risks, and select the best route in line with WHS and environmental requirements.</p> <p>4.2 Identify situations where the engagement of four-wheel drive is required and engage front hubs or centre differential lock where fitted.</p> <p>4.3 Use appropriate range, gear, speed, driving and braking technique to negotiate a range of terrain types while maintaining control of vehicle at all times.</p> <p>4.4 Check brakes and undercarriage after negotiating varying terrain.</p> <p>4.5 Park and shut down 4x4 vehicle in line with manufacturer specifications and organisational requirements.</p>
5. Operate 4x4 vehicle on	5.1 Inspect intended 4x4 vehicle path prior to negotiation of slope.

ELEMENTS	PERFORMANCE CRITERIA
a steep slope	<p>5.2 Use appropriate range, gear, speed, driving and braking technique to negotiate a steep slope, while maintaining control of vehicle.</p> <p>5.3 Use control braking to ascend and descend, and avoid skidding.</p> <p>5.4 Maintain traction in line with requirements of 4x4 vehicle.</p> <p>5.5 Apply appropriate automatic and manual techniques when 4x4 vehicle cannot proceed any further on a steep slope due to traction problems.</p>
6. Perform maintenance and minor repairs on 4x4 vehicles	<p>6.1 Perform operational maintenance and minor repairs as detailed in the vehicle operator manual and report vehicle defects to the appropriate person.</p> <p>6.2 Demonstrate safe use of a jack to support a 4x4 vehicle while changing a tyre under relevant road terrains and conditions within the operating environment</p> <p>6.3 Clean and store 4x4 vehicle and equipment after use in line with manufacturer specifications and organisational procedures.</p> <p>6.4 Document maintenance and minor repairs in line with organisational procedures.</p>

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.	
Numeracy skills to:	<ul style="list-style-type: none"> • correctly adjust tyre pressure and follow operating instructions on instruments for checking, repairing and operating a four wheel drive vehicle • estimate the impact of shape of terrain on driving conditions • estimate time of a journey, water depth and fuel consumption.
Reading skills to:	<ul style="list-style-type: none"> • follow instructions in safety and equipment manuals when checking and operating four wheel drive vehicle • interpret diagrams on equipment or in operational manuals.
Problem solving skills to:	<ul style="list-style-type: none"> • identify problems and equipment faults in four wheel drive vehicles and demonstrate appropriate response procedures • identify potential hazards and operational faults when driving four wheel drive vehicles and demonstrate appropriate response procedures • demonstrate appropriate response procedures to driving conditions when driving four wheel drive vehicles.

Range of Conditions

Not Applicable

Unit Mapping Information

FPICOT3259 Operate a four wheel drive on unsealed roads

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3259 Operate a four wheel drive on unsealed roads

Modification History

Release	Comment
1	<p>Replaces equivalent unit FPICOT3259 Operate a four wheel drive on unsealed roads, which was first released with FPI11 Forest and Forest Products Training Package version 1.0. This is the first release of this unit in the new standards format.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including 'Required Skills and Knowledge, Evidence Guide and Range Statement'.</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- follow applicable workplace safety, environmental and regulatory requirements and codes of practice relevant to operating a 4x4 vehicle
- follow organisational policies and procedures relevant to operating a 4x4 vehicle, including:
 - own work role and responsibilities
 - procedural manuals
 - quality and continuous improvement
 - WHS, emergency and evacuation procedures
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements
- communicate and work safely with others in rough terrain when operating a 4x4 vehicle
- perform pre-start checks of vehicle and equipment suitable to different terrains by checking loads and tyre pressure, selecting navigation aids and advising passengers of safety precautions
- operate safely, a 4x4 vehicle, on unsealed road conditions and different terrain types, including negotiating steep slopes, by identifying hazards and assessing risks
- use appropriate range, gear, speed, driving and braking techniques safely when operating a 4x4 vehicle on a steep slope

- demonstrate safe use of a jack to support a 4x4 vehicle while changing a tyre under relevant road terrains and conditions within the operating environment
- park and shut down 4x4 vehicle in line with *manufacturer specifications* and organisational requirements
- perform and document operational maintenance as permitted by vehicle operator handbook.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- four wheel drive operational information
- structural differences between conventional two wheel drive and a four wheel drive including:
 - recovery hooks and mounting features
 - purpose and use of front wheel hubs
 - factors affecting tyre size, fitment, rating and pressure
- applicable regulations, standards, codes of practice and established safe practices relevant to the operating a 4x4 vehicle
- road rules, regulations, permit and licence requirements of the relevant state or territory
- environmental protection requirements including the safe disposal of waste material
- prestart checks for 4 x 4 vehicle on:
 - fuel, either diesel, gas or petrol
 - water
 - oil
 - brake and transmission fluid levels
 - battery water levels and electrolyte checks
 - tyres
 - belts
 - leads
 - hydraulic lines and connections
 - air cleaners
 - brakes
 - off-road safety equipment
 - traction devices
- Types of communication equipment including:
 - personal location beacon (PLB)
 - flares
 - markers
 - phone
 - radio
 - V-Sheet

- safe operating conditions for a 4 X 4 vehicle
 - interpreting weather conditions to determine suitability for driving
 - determining food, water, PPE (sunglasses, high-visibility vest, etc.) and clothing requirements for journey
 - selecting routes to minimise damage to the environment
 - on and off-road conditions
 - traffic pattern and density
 - visibility
 - loading of four-wheel drive, including techniques to reduce overloading
- types of environmental risks and hazards associated with operating a 4x4 vehicle on unsealed roads including:
 - rocks and other unexpected obstacles
 - damage to vehicle
 - tidal influences
 - fire in vehicle
 - faulty brakes
 - leaking fuel
 - faulty steering mechanism on vehicle
 - animals and objects in vehicle path
 - crocodiles and snakes in some areas
 - windy or foggy sections of terrain
 - steep slopes
 - side slopes
 - slippery surfaces
 - land slides
 - overhead tree limbs
 - black ice
 - towing trailers
 - other vehicles
 - fallen trees, limbs and logs
 - icy terrain
 - flooded terrain
 - oil on road
 - parked vehicles on road
 - pedestrians on or near the road
 - poor visibility
- 4x4 driving techniques in different terrains including:
 - smooth
 - rough
 - uneven

- slippery
- wet
- boggy
- sandy
- steep or hilly
- rock
- icy
- snow
- mud, including:
 - brown clay
 - black silt
 - salt pan mud
 - red
- hard ground
- water
- operational knowledge of a 4x4 vehicle, including controls, instruments, indicators and their use
- tyre management principles for checking, changing and maintenance
- workplace communication channels and protocols
- techniques for travelling in convoy
- problem identification and resolution strategies, and common fault-finding techniques relevant to safely operating a four wheel drive vehicle
- types of tools and equipment relating to a 4x4 vehicle, and procedures for their safe use and maintenance
- maintenance equipment including spares and fluids
- procedures for recording and reporting workplace information.

Assessment Conditions

The following resources must be made available:

- workplace location or simulated workplace offering conditions including different terrain on unsealed roads and steep slopes
- materials and equipment relevant to undertaking work applicable to this unit, including manual or automatic four-wheel drive or all-wheel drive
- specifications and work instructions relevant to workplace requirements and the safe operation of four wheel drive vehicles
- personal protective equipment required for operating a four wheel drive on unsealed roads
- relevant personnel for the purposes of communicating information.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT3301 Trim trees using a pole saw

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to use a fuel or battery powered pole saw to trim tree branches within safe height and angle limits.

The unit applies to individuals who operate pole saws to trim tree branches as part of arboriculture, forestry, agriculture, conservation and land management, local government, emergency services and other government agency operations.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for trimming	1.1 Determine job requirements from work order or instruction and, where required, seek clarification from appropriate personnel 1.2 Confirm safety and environmental requirements for the task

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>according to workplace procedures</p> <p>1.3 Identify, assess and take actions to mitigate risks and hazards associated with using pole saw to trim branches</p> <p>1.4 Plan trimming activities according to workplace procedures</p> <p>1.5 Consult with team members and other appropriate personnel to ensure that work is coordinated effectively with others in the workplace</p> <p>1.6 Obtain pole saw and other support equipment needed for the work</p> <p>1.7 Select, fit and use personal protective equipment</p> <p>1.8 Conduct pre-start-up checks of pole saw to determine serviceability according to manufacturer instructions</p>
2. Assess trees	<p>2.1 Identify and assess tree type, location and stability for safe working conditions</p> <p>2.2 Plan trim of tree according to workplace procedures and environmental conditions</p> <p>2.3 Identify trees unsafe to be trimmed, and refer to supervisor</p> <p>2.4 Identify hazards in immediate vicinity of the tree to be trimmed, and refer to supervisor</p> <p>2.5 Determine whether the height of branches to be trimmed is within safe reach and safe working angle when using the pole saw</p> <p>2.6 Establish general falling direction of branches to be trimmed, and identify clear escape routes</p>
3. Trim trees	<p>3.1 Trim accessible branches within safe height and angle limits according to work order or instructions and manufacturer recommendations</p> <p>3.2 Monitor location and movement of people in work area to ensure work site is safe</p> <p>3.3 Undertake sequence of cuts to trim tree branches</p> <p>3.4 Operate pole saw according to workplace procedures and manufacturer instructions, adjusting technique in response to condition of the tree</p> <p>3.5 Identify unexpected tree characteristics during trimming operations, and review tree assessment if required</p> <p>3.6 Complete cutting once initiated to minimise splitting</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.7 Clear cut branches from the site according to workplace procedures and environmental requirements
4. Conduct operator maintenance	<p>4.1 Follow workplace safety procedures and manufacturer instructions to lock out equipment</p> <p>4.2 Inspect condition of pole saw and other equipment on completion of trimming activities</p> <p>4.3 Clear pole saw of dust, shavings and debris, and check for serviceability</p> <p>4.4 Remove, sharpen, adjust or replace chain and other components according to manufacturer recommendations</p> <p>4.5 Recycle, re-use or dispose of blunt or damaged chain and other components according to workplace procedures and environmental requirements</p> <p>4.6 Record and report equipment faults and maintenance activity</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace documentation to determine requirements
Writing	<ul style="list-style-type: none"> Use technical and workplace specific vocabulary to accurately and legibly complete workplace records and forms
Oral communication	<ul style="list-style-type: none"> Ask questions and actively listen to clarify contents of work plans

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3301 Trim	FWPCOT3238	Retitled	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
trees using a pole saw	Operate a pole saw	Minor updates to Application, Performance Criteria and Knowledge Evidence Added new Performance Criteria Updated Foundation Skills, Performance Evidence and Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3301 Trim trees using a pole saw

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- assessed, planned and conducted the trimming of the accessible branches of six trees within safe height and angle limits using a pole saw
- followed workplace policies and procedures, current workplace health and safety legislation, regulations and related industry standards and codes of practice in completing the tree trimming work
- inspected and carried out routine operator maintenance on one pole saw on one occasion, including removing, sharpening, replacing and adjusting the chain, according to manufacturer requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types and components of pole saws
- uses of pole saws to trim trees
- procedures for pole saw operations
- risks and hazards associated with trimming trees with a pole saw
- characteristics of trees and timber defects
- trimming sequence and pole saw cutting techniques for trimming trees
- safe height and angle limits for pole saw use when trimming trees
- criteria for assessing condition of pole saw chain
- procedures for removing, sharpening, adjusting or replacing pole saw chain and other components
- established communication channels and protocols for trimming trees with a pole saw
- problem identification and resolution strategies related to trimming trees with a pole saw

- procedures for recording and reporting workplace information related to trimming trees with a pole saw.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - an industry standard fuel or battery powered pole saw
 - tools and equipment used to maintain pole saws
 - consumable pole saw parts, oil and fuel
 - personal protective equipment required in pole saw operations
- specifications:
 - access to workplace safety and environmental policies and procedures applicable to use of pole saws for trimming branches
 - access to workplace procedures and forms for recording pole saw maintenance and faults
 - access to workplace standard operating procedures or operator manual for pole saws.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT3314 Comply with soil and water protection

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to carry out soil erosion and sediment control works and pollution prevention measures in forestry operations and other work environments.

The unit applies to individuals who work as forestry technicians, nursery technicians, forestry operations supervisors, tree planters, silviculturists, arboriculture technicians and mobile equipment operators to implement erosion, sediment control and pollution prevention measures in a variety of work settings, including in forest, horticultural, domestic, local council and emergency services environments.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Determine soil and water protection requirements for the work

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>from work order or instruction and, where required, seek clarification from appropriate personnel</p> <p>1.2 Identify, assess and take actions to mitigate safety risks and hazards associated with soil and water protection operations</p> <p>1.3 Identify and report existing and potential environmental risks and hazards to relevant personnel</p> <p>1.4 Consult and maintain communication with team members and other appropriate personnel to ensure that work is coordinated effectively with others in the workplace</p> <p>1.5 Select tools, equipment and machinery needed for the work, and check for correct operation and safety</p>
2. Conduct erosion and other pollutant control measures	<p>2.1 Identify soil characteristics, weather conditions, environmental features and other factors likely to influence soil and water protection measures</p> <p>2.2 Apply erosion, sediment and other pollution control measures when conducting the work according to forest operational plans</p> <p>2.3 Identify situations requiring specialist advice, and seek assistance</p> <p>2.4 Document and report work activities according to workplace procedures</p>
3. Monitor work practices that impact on soil and water conditions	<p>3.1 Monitor and make recommendations to adjust work practices to meet changing soil and water conditions</p> <p>3.2 Monitor and maintain soil erosion and sediment control works and pollution prevention measures according to workplace requirements</p> <p>3.3 Identify and report work practices that are non-compliant with soil and water protection requirements to appropriate personnel</p> <p>3.4 Identify and make recommendations on ways of improving work practices to enhance soil and water protection</p> <p>3.5 Make recommendations for updating forest operational plan and workplace procedures to enhance soil and water protection as required</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret workplace documentation, including legislation, codes of practice and reports to determine requirements
Writing	<ul style="list-style-type: none"> Use technical and workplace specific vocabulary to accurately and legibly complete workplace records and forms for soil and water protection operations
Oral communication	<ul style="list-style-type: none"> Select and use appropriate spoken communication strategies with work colleagues and other personnel on site
Numeracy	<ul style="list-style-type: none"> Complete routine calculations to report on location and dimensions of soil and water protection operations Interpret graphical information on soil and water conditions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3314 Comply with soil and water protection	FWPCOT3258 Comply with soil and water protection	Clarified Application Updated and added new Performance Criteria Deleted Element and incorporated its Performance Criteria Updated Foundation Skills, Performance Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3314 Comply with soil and water protection

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- implemented either a soil or a water protection procedure in an operational work setting on one occasion
- followed workplace policies and procedures, current legislation, regulations and related industry standards and codes of practice applicable to soil and water protection operations
- monitored work practices in one operational work setting for consistency with soil and water protection requirements and made at least one recommendation on ways of improving work practices to enhance soil and water protection.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- regulations, standards, codes of practice and established safe practices for soil and water protection procedures
- applicable regulations from all levels of government that affect operations in relation to soil and water protection:
 - regional agreements
 - relevant codes of practice
 - operational plans
- workplace standards, requirements, policies and procedures relevant to soil and water protection
- techniques and measures relevant to erosion mitigation:
 - walk-over techniques
 - minimal disturbance techniques
 - crown and cross fall drainage

- cross bank drainage
- relief culverts on roads
- mitre and table drains on roads
- armouring/gravelling of roads
- crossing and draining surfaces
- batter stabilisation
- contour banks and channels
- gabions
- sediment basins
- riparian buffer zones
- outlet protection structures
- revegetation
- factors that are likely to influence soil and water protection measures:
 - track and road maintenance
 - drainage structures
 - setting of contour lines
 - slope measurement techniques
 - boundaries and survey markers
 - site preparation techniques
 - site cultivation techniques
 - disposal of logging waste materials
 - windrowing placement and techniques
 - tree selection and felling techniques
 - log dump locations and techniques
 - log extraction and haulage techniques
 - clearing techniques
 - soil types
- environmental features that can be adversely affected if soil erosion occurs, or if inundated with sediment of other pollutants:
 - trees, understorey and other vegetation
 - drainage lines and drainage depressions
 - water course, creeks and rivers
 - lakes, swamps and wetlands
 - aquatic species
 - steep slopes
 - caves
 - historic and cultural heritage sites
 - road and water supply infrastructure
- other pollution control measures:
 - fuel containment barriers

- chemical spillage barriers
- containment and removal of work waste, rubbish litter and human waste
- risks and hazard identification relevant to soil and water protection
- established communication channels and protocols for compliance with soil and water protection
- procedures for recording and reporting workplace information related to soil and water protection activities.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tools, equipment and machinery required for soil and water protection operations
 - personal protective equipment used in soil and water protection operations
 - communication system
- specifications:
 - access to workplace policies and procedures applicable to soil and water protection operations
 - access to operational plans
 - access to access to workplace procedures and forms for recording soil and water protection activities.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT3325 Operate four wheel drive vehicle on unsealed roads

Modification History

Release	Comments
Release 1	This version released with Forest and Wood Products Training Package Version 7.0.

Application

This unit of competency describes the outcomes required to safely operate a four wheel drive vehicle on unsealed roads.

The unit applies to individuals who operate four wheel drive vehicles in a variety of work settings and industry sectors, including forestry, agriculture, construction, tourism and energy.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

Individuals must hold a driver licence or a provisional driver licence prior to commencing this unit of competency.

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for operations	1.1 Access, interpret and apply vehicle manufacturer information relevant to operating a four wheel drive vehicle on unsealed roads 1.2 Identify the structural and handling differences between a

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	conventional two wheel drive vehicle and a four wheel drive vehicle 1.3 Determine type of operation and ensure safe operating conditions 1.4 Identify, fit and use suitable personal protective equipment 1.5 Perform pre-start checks 1.6 Establish and check communication with others, including convoy procedures 1.7 Secure loads according to safety, environmental and regulatory requirements 1.8 Research weather and topography for a planned trip on unsealed roads
2. Operate vehicle on unsealed roads	2.1 Check and change tyre pressure suitable for unsealed road according to workplace procedures 2.2 Continually monitor the track to identify hazards, assess risks and select the best route according to safety and environmental requirements 2.3 Identify situations where the engagement of four wheel drive is required and engage front hubs or centre differential lock where fitted 2.4 Use range, gear, speed, driving and braking technique appropriate to surface conditions while maintaining control of vehicle at all times 2.5 Check brake operation and undercarriage after operating vehicle on unsealed road conditions 2.6 Park and shut down vehicle
3. Ascend and descend slopes less than 15 degrees	3.1 Inspect intended vehicle path before negotiation of slope 3.2 Use appropriate range, gear, speed, driving and braking technique to negotiate a slope while maintaining control of vehicle 3.3 Use appropriate braking methods, user applied and vehicle controlled function, where fitted, to descend a slope 3.4 Maintain traction and minimise wheel spin 3.5 Apply appropriate automatic and manual techniques when vehicle cannot proceed any further on a slope
4. Complete operation	4.1 Conduct a post-trip inspection of vehicle 4.2 Complete post-trip documentation, including maintenance and minor repairs reports

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and comprehend basic factual information on four wheel drive vehicle equipment labels and in manufacturer manuals
Writing	<ul style="list-style-type: none"> Complete workplace forms using required format, industry terminology and structure
Oral communication	<ul style="list-style-type: none"> Use effective verbal communication techniques to convey instructions to people involved in four wheel drive operation
Numeracy	<ul style="list-style-type: none"> Estimate time of a journey and fuel consumption

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3325 Operate four wheel drive vehicle on unsealed roads	FWPCOT3259 Operate a four wheel drive on unsealed roads	Updated unit title Updated Elements and Performance Criteria Updated and added new Knowledge Evidence and Performance Evidence Reworded Foundation Skills Updated Assessment Conditions	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3325 Operate four wheel drive vehicle on unsealed roads

Modification History

Release	Comments
Release 1	This version released with Forest and Wood Products Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has performed each of the following tasks while driving a four wheel drive vehicle on unsealed roads:

- driven three separate ascents and three separate descents less than 15 degrees. In conducting this task, the individual has:
 - selected appropriate range and gearing
 - used foot brake effectively to control descent speed
 - used vehicle hill descent or similar function where available
 - used the most appropriate wheel placement
- used on one occasion traction aids and brakes when driving ascents and descents less than 15 degrees
- performed on two occasions a forward and a reverse stop start recovery on an incline according to the type of transmission
- demonstrated on one occasion the setting of vehicle controls for operation on unsealed roads. This may include:
 - the use of free wheel hubs if fitted
 - selection of low range in either manual or automatic vehicles
 - use of terrain selection system if fitted
 - use of differential locks if fitted
 - activation of traction control or terrain selection mode if fitted and where effective
- driven vehicle and operated vehicle controls and technology to avoid traction loss on unsealed roads in three of the following conditions:
 - loose gravel
 - ruts
 - loose material in centre and sides of track
 - corrugations

- mud
- rocky
- sand
- snow
- side slopes
- rutted
- water crossing
- fitted and used personal protective equipment (PPE).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- structural differences between conventional two wheel drive and a four wheel drive, including:
 - purpose and use of front wheel hubs
 - factors affecting tyre selection and pressure
- environmental protection requirements affecting four wheel drive operations
- common unsealed road surface hazards:
 - loose gravel
 - ruts
 - loose material in centre and sides of track
 - corrugations
- pre-start checks for four wheel drive vehicle
- types of communication equipment, including:
 - personal location beacon (PLB)
 - phone
 - radio
 - vehicle/personnel tracking devices
- safe operating conditions for a four wheel drive vehicle:
 - interpreting weather conditions to determine suitability for driving
 - selecting routes to minimise damage to the environment
 - visibility
 - loading of four wheel drive, including techniques to reduce overloading
 - braking techniques
 - cornering techniques
- types of environmental risks and hazards associated with operating a four wheel drive vehicle on unsealed roads, including:
 - rocks and other unexpected obstacles
 - damage to vehicle
 - animals and objects in vehicle path

- slippery surfaces
- overhead tree limbs
- other vehicles
- fallen trees, limbs and logs
- flood
- poor visibility
- tyre pressure management principles for varying terrain types
- principles for effective self-recovery of vehicle via driving skills (not the use of recovery equipment such as straps or winches)
- communication channels and protocols
- techniques for travelling in convoy
- procedures for recording and reporting workplace information.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a work environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - site with access to unsealed roads
 - manual or automatic four wheel drive vehicle or all-wheel drive vehicle
 - PPE required for operating a four wheel drive on unsealed roads
 - relevant personnel for the purposes of communicating information
- specifications:
 - workplace safety and environmental policies and procedures applicable to forestry operations.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT3326 Recover four wheel drive vehicle

Modification History

Release	Comments
Release 1	This version released with Forest and Wood Products Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to use recovery equipment to recover four wheel drive vehicles in difficult terrain conditions.

The unit applies to individuals who recover four wheel drive vehicles in a variety of work settings and industry sectors, including forestry, agriculture, construction, tourism and energy.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

Individuals must hold a driver licence or a provisional driver licence prior to commencing this unit of competency.

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify loads, ratings and equipment serviceability related to four wheel drive vehicle recovery	1.1 Determine the Gross Vehicle Mass (GVM) and estimate the recovery load on the vehicle using a recognised formula 1.2 Identify the rating and labelling of recovery gear 1.3 Identify rated recovery points on a vehicle

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.4 Determine the appropriate equipment to be used given the GVM, estimated recovery load and the equipment rating</p> <p>1.5 Determine serviceability of recovery equipment required for task</p>
2. Plan recovery	<p>2.1 Identify and follow work health and safety procedures, including selection and use of personal protective equipment relevant to recovery operations</p> <p>2.2 Identify, assess and take actions to mitigate risks and hazards associated with recovery operations</p> <p>2.3 Identify and implement workplace environmental protection procedures associated with recovery operations</p> <p>2.4 Identify emergency procedures to follow in the event of accident or incident</p> <p>2.5 Locate and survey site to determine recovery strategy and establishment of an exclusion zone</p> <p>2.6 Inform appropriate personnel of location of vehicle to be recovered and recovery strategy</p>
3. Perform kinetic rope or strap recovery	<p>3.1 Establish and maintain communications with appropriate personnel during recovery operation</p> <p>3.2 Establish when and by what means to start and stop the recovery</p> <p>3.3 Lay out the kinetic rope/strap prior to recovery</p> <p>3.4 Fit the kinetic rope/strap to an approved recovery point/device that is suitably rated for use with the strap</p> <p>3.5 Demonstrate the joining of two kinetic ropes and/or straps</p> <p>3.6 Identify where to place dampeners</p> <p>3.7 Perform a safe recovery using the kinetic rope/strap</p>
4. Perform winch recovery	<p>4.1 Establish and maintain communications with appropriate personnel during recovery operation</p> <p>4.2 Establish when and how to start and stop the recovery</p> <p>4.3 Lay out all the equipment to be used, including the dampeners</p> <p>4.4 Perform winch recovery using a single line pull</p> <p>4.5 Perform winch recovery using a double line pull using a snatch block or pulley ring</p> <p>4.6 Perform winch recovery using a change of direction pull using a</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	snatch block or pulley ring
5. Use other recovery tools and equipment	5.1 Use a spade for vehicle recovery 5.2 Use traction boards for vehicle recovery
6. Maintain vehicle recovery equipment	6.1 Clean, carry out operator maintenance, check serviceability and store recovery equipment after use according to manufacturer requirements 6.2 Record equipment maintenance according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret basic factual information on tool and equipment labels and in manufacturer manuals
Writing	<ul style="list-style-type: none"> Complete workplace forms using required format, industry terminology and structure
Oral communication	<ul style="list-style-type: none"> Use effective verbal communication techniques to convey instructions to people in vicinity location of recovery operation
Numeracy	<ul style="list-style-type: none"> Apply numeric skills to check rating of recovery equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3326 Recover four wheel drive vehicle	FWPCOT3260 Recover four wheel drive vehicle	Updated Elements and Performance Criteria Updated and added new Knowledge Evidence and	Not equivalent

		Performance Evidence Reworded Foundation Skills Updated Assessment Conditions	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3326 Recover four wheel drive vehicle

Modification History

Release	Comments
Release 1	This version released with Forest and Wood Products Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- performed two kinetic rope and/or strap recoveries
- performed one of the following winch recoveries:
 - single line
 - double line
 - change of direction.

In conducting each of the above tasks, the individual has:

- estimated the recovery load using a recognised formula
- determined the Gross Vehicle Mass (GVM) of the vehicle/s in the recovery
- determined the rating of the equipment being used
- determined the most appropriate recovery strategy to be used
- assessed why the vehicle is bogged, taken action to ensure vehicle is in four wheel drive, taken action to clear obstructions from the vehicle, taken action to use traction boards where available, determined safest method of recovery if straps or winches are to be used
- determined the appropriate equipment to be used given the GVM, equipment rating and chosen strategy.

There must be also be evidence that on one occasion the individual has joined two kinetic ropes and/or straps.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- safety procedures during recovery operations

- recognised formula used to estimate the recovery load and what variables apply to this formula
- reasons and procedures for establishing exclusion zone
- Gross Vehicle Mass (GVM):
 - identifying which vehicle's GVM should be used in relation to kinetic recovery
- ratings used on recovery equipment:
 - MBS (Minimum Breaking Strength) of ropes, straps and soft shackles
 - WLL (Working Load Limit) of hard shackles
 - drag chains
 - pulley blocks
 - pulley rings
 - winches (wire and/or rope)
- anchor point selection
- number, location and weighting of strap dampeners
- rated recovery points:
 - characteristics and purpose of rated recovery points
 - location of rated recovery points
 - what is and what is not a rated recovery point
- kinetic recovery:
 - kinetic recovery procedure
 - manufacturer recommendations on recovery techniques and equipment
- winches:
 - types, main components, ratings and manufacturer recommendation for use
 - effect of the layers of wrap of rope or wire on a winch drum
 - effects of a ring or snatch block on the load on a winch
 - impact of angle of rope or cable on recovery operation
 - procedures for easing the load on a winch
 - the reasons for not driving while winching
- maintenance of recovery gear:
 - straps/ropes
 - winches.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a work environment or an environment that accurately represents workplace conditions
 - work environment must include varied terrains and conditions from which to recover vehicle

- resources, equipment and materials:
 - four wheel drive to recover
 - rated recovery equipment for four wheel drive vehicle
 - relevant personnel for the purposes of communicating information
 - personal protective and safety equipment required for recovering a four wheel drive vehicle
- specifications:
 - workplace safety and environmental policies and procedures applicable to the recovery of four wheel drive vehicle.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT3329 Perform complex four wheel drive operations

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to safely operate four wheel drive vehicles in difficult terrain. Difficult terrain has surface conditions that include frequent steeps and/or rocks, slippery or sandy track sections, and including possible water crossings.

The unit applies to individuals who operate four wheel drive vehicles in a variety of work settings and industry sectors, including forestry, agriculture, construction, tourism and energy.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

Individuals seeking to undertake this unit should have prior experience in operating four wheel drive vehicles on unsealed surfaces.

Individuals must hold a driver licence or a provisional driver licence prior to commencing this unit of competency.

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for complex	1.1 Identify and assess types of trip and terrain being accessed for safe

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
four wheel drive operations	operating conditions 1.2 Check vehicle for suitability for the task 1.3 Identify and check operation of suitable communication equipment and protocols in the event of misadventure 1.4 Identify, fit and use suitable personal protective equipment 1.5 Secure loads according to safety, environmental and regulatory requirements 1.6 Ensure emergency rations food/water and clothing are carried
2. Operate vehicle in steep terrain	2.1 Assess the steep terrain and determine what may cause loss of traction 2.2 Perform steep ascent and descent using appropriate driving methods 2.3 Perform forward and reverse stop start recovery on an incline according to the type of transmission 2.4 Set vehicle controls according to manufacturer specifications
3. Operate vehicle over difficult terrain	3.1 Assess difficult terrain 3.2 Select appropriate wheel placement 3.3 Negotiate difficult terrain using vehicle's traction aids 3.4 Identify impact that wet weather or wet tracks will have on driving style 3.5 Set vehicle controls according to manufacturer specifications 3.6 Check vehicle for damage after driving
4. Operate vehicle through water crossing	4.1 Assess the water crossing 4.2 Identify wading depth of vehicle according to manufacturer specifications 4.3 Identify vulnerable mechanical aspects of the vehicle and prepare the vehicle for water crossing 4.4 Select appropriate range and gear and other traction aids for the water crossing 4.5 Perform water crossing by maintaining steady constant speed 4.6 Drain water from vehicle back into water crossing 4.7 Dry brakes after water crossing

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Perform post-trip tasks	5.1 Notify relevant personnel of trip completion 5.2 Complete post-trip inspection of vehicle 5.3 Record and report any repairs or replacement or damaged items to relevant personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret basic factual information on road signs and in manufacturer manual
Writing	<ul style="list-style-type: none"> Complete workplace forms using required format, industry terminology and structure
Oral communication	<ul style="list-style-type: none"> Use effective verbal communication techniques and questioning to convey information to passengers
Numeracy	<ul style="list-style-type: none"> Estimate distances, travelling times, fuel volume and consumption and speeds

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3329 Perform complex four wheel drive operations	FWPFGM3215 Perform complex four wheel drive operations	Updated Elements and Performance Criteria Updated and added new Knowledge Evidence and Performance Evidence Reworded Foundation Skills Updated Assessment	Not equivalent

		Conditions	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3329 Perform complex four wheel drive operations

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- assessed three separate ascents and three separate descents greater than 15 degrees for the safest route and the most appropriate wheel placement
- driven three separate ascents and three separate descents greater than 15 degrees, having selected appropriate range and gearing and using the most appropriate wheel placement
- used traction aids and/or brakes when driving ascents and descents greater than 15 degrees on one occasion
- performed a forward and a reverse stop start recovery on an incline according to the type of transmission on two occasions
- demonstrated the setting of vehicle controls for operation in complex terrain on one occasion. This must include:
 - the use of free wheel hubs, if fitted
 - selection of low range in either manual or automatic vehicles
 - use of differential locks, if fitted
 - activation of traction control or terrain selection mode, if fitted and where effective
- driven vehicle in difficult terrain and operated vehicle controls and technology to avoid traction loss in three of the following conditions:
 - mud
 - rocky
 - sand
 - side slopes
 - rutted
- completed two water crossing of at least axle depth
- recorded and reported repairs or replacement or damaged items on two occasions
- fitted and used personal protective equipment (PPE).

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- four wheel drive systems:
 - differences between four wheel drive, two wheel drive and all-wheel drive vehicles
 - types and operating principles of different four wheel drive systems
- planning trips
- sources of information for weather forecasts and road/track conditions:
 - water and food requirements for trip
 - emergency communication methods
 - first aid and first aid kit
- procedures for:
 - pre-departure vehicles check
 - track assessment
 - wheel placement over rutted, broken ground
 - using traction aids
 - driving ascents and descents greater than 15 degrees
 - performing a safe stop and start forward down a slope (greater than 15 degrees) and in reverse down a slope in manual or automatic vehicle
 - performing a water crossing of at least axle depth
 - driving in loose ground such as mud and sand
 - vehicle shutdown
- vehicle selection for complex four wheel drive activity:
 - high and low range or similar capability
 - requirement for wading depth according to manufacturer specifications
 - types, purpose and use of traction aids
 - types and uses of tyres for complex four wheel drive activity
 - impact of tyre pressure on traction
 - Gross Vehicle Mass (GVM) or Gross Vehicle Weight (GVW)
 - impact of loading and accessories on GVM or GVW
- type and use of personal protective equipment required for complex four wheel drive activity
- type of emergency equipment used in complex four wheel drive activity
- type and use of communications equipment used in remote locations
- purpose and procedures for securing loads
- types of road surfaces and impact on traction when ascending or descending steep slopes
- impact of wet weather on track conditions
- environmental impact of four wheel drive use on wet unsealed roads
- techniques for four wheel driving in difficult terrain
- reasons and procedure for post-trip vehicle inspection

- water crossings:
 - assessment of water crossings, including water base, water depth, flow rate and debris
 - vulnerable aspects of vehicle when completing water crossings
 - environmental impact of water crossings.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a work environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - site with access to a water crossing and difficult terrain with safe entry into and out of a waterway, shallow run-ins and a firm base. Simulated water crossings are acceptable for assessment if no suitable crossing is available due to little or no water level or flooded and unsafe to cross
 - manual or automatic four wheel drive vehicle with a low range transmission or equivalent
 - PPE required for operating a four wheel drive in difficult conditions and waterways
- specifications:
 - workplace safety and environmental policies and procedures applicable to the use of four wheel drive vehicles in difficult conditions and waterways.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPCOT6204 Use carbon accounting to estimate emissions

Modification History

Release	Comment
1	Replaces equivalent unit FPICOT6204A Use carbon accounting to estimate emissions in the workplace which was first released with FPI11 Forest and Forest Products Training Package Version 2.2

Application

This unit of competency describes the outcome required to identify and apply carbon accounting methodologies to develop and analyse a carbon inventory. It applies to senior managers and can apply to the full scope of forest and wood products industry workplaces and to operations of all sizes.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Common Technical

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Evaluate context for carbon accounting	<p>1.1 Determine organisational need to quantify stocks, sources and sinks of carbon and other greenhouse gas (GHG) emissions in line with anthropogenic impacts on global climate.</p> <p>1.2 Investigate mandatory and voluntary obligations for carbon</p>

ELEMENTS	PERFORMANCE CRITERIA
	<p>accounting under international conventions and protocols within national context.</p> <p>1.3 Examine the principles of baseline scenario, leakage and permanence.</p> <p>1.4 Assess the role of forest and wood products industry in global balance of GHG emissions.</p> <p>1.5 Establish organisational objective of conducting carbon emission accounting.</p>
2. Identify carbon accounting methodologies and define approach	<p>2.1 Identify and explore methodologies for carbon accounting.</p> <p>2.2 Examine carbon accounting frameworks.</p> <p>2.3 Identify protocols for carbon biomass pools including harvested wood products and non-CO2 emissions.</p> <p>2.4 Establish approach for developing carbon inventory in line with nationally agreed standards.</p>
3. Establish accounting area	<p>3.1 Define organisational and operational boundaries for carbon inventory.</p> <p>3.2 Determine time period over which carbon emissions will be assessed.</p>
4. Collect data	<p>4.1 Identify emissions and offset sources.</p> <p>4.2 Determine collection of activity consumption and offset data, based on data availability, analytical capacity and available resources.</p> <p>4.3 Construct carbon inventory summary table, listing and separating emission sources into correct scopes.</p> <p>4.4 Include carbon offset sources outside scope in carbon inventory summary table.</p> <p>4.5 Record available data in separate spreadsheet tabs.</p> <p>4.6 Research and gather existing secondary and field data for carbon storage sources.</p>
5. Calculate carbon emissions	<p>5.1 Calculate carbon dioxide equivalent emissions consistent with GHG protocol within spreadsheets for each emissions source.</p> <p>5.2 Calculate carbon storage according to standardised methodology for each carbon offset source in the inventory.</p> <p>5.3 Populate carbon inventory summary with calculated emissions and offsets in descending order.</p>

ELEMENTS	PERFORMANCE CRITERIA
	5.4 Calculate total emissions for each scope and for removals and offsets. 5.5 Calculate sum total of emissions and offsets for inventory. 5.6 Estimate change in carbon stock if a baseline exists. 5.7 Display emissions by scope and source, using charts or graphs. 5.8 Formulate suitable ratio indicator for organisation and calculate value based on total carbon emissions in the summary. 5.9 Report value of ratio indicator in carbon inventory summary.

Foundation Skills

<i>This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.</i>	
Numeracy skills to:	<ul style="list-style-type: none"> • interpret a range of complex abstract numerical data • complete highly technical and complex calculations using equations • record abstract data with precision and prepare interpretative charts and graphs.
Reading skills to:	<ul style="list-style-type: none"> • interpret highly technical, complex and unfamiliar information within international and Australian protocol and convention documents.
Writing skills to:	<ul style="list-style-type: none"> • document clear explanatory notes for calculations.
Planning and organising skills to:	<ul style="list-style-type: none"> • source, collect and organise a range of data to inform carbon emission calculations • plan and organise collection of all required information and manage own timing and productivity to complete calculations.
Technology skills to:	<ul style="list-style-type: none"> • use a computer, keyboard and spreadsheet software to prepare and maintain calculations.

Unit Mapping Information

FPICOT6204A Use carbon accounting to estimate emissions in the workplace.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT6204 Use carbon accounting to estimate emissions

Modification History

Release	Comment
1	<p>Replaces equivalent unit FPICOT6204A Use carbon accounting to estimate emissions in the workplace which was first released with FPI11 Forest and Forest Products Training Package Version 2.2.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including 'Required Skills and Knowledge, Evidence Guide and Range Statement'.</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit, and must be able to provide evidence that they can:

- For a given forest and wood products industry organisation within any sector:
 - identify mandatory and voluntary obligations for carbon accounting
 - define organisational objectives for participating in carbon accounting processes
 - define boundaries for the carbon inventory
 - select a methodology for carbon accounting calculations for emissions and offsets
- Complete two different carbon accounting calculations for two different time periods in line with the selected methodology and include the following factors:
 - direct greenhouse gas (GHG) emissions
 - indirect GHG emissions
 - on-site and off-site emissions (geographical)
 - upstream emissions
 - downstream emissions
 - full cycle accounting
 - non-CO2 emissions; soil disturbance, fertilisation, biomass combustion

In forest applications also consider the following:

- above ground biomass
- below ground biomass
- dead organic matter - wood, litter
- soil organic matter

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- Methods to access, locate and select applicable objectives and key content in relevant international and national conventions, protocols, standards and guidance frameworks, including the following key references:
 - Kyoto Protocol
 - ISO 14000 essentials:
 - ISO 14064-1 2006 Greenhouse gases -- Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
 - Greenhouse Gas Protocol Corporate Standard
 - Copenhagen Agreement
 - National Greenhouse Accounts (NGA) Factors Workbook
- Key drivers for carbon accounting
- Basic theory of the greenhouse effect and its impacts
- Basic principles of the carbon cycle and influences
- Carbon accounting terminology, frameworks and methods used to calculate carbon emissions and offsets
- Types of emissions and offset sources included in common calculations:
 - Direct GHG emissions
 - Indirect GHG emissions
 - On-site and off-site emissions (geographical)
 - Upstream emissions
 - Downstream emissions
 - Full cycle accounting
 - Non-CO2 emissions; soil disturbance, fertilisation, biomass combustion
- Sources of secondary data for carbon accounting
 - national statistical agencies
 - research institutes
 - information from sectoral experts
- Organisational and operational boundaries for the carbon inventory
- The full range of organisational emission sources and methods used to select key emission factors for calculations.

Assessment Conditions

The following resources must be made available:

- Computer, keyboard and spreadsheet software to prepare and maintain calculations
- Documents, spreadsheets and commonly used proformas for calculating carbon emissions

- Access to international and national conventions, protocols, standards and guidance frameworks including the following key references:
 - Kyoto Protocol
 - ISO 14000 essentials:
 - ISO 14064-1 2006 Greenhouse gases -- Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
 - Greenhouse Gas Protocol Corporate Standard
 - Copenhagen Agreement
 - National Greenhouse Accounts (NGA) Factors Workbook

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- Hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPFGM2207 Undertake brushcutting operations

Modification History

Release	Comment
1	Replaces equivalent unit FPIFGM2207B Undertake brushcutting operations, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to plan for and safely cut vegetation using a professional standard blade type brushcutter. Work is completed in a variety of work settings including forest environments, farms, nurseries and local council environments.

The unit applies to forestry worker, plantation forest officer, arboriculture worker.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Forest Growing and Management

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Prepare for brushcutting	1.1 Review work order and where required check with appropriate personnel. 1.2 Select personal protective and other equipment and check for operational effectiveness.

ELEMENTS	PERFORMANCE CRITERIA
	<p>1.3 Identify and assess environmental conditions and site hazards in line with organisational procedures.</p> <p>1.4 Select appropriate cutting methods for identified types of vegetation and to optimise time and safety.</p>
2. Operate brushcutter	<p>2.1 Use equipment in line with organisational safety procedures, manufacturer's instructions and environmental protection practices.</p> <p>2.2 Use hand signals with other operators to maintain effective and safe operations.</p> <p>2.3 Adjust brushcutter safety harness and handles to correct ergonomic position.</p> <p>2.4 Monitor brushcutter for operational effectiveness and refuel as required.</p> <p>2.5 Operate brushcutter appropriate to site conditions and at a safe distance from other people present.</p> <p>2.6 Dispose of cut vegetation in line with environmental protection practices.</p>
3. Complete operator maintenance	<p>3.1 Follow organisational safety procedures to lock out equipment.</p> <p>3.2 Check brushcutter blades for bluntness or damage.</p> <p>3.3 Remove and replace brushcutter blades and other operator-replaceable components in line with manufacturer's recommendations.</p> <p>3.4 Dispose of used blades in line with environmental protection practices.</p> <p>3.5 Record and report equipment faults and maintenance requirements to appropriate personnel.</p>

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	<ul style="list-style-type: none"> complete routine measurements of fuel volume.
Oral communication skills to:	<ul style="list-style-type: none"> ask open and closed probe questions and actively listen to clarify contents of work orders.
Reading skills to:	<ul style="list-style-type: none"> interpret: <ul style="list-style-type: none"> workplace health and safety and other organisational

	procedures <ul style="list-style-type: none"> • work orders • manufacturers' instructions and maintenance recommendations.
Writing skills to:	<ul style="list-style-type: none"> • complete accurate basic records for equipment faults and maintenance requirements.
Planning and organising skills to:	<ul style="list-style-type: none"> • efficiently and logically sequence the stages of preparation and brushcutting activities using work order to guide activities.

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Range of Conditions

Not Applicable

Unit Mapping Information

FPIFGM2207B Undertake brushcutting operations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPFGM2207 Undertake brushcutting operations

Modification History

Release	Comment
Release 1	<p>Replaces equivalent unit FPIFGM2207B Undertake brushcutting operations, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including Required Skills and Knowledge, Evidence Guide and Range Statement</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- assess, plan and safely complete brushcutting jobs in line with work order prescribing areas and types of vegetation to be cut
- on completion of each of the above jobs:
 - dispose of cut vegetation in line with environmental protection practices
 - complete operator maintenance operator maintenance tasks including oil, fuel, safety checks, cleaning, lubricating, adjustments
 - complete basic records for equipment faults and maintenance requirements.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- typical workplace hazards associated with operating brushcutters and methods of minimising risks:
 - ground growth
 - ground slope
 - ground hazards
 - noise
 - weather
 - kickback

- flying objects
- safe working distances from other people present
- purpose, features and safe operation of brushcutters
- the correct ergonomic position in which to conduct brushcutter operations, including using a safety harness and handle adjustments
- methods for assessing blade condition, removing and replacing
- operator maintenance tasks including oil, fuel, safety checks, cleaning, lubricating, adjustments
- different types of vegetation and the appropriate brushcutting methods
- environmental protection practices for disposing of cut vegetation:
 - recycling vegetation where appropriate
 - sending vegetation to landfill only where it cannot be recycled
 - redirecting vegetation for energy recovery.
- organisational procedures specific to brushcutting operations:
- workplace health and safety with particular emphasis on equipment lock out and use of personal protective equipment
- communication reporting lines
 - recording and reporting equipment faults and maintenance requirements.

Assessment Conditions

The following resources must be made available:

- brushcutters
- maintenance tools and equipment for removing and replacing blades
- consumable fuel, brushcutter blades and other components
- personal protective equipment suitable for operating brushcutters
- manufacturers' instructions for use and maintenance of equipment
- work order with specific instructions for brushcutting operations
- template documents for recording equipment faults and maintenance requirements
- relevant personnel for the purposes of communicating information
- organisational procedures for operating brushcutters.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPFGM3201 Manage seed collection

Modification History

Release	Comment
1	Replaces equivalent unit FPIFGM3201B Manage seed collection, which was first released with FPI11 Forest and Forest Products Training Package Version 1. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to plan and monitor the implementation of seed collection or sowing programs. The unit includes collection of native and non-native species.

The unit applies to those who manage seed collection in settings such as: forest environments, farms, agriculture, nurseries and local councils.

The unit applies to Forestry technician, Nursery technician, Supervisor (Forestry operations), Tree planter, Silviculturist, Arboriculture technician

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states & territories at the time of publication, and may differ according to jurisdiction.

Pre-requisite Unit

Nil

Unit Sector

Forest Growing and Management

Elements and Performance Criteria

<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Plan seed collection	1.1 Analyse seeding and/or planting program and identify seed characteristic requirements.

	<p>1.2 Identify seed collection opportunities and determine a suitable area for seed collection.</p> <p>1.3 Select seed collection methods and determine the quantity, cost and impacts on provenances and species.</p> <p>1.4 Identify the required approvals and seek and obtain from relevant authorities.</p> <p>1.5 Determine measurable performance indicators, specifications and targets.</p> <p>1.6 Seed collection plan, costs and performance indicators are clearly documented and communicated to appropriate personnel.</p>
2. Implement and monitor seed collection	<p>2.1 Coordinate and schedule resources required for seed collection.</p> <p>2.2 Establish and maintain communication with others to ensure safety.</p> <p>2.3 Implement the seed collection plan.</p> <p>2.4 Monitor seed collection activities to ensure compliance requirements are adhered to.</p> <p>2.5 Adjust seed collection activities to meet site conditions and communicate to appropriate personnel.</p>
3. Review seed collection	<p>3.1 Assess and evaluate data from seed collection activity to confirm techniques, methodologies and costs are in line with plan.</p> <p>3.2 Identify issues and impediments to seed collection activities and program costs.</p> <p>3.3 Prepare a cost benefit analysis and make recommendations to improve future seed collecting activity.</p> <p>3.4 Record and report seed collection activity to appropriate personnel.</p>

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	<ul style="list-style-type: none"> calculate costs of seed collecting activity and simple cost benefit analysis
Oral communication skills to:	<ul style="list-style-type: none"> interact with land owners, and internal and external bodies and groups to gain approvals disseminate information about seed collecting activity to appropriate personnel.
Writing skills to:	<ul style="list-style-type: none"> prepare a seed collecting plan and report on seed collection

	activity.
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Range of Conditions

Not Applicable

Unit Mapping Information

FPIFGM3201B Manage seed collection.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPFGM3201 Manage seed collection

Modification History

Release	Comment
1	<p>Replaces equivalent unit FPIFGM3201B Manage seed collection, which was first released with FPI11 Forest and Forest Products Training Package Version 1. This is the first release of this unit in the new standards format.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including Required Skills and Knowledge, Evidence Guide and Range Statement</p>

Performance Evidence

- A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:
- follow legal and regulatory requirements, and codes of practice for managing seed collection
- follow organisational policies and procedures for managing seed collection
- develop a plan for seed collection which includes measurable performance indicators, specifications and targets
- coordinate and schedule resources, and manage the work of others to achieve specific outcomes
- monitor seed collection operations, ensuring that activity follows quality standards
- document results from seed collection activities and prepare a report for relevant personnel.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- applicable regulations, standards, codes of practice and established safe practices for managing seed collection
- organisational and site standards, policies and procedures for managing seed collection
- environmental risks and hazards of seed collection
- seed collection methods including:
 - climbing

- removal of branches with rifle
- elevated platform vehicles
- collecting after falling or felling
- ladders
- shaking
- biological signs that indicate that the seed crop is ready to be collected
- procedures to extract and handle seed from collected material, including handling procedures of the seed crop after picking
- treatment and documentation requirements of extracted seed
- characteristics of seed including:
 - provenance
 - potential growth characteristics
 - forest types
 - optimum time to collect
 - physiology and biology
 - dormancy
 - species
- process for approvals to undertake seed collection
- established communication channels and protocols
- procedures for recording and reporting workplace information.

Assessment Conditions

The following resources must be made available:

- seed collection site
- tools and equipment required to collect seed
- relevant personnel for the purposes of communicating information
- organisational requirements and standards for managing seed collection.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPFGM3202 Extract seed

Modification History

Release	Comment
1	Replaces equivalent unit FPIFGM3202B Extract seed, which was first released with FPI11 Forest and Forest Products Training Package Version 1. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to extract and process native or non-native seed using an extraction unit. It includes seed storage requirements and extraction unit maintenance.

The unit applies to those who extract seed in a variety of work settings, including forest environment settings such as farms, agriculture, workshops, domestic, nurseries and local councils.

The unit applies to Forestry technician, Nursery technician, Supervisor (Forestry operations), Tree planter, Silviculturist, Arboriculture technician

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Forest Growing and Management

Elements and Performance Criteria

<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Prepare for seed extraction	1.1 Review and clarify work order with appropriate personnel. 1.2 Receive and visually assess seed bearing material and ensure species is identified on container label.

	<p>1.3 Weigh and label containers with identifiers in line with site procedures.</p> <p>1.4 Store material in dry and well-ventilated conditions.</p>
2. Extract seed	<p>2.1 Plan and check seed extraction processes for safe working conditions</p> <p>2.2 Select appropriate extraction units and equipment and check for operational effectiveness.</p> <p>2.3 Operate and monitor seed extraction systems to extract maximum seed yield.</p> <p>2.4 Inspect seed capsules and reprocess as required to ensure maximum yield.</p>
3. Clean and store seed	<p>3.1 Weigh and store separated seed in line with species requirements and site procedures.</p> <p>3.2 Accurately record seed information.</p> <p>3.3 Package seed for storage with label to maintain traceability to collection source.</p>
4. Clean and maintain extraction unit	<p>4.1 Clean, maintain and calibrate extraction units and equipment.</p> <p>4.2 Dispose of residue and other waste material in line with site environmental management guidelines.</p> <p>4.3 Report abnormal operation or faults in equipment for corrective action.</p> <p>4.4 Clean and maintain work areas in line with site procedures, and organisational and environmental requirements.</p> <p>4.5 Record and report results of seed extraction process.</p>

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

- calibrate scales, ensuring compliance with weights and measure authority.
- correctly label seeds
- complete records, reports and maintenance logs.

Range of Conditions

Not Applicable

Unit Mapping Information

FPIFGM3202B Extract seed.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPFGM3202 Extract seed

Modification History

Release	Comment
1	<p>Replaces equivalent unit FPIFGM3202B Extract seed, which was first released with FPI11 Forest and Forest Products Training Package Version 1. This is the first release of this unit in the new standards format.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including Required Skills and Knowledge, Evidence Guide and Range Statement</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- apply safe and efficient techniques to identify, extract, clean and store seed in line with species requirements, work order and organisational guidelines
- operate seed extraction units and equipment including
 - kilns operated by gas, solar energy, oil or electricity
 - sieves of various sizes
 - air-drying racks and trays
 - conveyor belt
- clean, maintain and calibrate seed extraction units and equipment
- record seed species information and extraction results including
 - species name
 - weight
 - place or origin
 - container identifier.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- regulations, standards, codes of practice and established safe practices for extracting seed
- organisational and site standards, policies and procedures for extracting seed
- environmental protection requirements for extracting seed
- the cleaning maintenance and calibration of plant, tools and equipment
- hazards associated with seed extraction, processing and storage
- seed species, including native and non-native
- seed extraction processes
- identification of seed species from capsules
- storage procedures and requirements for different seed species
- procedures for recording and reporting workplace information.

Assessment Conditions

The following resources must be made available:

- manual or automated seed extraction equipment
- material with seed to be extracted
- relevant personnel for the purposes of communicating information
- documents, spreadsheets and commonly used proforma documents
- work order, workplace requirements and site standards for extracting seed.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPFGM3212 Fall trees manually (intermediate)

Modification History

Release	Comment
1	Replaces equivalent unit FPIFGM3212 Fall trees manually (intermediate), which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to assess, plan and safely carry out manual tree-felling operations using a chainsaw.

This unit covers the felling procedures for trees with a level of complexity that requires significant tree assessment and practical felling skills.

Persons competent in this unit should be able to effectively fell most trees except very large trees, and/or those with significant defects and/or characteristics that cause excessive complexity.

It applies to trees that have a diameter greater than the bar length of the chainsaw.

Trees typical to the scope of this unit may include the following characteristics:

- lean and weight distribution, which can be assessed and readily adapted to falling direction with the use of wedges and/or control with hinge-wood
- various dimensions relative to local forest size distribution
- limited visible damage or defect
- species prone to free splitting and adverse reactions during felling
- single or multi-stems
- diameter of tree greater than chainsaw bar length
- grown on terrain and slope that can add complexity to the operation

The unit applies to a non-production environment, including forest, rural and community environments.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states & territories at the time of publication, and may differ according to jurisdiction

Pre-requisite Unit

Nil

Unit Sector

Forest Growing and Management

Elements and Performance Criteria

<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Prepare for felling	<p>1.1 Identify and comply with applicable work health and safety (WHS), environmental, legislative and organisational requirements relevant to felling trees</p> <p>1.2 Identify and adhere to site environmental protection measures according to relevant legislation and regulations</p> <p>1.3 Review and check job requirements with appropriate personnel</p> <p>1.4 Sharpen and adjust chainsaw or change components according to manufacturer recommendations</p> <p>1.5 Assess tree and determine felling requirements</p> <p>1.6 Identify and control potential and existing risks and hazards in the work area</p> <p>1.7 Identify trees to be retained and felled</p> <p>1.8 Establish and maintain communication with others according to WHS requirements</p>
2. Visually assess site conditions and surroundings	<p>2.1 Review terrain and slope to determine if they add complexity to the operation</p> <p>2.2 Assess general factors affecting felling requirements and detect and control specific forest or site risks and hazards</p>
3. Assess tree and plan felling	<p>3.1 Visually assess tree for felling characteristics</p> <p>3.2 Confirm tree is safe to fell</p> <p>3.3 Select tools and equipment appropriate to work requirements and check for operational effectiveness according to manufacturer recommendations</p> <p>3.4 Identify trees to be felled for size, significant defects and any characteristics causing excessive complexity</p> <p>3.5 Assess and progressively plan tree-felling sequence for individual trees</p> <p>3.6 Assess and check required falling direction and possible deviation</p> <p>3.7 Plan sequence of cuts to fell tree according to standard felling</p>

	<p>procedures</p> <p>3.8 Assess limitations of own skills in safely felling trees, identify trees considered outside own skill level and seek assistance from appropriate personnel where required</p> <p>3.9 Monitor and exclude location and activity of other personnel on the work site</p>
4. Apply tree-felling techniques	<p>4.1 Select suitable escape route and clear of growth and other obstacles according to environmental care principles and statutory requirements</p> <p>4.2 Fell individual trees using planned techniques according to site requirements, at a safe distance from other personnel in the work area</p> <p>4.3 Adjust cutting technique in response to movement and condition of tree</p> <p>4.4 Use planned escape route when tree starts to fall and monitor the fall and movement of tree on ground until determined stable</p> <p>4.5 Delay movement back into the felling area until all tree material, including from adjacent tree crowns, has fallen</p> <p>4.6 Identify and implement procedures for removal of trees that are hung-up</p> <p>4.7 Dispose of waste materials in line with environmental and operational requirements</p> <p>4.8 Detect, rectify and report blunt or damaged saw chain according to workplace procedures</p> <p>4.9 Monitor chainsaw for operational effectiveness and record and report faults, malfunctions and problems according to workplace procedures</p>

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	<ul style="list-style-type: none"> • measure and record tree height, length and diameter • estimate, measure and compare height, size and distance relevant to tree felling • calculate product mass of individual trees and determine fall zone
Oral communication skills to:	<ul style="list-style-type: none"> • select and use appropriate spoken communication strategies with work colleagues and other personnel on site when felling trees • interpret hand signals with other operators to ensure safe tree

	felling
Reading skills to:	<ul style="list-style-type: none"> • interpret: <ul style="list-style-type: none"> • workplace health and safety, industry standards and regulations for felling trees and other relevant tree felling procedures • work orders • manufacturers' maintenance recommendations.
Writing skills to:	<ul style="list-style-type: none"> • complete forms to record WHS considerations for felling trees • report equipment faults and request maintenance of equipment. • complete log book requirements
Planning and organising skills to:	<ul style="list-style-type: none"> • identify an unsafe tree. • efficiently and logically sequence the stages of preparation for and felling of trees using work order to guide activities.
Problem solving skills to:	<ul style="list-style-type: none"> • plan and apply the hierarchy of risk control • review and identify work requirements • recognise own limitations in conditions and trees for felling • identify problems and equipment faults and demonstrate appropriate response procedures

Range of Conditions

Not Applicable

Unit Mapping Information

FPIFGM3212 Fall trees manually (intermediate)

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPFGM3212 Fall trees manually (intermediate)

Modification History

Release	Comment
1	<p>Replaces equivalent unit FPIFGM3212 Fall trees manually (intermediate), which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including Required Skills and Knowledge, Evidence Guide and Range Statement.</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- comply with applicable federal, state or territory legislative and regulatory requirements and codes of practice including WHS, environmental and organisational policies and procedures relevant to felling trees at an intermediate level
- comply with organisational policies and procedures relevant to felling trees manually at an intermediate level
- comply with applicable licensing and certification requirements relevant to felling trees at an intermediate level
- effectively communicate and use safe working practices, including maintaining an awareness of other personnel activity in the work area
- assess site conditions, by applying environmental protection measures, detecting hazards and own skill level for felling trees at an intermediate level
- conduct a tree assessment
- identify structural defects and stresses in trees and the impact on felling, including exclusion of trees from hand felling due to hazardous and difficult situations for assessment, monitoring and safe falling including a crown that contains dead or broken material, entanglement or malformation
- plan a felling sequence for individual trees and preparing surroundings including escape route
- fell intermediate trees using appropriate cuts safely without damage to personnel, equipment and surrounding environment
- identify trees that are hung up

- select, prepare and maintain chainsaw equipment including recognising faults, problems and malfunctions
- assess, plan and safely operate chainsaw equipment to manually fell trees at an intermediate level in forest, rural and community environments
- use tree felling techniques including scarf cutting , back cutting to provide hinge-wood and the use of wedges to assist in controlling falling direction
-

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- Workplace health and safety (WHS) requirements including:
 - PPE and clothing
 - safety equipment
 - first aid equipment
 - firefighting equipment
 - hazard and risk control procedures
 - fatigue management procedures
 - appropriate signage
 - elimination of hazardous materials and substances procedures
 - safe forest practices, including required actions relating to fire
 - techniques for manual handling, including shifting, lifting and carrying
 - types and purposes of cuts to fell trees, including scarf cutting and back cutting to provide hinge-wood and maintain control of tree
- typical tree defects and how these affect tree felling activities:
 - shakes
 - insect defects
 - knots and resin pockets
 - pipe
 - drysides
- Identifying trees:
 - that contain hazards and are deemed unsafe to fell
 - considered outside own skill level
 - trees where cuts made may lead to loss of control of tree in felling
- hazards and related risks and the impact on felling trees of:
 - uneven and unstable terrain
 - unsafe trees
 - fires
 - overhead and underground services
 - excavations

- traffic
- structures
- hazardous materials
- insects and animals
- other personnel and machinery
- methods used to remove trees that are hung up and procedures for removal
- methods for assessing chain condition
- environmental protection measures to follow when felling trees related to:
 - native vegetation
 - soil and water
 - heritage and archeological artefacts
 - flora and fauna
 - geomorphologic features
 - landscape
 - external site pollution
 - recreational opportunities
 - regeneration opportunities
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing timber and other waste
- key features of these varying environmental conditions and their effects on intermediate tree felling activities:
 - general forest lean
 - ground growth
 - ground hazards and obstacles
 - ground slope
 - gullies
 - presence and density of seed and habitat trees
 - water courses
 - wet and adverse weather conditions
 - wind speed and direction
- the use of types of tools and equipment for felling trees manually, and the procedures for their safe use, operation and maintenance including:
 - warning signs
 - chainsaw and components
 - PPE and clothing
 - first aid equipment
 - maintenance requirements
 - support tools
 -

Assessment Conditions

The following resources must be made available:

- workplace location or simulated workplace of a forest environment with trees typical to the scope of this unit
- relevant personnel for the purposes of communicating information
- PPE and clothing including:
 - Safety helmet
 - Safety gloves
 - Protective footwear
 - Eye protection
 - Hearing protection
 - High visibility clothing
 - Leg protection (trousers or chaps)
- materials and equipment including:
 - warning signs
 - chainsaw and components
 - first aid equipment
 - maintenance tools and equipment
 - support tools
 - manufacturers' instructions for use and maintenance of equipment
 - radio or communication device
 - fire fighting equipment (if prescribed)
- specifications and work instructions, including
 - information and instructions relevant to tree-felling operations, including processing location details and trees to be felled and retained
 - policy and procedures for work health and safety (WHS)
 - risk assessment plan
 - general and specific environmental requirements
 - applicable state or territory logging code of practice
 - emergency and evacuation procedures
 - fire protocols

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPFGM3213 Fall trees manually (advanced)

Modification History

Release	Comment
1	Replaces equivalent unit FPIFGM3213 Fall trees manually (advanced), which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to assess, plan and safely carry out manual tree-felling operations using a chainsaw.

This unit covers the felling procedures for trees with a level of complexity that requires significant tree assessment and advanced practical felling skills.

Persons competent in this unit should be able to effectively fell trees of any size, species and condition, including those with significant defects and characteristics that cause excessive felling complexity, that are deemed safe to fell.

Trees typical to the scope of this unit may include the following characteristics:

- lean and weight distribution that adds significant complexity yet can be assessed and adapted to site requirements
- larger dimensions relative to local forest size distribution
- substantial lean
- damage or defect that requires complex felling techniques
- multi-legged, hollow butts, culls and stags
- species prone to free splitting and adverse reactions during felling
- single or complex multi-stems
- diameter of tree greater than chainsaw bar length
- grown on terrain and slope that can add significant complexity to the operation

The unit applies to a non-production environment, including forest, rural and community environments.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states & territories at the time of publication, and may differ according to jurisdiction

Pre-requisite Unit

Nil

Unit Sector

Forest Growing and Management

Elements and Performance Criteria

<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Prepare for felling	1.1 Identify and comply with applicable work health and safety (WHS), environmental, legislative and organisational requirements relevant to felling trees 1.2 Identify and adhere to site environmental protection measures according to relevant legislation and regulations 1.3 Review job requirements and check with appropriate personnel 1.4 Select tools and equipment appropriate to work requirements and check for operational effectiveness according to manufacturer recommendations 1.5 Sharpen and adjust chainsaw or change components according to manufacturer recommendations 1.6 Identify and control potential and existing risks and hazards in the work area 1.7 Identify trees to be felled as being safe to fell 1.8 Establish and maintain communication with others according to OHS requirements
2. Visually assess site conditions and surroundings	2.1 Review terrain and slope to determine if they add significant complexity to the operation 2.2 Assess general factors affecting felling requirements and detect and control specific forest or site risks and hazards 2.3 Assess and progressively plan tree-felling sequence for individual trees
3. Assess tree and plan felling	3.1 Locate and visually assess tree for felling characteristics 3.2 Confirm tree is safe to fell 3.3 Assess and check required falling direction and possible deviation 3.4 Plan sequence of cuts to fell tree according to standard felling procedures 3.5 Assess limitations of own skills in safely felling trees, identify trees considered outside own skill level and seek assistance from

	<p>appropriate personnel where required</p> <p>3.6 Monitor and exclude location and activity of other personnel on the work site</p>
4. Apply tree-felling techniques	<p>4.1 Select suitable escape route and clear of growth and other obstacles according to environmental care principles and statutory requirements</p> <p>4.2 Fell individual trees using planned techniques according to site requirements, at a safe distance from other personnel in the work area</p> <p>4.3 Adjust cutting technique in response to movement and condition of tree</p> <p>4.4 Use planned escape route when tree starts to fall and monitor the fall and movement of tree on ground until determined stable</p> <p>4.5 Delay movement back into the felling area until all tree material, including from adjacent tree crowns, has fallen</p> <p>4.6 Identify and implement procedures for removal of trees that are hung-up</p> <p>4.7 Dispose of waste materials in line with environmental and operational requirements</p> <p>4.8 Detect, rectify and report blunt or damaged saw chain according to workplace procedures</p> <p>4.9 Monitor chainsaw for operational effectiveness and record and report faults, malfunctions and problems according to workplace procedures</p>

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	<ul style="list-style-type: none"> measure and record tree height, length and diameter estimate, measure and compare height, size and distance relevant to tree felling calculate product mass of individual trees and determine fall zone
Oral communication skills to:	<ul style="list-style-type: none"> select and use appropriate spoken communication strategies with work colleagues and other personnel on site when felling trees interpret hand signals with other operators to ensure safe tree felling
Reading skills to:	<ul style="list-style-type: none"> interpret: <ul style="list-style-type: none"> workplace health and safety, industry standards and

	<p>regulations for felling trees and other relevant tree felling procedures</p> <ul style="list-style-type: none"> • work orders • manufacturers maintenance recommendations
Writing skills to:	<ul style="list-style-type: none"> • complete forms to record WHS considerations for felling trees • report equipment faults and request maintenance of equipment. • complete log book requirements
Planning and organising skills to:	<ul style="list-style-type: none"> • identify an unsafe tree. • efficiently and logically sequence the stages of preparation for and felling of trees using work order to guide activities.
Problem solving skills to:	<ul style="list-style-type: none"> • plan and apply the hierarchy of risk control • review and identify work requirements • recognise own limitations in conditions and trees for felling • identify problems and equipment faults and demonstrate appropriate response procedures

Range of Conditions

Not Applicable

Unit Mapping Information

FPIFGM3213 Fall trees manually (advanced)

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPFGM3213 Fall trees manually (advanced)

Modification History

Release	Comment
1	<p>Replaces equivalent unit FPIFGM3213 Fall trees manually (advanced), which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including Required Skills and Knowledge, Evidence Guide and Range Statement.</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- comply with applicable federal, state or territory legislative and regulatory requirements and codes of practice including OHS, environmental and organisational policies and procedures relevant to felling trees at an advanced level
- comply with applicable licensing or certification requirements relevant to felling trees manually at an advanced level
- effectively communicate and use safe working practices, including maintaining an awareness of other personnel activity in the work area
- assess site conditions, by applying environmental protection measures, detecting hazards and own skill level for felling trees at an advanced level
- conduct a tree assessment
- identify structural defects and stresses in trees and the impact on felling, including exclusion of trees from hand felling due to hazardous and difficult situations for assessment, monitoring and safe falling including a crown that contains dead or broken material, entanglement or malformation
- plan a felling sequence for individual trees and preparing surroundings including escape route
- fell advanced trees using appropriate cuts safely without damage to personnel, equipment and surrounding environment

- identify trees that are hung up
- select, prepare and maintain chainsaw equipment including recognising faults, problems and malfunctions
- assess, plan and safely operate chainsaw equipment to manually fell trees at an advanced level in forest, rural and community environments
- use tree felling techniques including scarf cutting , back cutting to provide hinge-wood and the use of wedges to assist in controlling falling direction

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- workplace health and safety (WHS) requirements including:
 - PPE and clothing
 - safety equipment
 - first aid equipment
 - firefighting equipment
 - hazard and risk control procedures
 - fatigue management procedures
 - appropriate signage
 - elimination of hazardous materials and substances procedures
 - safe forest practices, including required actions relating to fire
 - techniques for manual handling, including shifting, lifting and carrying
- types and purposes of cuts to fell trees, including scarf cutting and back cutting to provide hinge-wood and maintain control of tree
- typical tree defects and how these affect tree felling activities:
 - shakes
 - insect defects
 - knots and resin pockets
 - pipe
 - drysides
- Identifying trees:
 - that contain hazards and are deemed unsafe to fell
 - considered outside own skill level
 - trees where cuts made may lead to loss of control of tree in felling
- hazards and related risks and the impact on felling trees of:
 - uneven and unstable terrain
 - unsafe trees
 - fires
 - overhead and underground services
 - excavations
 - traffic

- structures
- hazardous materials
- insects and animals
- other personnel and machinery
- methods used to remove trees that are hung up and procedures for removal
- methods for assessing chain condition
- environmental protection measures to follow when felling trees related to:
 - native vegetation
 - soil and water
 - heritage and archeological artefacts
 - flora and fauna
 - geomorphologic features
 - landscape
 - external site pollution
 - recreational opportunities
 - regeneration opportunities
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing timber and other waste
- key features of these varying environmental conditions and their effects on advanced tree felling activities:
 - general forest lean
 - ground growth
 - ground hazards and obstacles
 - ground slope
 - gullies
 - presence and density of seed and habitat trees
 - water courses
 - wet and adverse weather conditions
 - wind speed and direction
- the use of types of tools and equipment for felling trees manually, and the procedures for their safe use, operation and maintenance including:
 - warning signs
 - chainsaw and components
 - PPE and clothing
 - first aid equipment
 - maintenance requirements
 - support tools
 -

Assessment Conditions

The following resources must be made available:

- workplace location or simulated workplace of a forest environment with trees typical to the scope of this unit
- relevant personnel for the purposes of communicating information
- PPE and clothing including:
 - safety helmet
 - safety gloves
 - protective footwear
 - eye protection
 - hearing protection
 - high visibility clothing
 - leg protection (trousers or chaps)
- materials and equipment including:
 - warning signs
 - chainsaw and components
 - first aid equipment
 - maintenance tools and equipment
 - support tools
 - manufacturers' instructions for use and maintenance of equipment
 - radio or communication device
 - fire fighting equipment (if prescribed)
- specifications and work instructions, including
 - information and instructions relevant to tree-felling operations, including processing location details and trees to be felled and retained
 - policy and procedures for work health and safety (WHS)
 - risk assessment plan
 - general and specific environmental requirements
 - applicable state or territory logging code of practice
 - emergency and evacuation procedures
 - fire protocols

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPFGM3216 Fell trees manually (intermediate)

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to assess, plan and safely carry out manual felling of intermediate trees using a chainsaw. This unit covers the felling procedures for trees with a level of complexity that requires significant tree assessment and practical felling skills.

Individuals competent in this unit should be able to effectively fell most trees, except advanced trees and/or those with significant defects and/or characteristics that cause excessive complexity.

Trees typical to the scope of this unit may have some of the following characteristics:

- lean and weight distribution that can be assessed and readily adapted to falling direction with the use of wedges and/or controlled with hinge wood of a larger size than typical for the local environment
- limited visible damage or defect
- multi-stems
- forward lean, backward lean or side lean
- small or medium size diameter trees that can be safely felled with intermediate felling techniques
- dead trees with minimal visible damage or defects that do not add significant complexity to the cutting technique
- various dimensions relative to other trees when working in a forest environment
- in local site conditions that add additional complexity to the felling operation, including site conditions that impact the working position of the operator or the natural direction of fall of the tree.

The unit applies to individuals who fell intermediate trees as part of arboriculture, forestry, agriculture, conservation and land management, local government, emergency services and other government agency operations. With the exception of minor forest produce, this unit does not apply to commercial harvesting operations.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Forest Growing and Management (FGM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for felling	<p>1.1 Determine job requirements from work order or instruction and, where required, seek clarification from appropriate personnel</p> <p>1.2 Confirm safety and environmental requirements for the task according to workplace procedures</p> <p>1.3 Identify, assess and take actions to mitigate risks and hazards associated with felling intermediate trees</p> <p>1.4 Identify, assess and determine felling requirements of trees to be felled according to work order or instruction</p> <p>1.5 Consult and maintain communication with team members and other appropriate personnel to ensure that work is coordinated effectively with others in the workplace</p> <p>1.6 Obtain tools and equipment needed for the work, and check for correct operation and safety</p> <p>1.7 Select, fit and use personal protective equipment</p>
2. Assess site conditions and surroundings	<p>2.1 Inspect site for conditions likely to affect safe implementation of felling activities</p> <p>2.2 Identify and report site environmental conditions to appropriate personnel</p> <p>2.3 Determine fall zone and implement control measures to minimise risks and hazards in the zone according to safe work procedures</p> <p>2.4 Monitor location and activity of other personnel on the work site, and implement control measures according to workplace safety procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
3. Assess tree and plan felling	3.1 Identify trees considered outside own skill level, and seek assistance from appropriate personnel where required 3.2 Assess tree visually to identify felling characteristics 3.3 Confirm tree is safe to fell 3.4 Assess trees and site to determine complexity of felling requirements 3.5 Assess and progressively plan tree-felling sequence for individual trees 3.6 Assess and check required felling direction and possible deviation 3.7 Plan sequence of cuts to fell tree according to standard felling procedures 3.8 Assess need, safety and suitability of an industry approved technique and associated equipment to control tree fall 3.9 Identify suitable escape routes, and clear growth and other obstacles according to environmental care principles and workplace procedures
4. Apply tree-felling techniques	4.1 Apply an industry approved technique and equipment to ensure that the tree falls in the direction of the scarf cut 4.2 Fell individual trees using planned and appropriate techniques according to the current Australian Standard and industry code of practice at a safe distance from other personnel in the work area 4.3 Adjust cutting technique in response to movement and condition of tree 4.4 Maintain accuracy of cuts and consistency with the cutting technique 4.5 Use planned escape route when tree starts to fall, and monitor the fall of the tree until all movement has stopped 4.6 Delay movement back into the felling area until all tree material, including from adjacent tree crowns, has fallen or is stable enough to allow safe access back into the felling area 4.7 Identify procedures for removal of trees that are hung-up if safe to do so 4.8 Dispose of waste materials according to environmental and operational requirements
5. Maintain chainsaw	5.1 Follow workplace health and safety procedures and manufacturer

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
and cutting attachments	instructions to lock out equipment 5.2 Inspect chainsaw on completion of activities 5.3 Inspect for damage to chainsaw and cutting attachments, and tag for repair, service or replacement according to workplace requirements and manufacturer recommendations if required 5.4 Remove, clean, adjust, sharpen or replace chain and other components according to workplace requirements and manufacturer recommendations

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read workplace documentation and correctly identify work requirements
Writing	<ul style="list-style-type: none"> Use technical and workplace specific vocabulary to accurately and legibly complete workplace records and forms
Oral communication	<ul style="list-style-type: none"> Select and use appropriate spoken communication strategies with work colleagues and other personnel on site when felling trees Interpret hand signals with other operators to ensure safe tree felling
Numeracy	<ul style="list-style-type: none"> Complete routine calculations and report on size, length and diameter of felled trees

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPFGM3216 Fell trees manually (intermediate)	FWPFGM3212 Fall trees manually (intermediate)	Reworded and added new Performance Criteria Added a new Element	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Updated Foundation Skills, Performance Evidence, Knowledge Evidence and Assessment Conditions	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPFGM3216 Fell trees manually (intermediate)

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has assessed, planned and conducted the felling of six intermediate trees. This must include demonstration of:

- two different scarf cutting techniques
- two different back cutting techniques, which must be for either forward leaning, side leaning or back leaning trees
- applying, on one occasion, an industry approved technique, such as the use of wedges, to ensure that the tree falls in the direction of the scarf cut.

The scarfing methods must be selected from the following:

- Standard
- Humboldt
- 90 degree scarf
- V scarf.

In performing all cuts, the individual must have complied with the following criteria:

- direction – the scarf must be in the direction of the desired fell
- depth – the depth of the scarf is 1/4 to 1/3 of the diameter of the tree
- size (width) of opening – 2/3 across the front of the tree
- top and bottom scarf cuts – the two cuts should meet without overcutting or undercutting, the scarf line is level and the scarf line is at 90 degrees to the intended direction of fall
- back cut height – the back cut is level and above the scarf line by about 1/10 of the tree diameter
- hinge wood thickness is about 1/10 of the tree diameter.

In completing this work, the individual must demonstrate that, for each tree, the felling technique was consistent with current Australian Standards and industry codes of practice applicable to tree felling operations.

There must also be evidence that the individual has inspected and carried out routine maintenance on one occasion on one chainsaw and its cutting attachments according to manufacturer requirements.

This work must comply with workplace policy and procedures and current workplace health and safety legislation and regulations.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- Australian Standards and codes of practice applicable to tree felling operations
- hazards and risks related to felling trees with chainsaws, and methods to minimise associated risks:
 - physical conditions of the site
 - unsafe/hazardous trees
 - fire and other emergency situations
 - overhead and underground services
 - nearby structures
 - standing vegetation in the intended direction of fall
 - falling branches
 - weather conditions
 - impediments of escape routes
 - vehicle and traffic access
 - people on or near worksite
 - machinery on or near worksite
 - carrying and transporting a chainsaw
 - user fatigue
- hazards related to maintaining chainsaws, and methods to minimise associated risks
- features of unsafe/hazardous intermediate trees and defects of trees and how they affect tree felling activities
- types and purposes of cuts to fell intermediate trees:
 - scarf cuts
 - back cuts using different methods to provide hinge wood and wedges to maintain control of tree
- characteristics of intermediate trees
- methods used to identify intermediate trees:
 - that contain hazards and are deemed unsafe to fell
 - that are considered outside own skill level
 - where cuts made may lead to loss of control of tree in felling
- methods used to remove trees that are hung up, and procedures for removal
- methods for assessing chain condition

- types, safe use, operation and maintenance of chainsaws, support tools and attachments
- workplace procedures specific to felling trees with chainsaws:
 - workplace health and safety, with particular emphasis on equipment lock-out, use of personal protective equipment (PPE), safe manual handling and fire prevention measures
 - communication reporting lines
 - recording and reporting repairs, maintenance activities and equipment faults
- environmental protection measures that meet legal obligations and requirements of the industry, state and local standards and/or codes of practice for felling trees with chainsaws:
 - protection of natural and cultural assets
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing materials
 - disposing of hazardous substances.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - chainsaw and accessories
 - suitable trees to fell
 - tools and equipment to fell trees
 - PPE required in tree felling operations
 - communication system
- specifications:
 - access to workplace safety and environmental policies and procedures applicable to tree felling and chainsaw operations
 - access to workplace standard operating procedures or operator manual for chainsaws.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPFGM5219 Undertake carbon stock sampling of forests and plantations

Modification History

Release	Comment
1	Replaces superseded equivalent unit FPIFGM5219 Undertake carbon stock sampling which was first released with FPI11 Forest and Forest Products Training Package Version 2.2.

Application

This unit of competency describes the outcomes required to assess forests and plantations for current and future carbon stocks, including the use of growth modelling techniques to estimate future stocks. Work is completed in a variety of settings including native forest environments, hardwood or softwood plantations and agroforestry and farm forestry.

The unit applies to job roles including Forest Auditor, Forest Planner, Environmental Manager, Environmental Planner Forest Sustainability Manager And Sustainability Manager.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Forest Growing and Management

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>

ELEMENTS	PERFORMANCE CRITERIA
1. Plan for carbon stock sampling activities	<p>1.1 Confirm purpose, objectives and scope of sample collection activity through stakeholder discussions and consultations.</p> <p>1.2 Conduct desktop study of existing forests and plantations.</p> <p>1.3 Design measurement program and confirm sampling site locations and where required, obtain approval for site access.</p> <p>1.4 Evaluate characteristics of sites for impact on sampling and testing method.</p> <p>1.5 Determine and arrange human and physical resource requirements.</p>
2. Prepare for carbon stock sampling activities	<p>2.1 Locate forests and plantations using site maps and plans and identify areas for sampling.</p> <p>2.2 Complete administrative requirements, arrange contractors and obtain approvals in line with organisational procedures.</p> <p>2.3 Complete a risk assessment for the sample site and activities.</p>
3. Conduct carbon stock sampling collection	<p>3.1 Inspect and test sampling equipment to ensure operational effectiveness.</p> <p>3.2 Coordinate sampling activities at sites prior to commencement of and during the work activity.</p> <p>3.3 Conduct surveys and sampling in line with organisational safety procedures.</p> <p>3.4 Record results of samples and surveys, in line with sampling plan.</p> <p>3.5 Monitor sampling activities on a regular basis against sampling plan, and implement modifications or improvements as required.</p>
4. Interpret results	<p>4.1 Estimate forest carbon stocks from collected data.</p> <p>4.2 Review data against assessment program in line with organisational procedures.</p> <p>4.3 Analyse data to determine effectiveness of assessment.</p> <p>4.4 Prepare recommendations for future programs based on analysis.</p> <p>4.5 Record and report assessment processes and improvement suggestions to appropriate personnel.</p>
5. Use growth models to predict biomass and carbon stocks	<p>5.1 Select appropriate growth model.</p> <p>5.2 Predict biomass growth and carbon stocks from data</p>

ELEMENTS	PERFORMANCE CRITERIA
	assessments and incorporate in growth model. 5.3 Analyse data to determine comparability of predicted forest carbon stocks to current available data.

Foundation Skills

<i>This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.</i>	
Numeracy skills to:	<ul style="list-style-type: none"> • Interpret numerical data and symbols on maps. • Collect, analyse and record complex statistical data. • Identify and extract relevant information from complex diagrams, graphs and charts. • Use complex numerical modelling calculations to predict biomass growth and carbon stock growth.
Reading skills to:	<ul style="list-style-type: none"> • Interpret complex information in a range of internal and external source documents to plan for sampling activities.
Oral communication skills to:	<ul style="list-style-type: none"> • Hold high-level consultative discussions to generate ideas for and negotiate purpose, objectives and scope of sampling program.
Writing skills to:	<ul style="list-style-type: none"> • Prepare detailed and accurate reports involving qualitative and quantitative content where precise meaning is required. • Report on effectiveness of programs and potential improvements including rationale for recommendations.

Unit Mapping Information

FPIFGM5219 Undertake carbon stock sampling of forests and plantations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPFGM5219 Undertake carbon stock sampling of forests and plantations

Modification History

Release	Comment
1	<p>Replaces superseded equivalent unit FPIFGM5219 Undertake carbon stock sampling which was first released with FPI11 Forest and Forest Products Training Package Version 2.2.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including 'Required Skills and Knowledge, Evidence Guide and Range Statement'.</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit, and must be able to provide evidence that they can:

- Design two measurement programs for two individual sites to calculate current and expected biomass and carbon stocks of:
 - trees above and below ground
 - other vegetation
 - litter layer
 - soil.
- Complete survey and sampling activities for one of those sites using the measurement plan designed.
- Record and analyse all data collected for the site, estimate current carbon stocks, select a growth model and predict and document biomass growth and carbon stocks.
- Complete a report on survey and sampling activities recommending improvements for future processes.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- Requirements for obtaining permits and licences for site sampling activities and the authority from whom approval must be obtained.
- Characteristics and growth habits of local vegetation.
- Soil characteristics and topography of local area.

- Purpose, features and application of measurement programs used to calculate current and expected biomass and carbon stocks of the following:
 - trees above and below ground
 - other vegetation
 - litter layer
 - soil
 - wood products.
- Data collection and sampling methods for estimating carbon stocks.
- Statistical analysis techniques applicable to biomass and carbon assessments.
- Methods used to predict biomass growth and carbon stock growth, specifically the use of growth models.
- Purpose, features and operation of survey and assessment equipment and tools, including:
 - geographic information systems
 - interpretation of topographic maps and aerial photography
- Organisational procedures specific to carbon stock sampling, including:
 - workplace health and safety with particular emphasis on risk assessment and control
 - communication reporting lines
 - recording and reporting sampling data.

Assessment Conditions

The following resources must be made available:

- topographic maps
- aerial photography
- geographic information systems
- documents and commonly used proformas for recording sampling data
- organisational procedures for carbon stock sampling.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- Hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPFGM6203 Manage sustainable tree inventory

Modification History

Release	Comment
1	Replaces superseded equivalent FPIFGM6203 Manage sustainable tree inventory which was first released with FPI11 Forest and Forest Products Training Package Version 2.2.

Application

This unit of competency describes the outcomes required to develop a tree inventory plan to manage an inventory of forestry timber assets. The unit applies to those people who manage forests for enterprises but may also apply to people who have responsibility for sustainable tree management in urban or rural enterprises.

The unit applies to job roles including Forest Auditor, Forest Planner, Environmental Manager, Environmental Planner Forest Sustainability Manager And Sustainability Manager.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Forest Growing and Management

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Conduct risk assessment	1.1 Research and analyse sustainable tree management

ELEMENTS	PERFORMANCE CRITERIA
for managing tree inventory	<p>requirements.</p> <p>1.2 Identify resources and site characteristics.</p> <p>1.3 Research and assess external influences on tree inventory.</p> <p>1.4 Identify risks and potential outcomes related to identified resources and site characteristics and document risk management strategy.</p>
2. Obtain approvals for development of tree inventory plan	<p>2.1 Consult stakeholders and obtain support for development of tree inventory plan and management approach.</p> <p>2.2 Obtain approval for identified inventory plan and management approach.</p>
3. Prepare tree inventory plan for sustainable forest management	<p>3.1 Identify administrative tools, physical resources and recording methodology.</p> <p>3.2 Identify forest estate and associated management requirements.</p> <p>3.3 Forecast required human and financial resources to manage inventory.</p> <p>3.4 Establish quality assurance practices for collecting, documenting and verifying data.</p> <p>3.5 Clearly document plan and communicate to appropriate personnel.</p>
4. Manage the implementation of tree inventory plan	<p>4.1 Explain inventory plan requirements and responsibilities to participating stakeholders.</p> <p>4.2 Provide stakeholder support to ensure quality outcomes and objectives are met.</p> <p>4.3 Monitor finances and resources and maintain record keeping systems.</p> <p>4.4 Monitor risks and implement contingency management processes.</p>
5. Evaluate tree inventory plan	<p>5.1 Collect, analyse and store data about tree inventory in line with organisational procedures.</p> <p>5.2 Identify and investigate variations in tree inventory outcomes and objectives.</p> <p>5.3 Consult appropriate stakeholders on variation between desired results and actual outcomes.</p> <p>5.4 Evaluate outcomes and processes against tree inventory plan.</p>

ELEMENTS	PERFORMANCE CRITERIA
	5.5 Prepare recommendations for future plans based on consultation and analysis.

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	<ul style="list-style-type: none"> Analyse complex numerical data involving areas, ratios, percentages, volumes, lengths and diameters.
Oral communication skills to:	<ul style="list-style-type: none"> Hold high-level consultative discussions to generate ideas for and negotiate content of tree inventory plans.
Reading skills to:	<ul style="list-style-type: none"> Interpret complex information in a range of source documents to research and develop tree inventory plans.
Writing skills to:	<ul style="list-style-type: none"> Develop and document comprehensive tree inventory plans. Report on effectiveness of inventory management approach and potential improvements including rationale for recommendations.
Planning and organising skills to:	<ul style="list-style-type: none"> Source, collect and organise a range of data to inform plan content. Plan and manage own timing and productivity to plan, implement and evaluate management of tree inventory.
Technology skills to:	<ul style="list-style-type: none"> Use a computer, keyboard and software to prepare plans and reports.

Unit Mapping Information

FPIFGM6203 Manage sustainable tree inventory

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPFGM6203 Manage sustainable tree inventory

Modification History

Release	Comment
1	<p>Replaces superseded equivalent FPIFGM6203 Manage sustainable tree inventory which was first released with FPI11 Forest and Forest Products Training Package Version 2.2.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including 'Required Skills and Knowledge, Evidence Guide and Range Statement'.</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit, and must be able to provide evidence that they can:

- Develop a comprehensive written plan to manage sustainability tree inventory for a given site.
- Incorporate these inclusions in the plan:
 - risk management strategy to manage and minimise risks
 - quality assurance practices for collecting, documenting and verifying data
 - required data collection and administrative tools
 - required human resources and responsibilities
 - data recording methodology
 - recording and reporting procedures.
- For a specified period, analyse data and record and report on the following types of outcomes:
 - established growth rates
 - established volumes
 - forecasted outputs
 - forecasted sustainability
 - monitored sustainability
 - preserved forest sustainability.
- Evaluate the effectiveness of the tree inventory plan and complete a report including recommendations for improving future plans and tree management approach.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- Role of wood or waste products in generating renewable energy through biomass.
- Behavioural characteristics of a range of tree species.
- Silvicultural practices associated with management objectives.
- Key sustainability indicators for tree management.
- Key content and application of mensuration theory.
- Risks involved managing a sustainable tree inventory and methods used to minimise impacts, including:
 - biological
 - pests and diseases
 - weather and climate change
 - economic risk
 - erosion
 - fire
 - market failure
 - natural disaster
 - sabotage
 - water
 - structural failure.
- External influences and how they impact on managing a sustainable tree inventory, including:
 - international and Australian forestry and environmental standards
 - state, territory and local laws
 - advisory standards and codes of practice
 - land tenure and access
 - neighbouring tenure and access
 - habitat
 - cultural and heritage sites
 - agriforestry arrangements
 - fire management
 - data availability
 - human resource skills and availability.
- Purpose, features and application of inventory management tools, including:
 - measuring or diameter tapes
 - dataloggers and laptops
 - log sheets
 - compass
 - clinometer
 - height sticks

- prisms
- mobile GPS
- maps
- survey and title data
- survey equipment
- gantt charts
- flow charts.
- Key features and benefits of different recording methodologies, including:
 - dataloggers
 - log sheets
 - manual or electronic data transfer
 - analytical techniques and formulae
 - radio, UV, laser advanced technology
 - digital dataloggers and laptop computers
 - desk or field surveys
 - testing and calibration records.
- Organisational procedures specific to managing sustainable tree inventory:
 - communication reporting lines
 - database management and document control.

Assessment Conditions

The following resources must be made available:

- Computers, keyboards, printers and software used to document plans and reports.
- Administrative tools and equipment for managing sustainable tree inventory:
 - filing systems
 - field templates
 - operational manual
 - land access information
 - gantt charts
 - flow charts.
- Documents and commonly used proformas used to document risk management strategies and tree inventory plans.
- Organisational procedures for managing sustainable tree inventory.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- Hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPHAR2206 Operate a mobile chipper/mulcher

Modification History

Release	Comment
1	Replaces equivalent unit FPIHAR2206B Operate a mobile chipper/mulcher, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to operate a mobile chipping or mulching unit to chip or mulch timber refuse such as branches and other timber waste left after felling operations. Work is completed in a forest or forest farm setting.

The unit applies to those who operate a mobile chipping or mulching unit in a forest environment.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Harvesting and Haulage

Elements and Performance Criteria

<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Prepare for mobile chipping or mulching.	1.1 Review work order and where required check with appropriate personnel. 1.2 Select appropriate personal protective and other equipment and check for operational effectiveness. 1.3 Identify type and quantity of timber refuse to be chipped or

	<p>mulched.</p> <p>1.4 Plan chipping or mulching activities in line with work order.</p>
2. Chip or mulch timber refuse	<p>2.1 Reject timber refuse assessed as unsuitable for chipping or mulching and dispose of or recycle in line with environmental protection practices.</p> <p>2.2 Use equipment in line with organisational safety procedures, manufacturer's instructions and environmental protection requirements.</p> <p>2.3 Position, secure and set up chipping and mulching unit in line with manufacturer's specifications and required size.</p> <p>2.4 Direct timber refuse into chipper or mulcher at rate applicable to machine capacity.</p> <p>2.5 Chip timber refuse to chip sizes specified in work order.</p> <p>2.6 Respond to critical situations requiring emergency shutdown to prevent personal injury or damage to machine or product.</p>
3. Complete operator maintenance.	<p>3.1 Follow organisational safety procedures to lock out equipment.</p> <p>3.2 Check cutters for wear and damage at appropriate or recommended intervals.</p> <p>3.3 Remove, replace and dispose of cutters in line with manufacturer's recommendations, site procedures and environmental protection practices.</p> <p>3.4 Complete operator maintenance tasks in line with manufacturer's recommendations and site procedures.</p> <p>3.5 Record and report production outcomes and equipment faults to appropriate personnel.</p>

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	<ul style="list-style-type: none"> • identify quantities of required material within work orders • read basic numerical machine settings and choose according to chip size • complete routine production records involving quantities tallied against orders.
Oral communication skills to:	<ul style="list-style-type: none"> • ask questions and actively listen to clarify contents of work orders.

Reading skills to:	<ul style="list-style-type: none"> interpret workplace health and safety and other organisational procedures work orders manufacturers' instructions and maintenance recommendations.
Writing skills to:	<ul style="list-style-type: none"> complete accurate basic records for production outcomes and equipment faults.
Planning and organising skills to:	<ul style="list-style-type: none"> efficiently and logically sequence the stages of preparation and processing activities using work order to guide activities.

Range of Conditions

Not Applicable

Unit Mapping Information

FPIHAR2206B Operate a mobile chipper/mulcher

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPHAR2206 Operate a mobile chipper/mulcher

Modification History

Release	Comment
1	<p>Replaces equivalent unit FPIHAR2206B Operate a mobile chipper/mulcher, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.</p> <p>Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including Required Skills and Knowledge, Evidence Guide and Range Statement.</p>

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- complete chipping and mulching jobs in line with individual work orders which prescribe different quantities of timber refuse and different chip sizes
- complete operator maintenance, including fuelling, safety checks, cleaning, lubricating, operational adjustments, cutter inspection, removal, disposal and replacement to manufacturer recommendations and site procedures.
-

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- environmental protection practices for forest and forest farm settings:
 - reducing water and energy use
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing timber
- types of timber refuse suitable and unsuitable for chipping and mulching
- purpose, features and operation of mobile chipping and mulching units
- capacity of chippers and mulchers to cope with differing sizes and diameters of branch
- feed rates at which waste is fed into chippers and mulchers to optimise output without damaging or blocking machinery
- methods for checking cutting blade condition

- operator maintenance procedures including for fuelling, safety checks, cleaning, lubricating, operational adjustments, cutter inspection, removal, disposal and replacement
- common hazards associated with chipping and mulching operations and methods to minimise associated risks
- organisational procedures specific to chipping and mulching timber refuse:
 - workplace health and safety with particular emphasis on equipment lock out and use of personal protective equipment
 - communication reporting lines
 - recording and reporting production outcomes and equipment faults.
 -

Assessment Conditions

The following resources must be made available:

- mobile chipping and mulching units feeding into a truck or other form of transportation:
 - truck mounted
 - trailer mounted
- tools and consumables for operator maintenance
- tools and equipment for removing and replacing cutters
- consumable cutters
- personal protective equipment suitable for chipping and mulching timber refuse
- timber refuse for processing
- manufacturers':
 - instructions for equipment use
 - recommendations for operator maintenance
- work order with specific instructions for chipping or mulching timber refuse
- template documents for recording production outcomes and equipment faults
- relevant personnel for the purposes of communicating information
- organisational procedures for chipping and mulching timber refuse.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence
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Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

FWPNSY3002 Extract, clean, store and despatch tree seeds

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to extract, clean, store and despatch tree seeds.

The unit applies to individuals who are involved in tree nursery operations.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Forest Nursery Production (NSY)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for processing tree seeds	1.1 Determine job requirements from work order or instruction, and where required seek clarification from appropriate personnel 1.2 Confirm safety and environmental requirements, including use of personal protective equipment, for the task according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Identify, assess and take actions to mitigate risks and hazards associated with extracting, cleaning, storing and despatching tree seeds</p> <p>1.4 Identify emergency and evacuation procedures to follow in the event of an incident or accident</p> <p>1.5 Consult with appropriate personnel to ensure that work is coordinated effectively with others in the workplace</p> <p>1.6 Select tools, equipment and materials, and check for serviceability according to workplace procedures</p>
2. Extract tree seed	<p>2.1 Receive and visually assess seed bearing material, and ensure species is identified on container label</p> <p>2.2 Weigh and allocate identifiers according to workplace procedures</p> <p>2.3 Select appropriate extraction units and equipment, and check for operational effectiveness</p> <p>2.4 Operate and monitor seed extraction systems to extract maximum seed yield</p> <p>2.5 Inspect seed capsules and reprocess as required to ensure maximum yield</p> <p>2.6 Clean, maintain and calibrate extraction units and equipment, and report abnormal operation or faults in equipment for corrective action</p> <p>2.7 Dispose of residue and other waste material according to workplace procedures</p> <p>2.8 Clean and maintain work areas according to workplace procedures</p> <p>2.9 Record and report results of seed extraction process</p>
3. Clean, treat and store tree seed	<p>3.1 Separate seeds from other materials, weigh and store according to workplace procedures</p> <p>3.2 Treat seeds to prevent deterioration according to seed species and workplace procedures</p> <p>3.3 Record seed information onto inventory system accurately according to workplace procedures</p> <p>3.4 Package seed for storage according to workplace procedures</p>
4. Prepare tree seed sample for viability testing	<p>4.1 Identify and check seed sample for testing according to work order</p> <p>4.2 Remove seed sample from lot and prepare for testing according to workplace procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.3 Clearly label and package representative seed sample for despatch to testing body according to workplace procedures</p> <p>4.4 Record seed sample information onto inventory system accurately according to workplace procedures</p>
5. Despatch tree seed	<p>5.1 Interpret and check seed request specifications with appropriate personnel</p> <p>5.2 Retrieve seed from storage, and calculate quantities and species of seed to meet request specifications</p> <p>5.3 Weigh, document and place each seed species in an appropriate container in line with request requirements and workplace procedures</p> <p>5.4 Mix multiple seed lots thoroughly, as required in line with request specifications</p> <p>5.5 Label seed and seed mixtures according to workplace procedures</p> <p>5.6 Organise and undertake despatch of seed in line with request specifications and workplace procedures</p> <p>5.7 Record seed processing results onto inventory system according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Read and follow information on equipment and in workplace procedure manuals on safety and environmental requirements when processing seed Interpret instructions combining written and pictorial information on equipment or in operational manuals
Writing	<ul style="list-style-type: none"> Complete seed records and labels accurately and legibly using correct technical and enterprise specific vocabulary
Oral communication	<ul style="list-style-type: none"> Ask open and closed questions and use active listening techniques to clarify contents of work orders

Skill	Description
Numeracy	<ul style="list-style-type: none"> Calculate seed weight and quantity using scales Identify and calculate percentages in specifications for seed mix Estimate impact of time on storage of seed Estimate time to complete work tasks when processing seed Undertake numerical calculations on seed processing equipment

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPNSY3002 Extract, clean, store and despatch tree seeds	FWPFGM2213 Process seed	Redesigned unit that includes content from FWPFGM2213 Process seed, FWPFGM3201 Manage seed collection, and FWPFGM3202 Extract seed	Not equivalent
FWPNSY3002 Extract, clean, store and despatch tree seeds	FWPFGM3201 Manage seed collection	Redesigned unit that includes content from FWPFGM2213 Process seed, FWPFGM3201 Manage seed collection, and FWPFGM3202 Extract seed	Not equivalent
FWPNSY3002 Extract, clean, store and despatch tree seeds	FWPFGM3202 Extract seed	Redesigned unit that includes content from FWPFGM2213 Process seed, FWPFGM3201 Manage seed collection, and FWPFGM3202 Extract seed	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPN3002 Extract, clean, store and despatch tree seeds

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 7.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has extracted, cleaned, stored and despatched one batch of tree seeds.

In undertaking this activity, the individual has:

- extracted tree seed using appropriate items of equipment selected from:
 - kilns operated by gas, solar energy, oil or electricity
 - sieves of various sizes
 - air-drying racks and trays
 - conveyor belt
 - computer controlled extraction systems
- cleaned, treated and stored one batch of tree seed
- prepared one tree seed sample for viability testing
- despatched one batch of seed in line with seed request specifications
- complied with safety requirements, including use of personal protective equipment (PPE)
- recorded seed processing information and results.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- tree seed species and structure
- tree seed source classes
- methods to treat seed
- methods for testing, packaging and storing tree seed species using:
 - vacuum sealing
 - use of inert atmospheres, including nitrogen and carbon dioxide

- methods for controlling the packing environment, including temperature, light and moisture
- types, operation and maintenance procedures for seed processing equipment, including electric and manual scales, packaging material, seed cleaning machine, seed lot mixing device, lifting equipment
- seed separation methods:
 - hand selection
 - wind separation and winnowing
 - sieving
 - vibrating
 - flotation
 - drying
 - crumbling of husks
 - computer controlled extraction systems
- seed despatch process:
 - seed species
 - seed batching and mixing
 - pure graded seed
 - sowing rate
 - despatch container
 - method of despatch
 - sowing equipment to be used
- methods for recording seed processing information and results and maintaining workplace information
- impact and application procedures of seed treatments, including fungicides and cleaning
- hazards associated with the storage, treatment and despatch of seed
- seed species and treating, packaging and storage processes
- seed treatments and storage requirements for different seed species
- types of diseases and pests likely to infect the species
- workplace procedures for recording and reporting workplace seed information, including:
 - species
 - time and date of harvest
 - time and date of receipt into the store
 - place or origin of seed
 - container identifier
- request specifications, including:
 - seed species
 - percentage of seed mix
 - pure graded seed
 - rate of sown
 - dispatch container

- method of dispatch
- sowing equipment to be used
- appropriate container criteria:
 - length of time seed will be stored
 - method to be used to transport seed
 - equipment to be used for sowing seed
 - quantity of seed
 - size of individual seeds
- methods for viability testing tree seed samples.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a forest or wood products work environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - tree seed bearing material
 - workplace location or simulated workplace, required to extract, treat, store and despatch tree seed
 - materials and equipment relevant to tree seed extraction and processing work
 - PPE suitable for work involving the extraction, cleaning, storing and despatching of tree seeds
- specifications:
 - workplace health, safety and environmental policies and procedures applicable to tree seed extraction and processing work.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

HLTAID009 Provide cardiopulmonary resuscitation

Modification History

Not applicable.

Application

This unit describes the skills and knowledge required to perform cardiopulmonary resuscitation (CPR) in line with the Australian Resuscitation Council (ARC) guidelines.

This unit applies to all persons who may be required to provide CPR, in a range of situations, including community and workplace settings.

Specific licensing/regulatory requirements relating to this competency, including requirements for refresher training should be obtained from the relevant national/state/territory Work Health and Safety Regulatory Authorities.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

1. Respond to an emergency situation.

- 1.1. Recognise and assess an emergency situation.
- 1.2. Ensure safety for self, bystanders and casualty.
- 1.3. Assess the casualty and recognise the need for cardiopulmonary resuscitation (CPR).
- 1.4. Seek assistance from emergency services.

2. Perform CPR procedures.

- 2.1. Perform CPR in accordance with the ARC guidelines.
- 2.2. Display respectful behaviour towards casualty.
- 2.3. Operate an automated external defibrillator (AED) according to manufacturers' instructions.

3. Communicate details of the incident.

- 3.1. Accurately convey incident details to emergency services.
- 3.2. Report details of incident in line with appropriate workplace or site procedures.
- 3.3. Maintain privacy and confidentiality of information in line with statutory or organisational policies.

4. Review the incident.
- 4.1. Recognise the possible psychological impacts on self and other rescuers and seek help when required.
 - 4.2. Contribute to a review of the first aid response as required.

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and not equivalent to HLTAID001 Perform cardiopulmonary resuscitation

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

Assessment Requirements for HLTAID009 Provide cardiopulmonary resuscitation

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the workplace or community setting.

There must be evidence that the candidate has completed the following tasks in line with State/Territory regulations, first aid codes of practice, first aid guidelines determined by the Australian Resuscitation Council (ARC) and other Australian national peak clinical bodies and workplace or site procedures:

- managed, in line with ARC guidelines, the unconscious, breathing casualty including appropriate positioning to reduce the risk of airway compromise
- managed, in line with ARC guidelines, the unconscious, non-breathing adult, including:
 - performing at least 2 minutes of uninterrupted single rescuer cardiopulmonary resuscitation (CPR) (5 cycles of both compressions and ventilations) on an adult resuscitation manikin placed on the floor
 - following the prompts of an automated external defibrillator (AED) to deliver at least one shock
 - demonstrating a rotation of single rescuer operators with minimal interruptions to compressions
 - responding appropriately in the event of regurgitation or vomiting
 - handing over to emergency services
 - providing an accurate verbal report of the incident
 - reviewing the incident
- managed, in line with ARC guidelines, the unconscious, non-breathing infant, including:
 - performing at least 2 minutes of uninterrupted single rescuer CPR (5 cycles both compressions and ventilations) on an infant resuscitation manikin placed on a firm surface.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- guidelines and procedures including:
 - relevant ARC guidelines to managing the unconscious breathing and non-breathing casualty and provision of CPR
 - potential incident hazards and risk minimisation processes when providing first aid

- infection control procedures, including use of standard precautions and resuscitation barrier devices
- requirements for currency of skill and knowledge
- first aid codes of practice
- appropriate workplace or site procedures relevant to the provision of first aid
- legal, workplace and community considerations, including:
 - duty of care requirements
 - own skills and limitations
 - consent and how it relates to the conscious and unconscious casualty
 - privacy and confidentiality requirements
 - awareness of potential need for stress management techniques and available support for rescuers
- considerations when providing CPR, including:
 - upper airway and effect of positional change
 - appropriate duration and cessation of CPR
 - appropriate use of an AED
 - safety and maintenance procedures for an AED
 - chain of survival
 - how to access emergency services
- techniques for providing CPR to adults, children and infants including:
 - how to recognise that a casualty is unconscious and not breathing normally
 - rate, ratio and depth of compressions and ventilations
 - correct hand positioning for compressions
 - basic anatomy, physiology and the differences between adults, children and infants relating to CPR.

Assessment Conditions

Each candidate to demonstrate skills in an environment that provides realistic in-depth, scenarios and simulations to assess candidates' skills and knowledge.

Due to the nature of this type of training, it is acceptable for the performance evidence to be collected in a simulated environment.

Compression and ventilation skills must be demonstrated on resuscitation manikins following ARC guidelines for the purpose of assessment of CPR procedures.

Assessment must ensure access to:

- adult and infant resuscitation manikins following ARC guidelines for the purpose of assessment of CPR procedures
- AED training devices
- personal protective equipment (PPE).

Simulated assessment environments must simulate real-life situations where these skills and knowledge would be performed, with all the relevant equipment and resources of that workplace or community environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors and must hold this unit or demonstrate equivalent skills and knowledge to that contained within this unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

HLTAID010 Provide basic emergency life support

Modification History

Not applicable.

Application

This unit describes the skills and knowledge required to recognise and respond to life-threatening emergencies in line with first aid guidelines determined by the Australian Resuscitation Council (ARC) and other Australian national peak clinical bodies.

This unit applies to all persons who may be required to provide an emergency response in a range of situations, including community and workplace settings.

Specific licensing/regulatory requirements relating to this competency, including requirements for refresher training should be obtained from the relevant national/state/territory Work Health and Safety Regulatory Authorities

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

1. Respond to an emergency situation.

- 1.1. Recognise and assess an emergency situation.
- 1.2. Ensure safety for self, bystanders and casualty.
- 1.3. Assess the casualty and recognise the need for first aid response.
- 1.4. Seek assistance from emergency services.

2. Apply appropriate first aid procedures.

- 2.1. Perform cardiopulmonary resuscitation (CPR) in accordance with the ARC guidelines.
- 2.2. Provide first aid in accordance with established first aid principles.
- 2.3. Display respectful behaviour towards casualty.
- 2.4. Obtain consent from casualty where possible.
- 2.5. Use available resources and equipment to make the casualty as comfortable as possible.
- 2.6. Operate first aid equipment according to manufacturers' instructions.
- 2.7. Monitor the casualty's condition and respond in accordance with first aid principles.

3. Communicate details of the incident.
 - 3.1. Accurately convey incident details to emergency services.
 - 3.2. Report details of incident in line with appropriate workplace or site procedures.
 - 3.3. Maintain privacy and confidentiality of information in line with statutory or organisational policies.
4. Review the incident.
 - 4.1. Recognise the possible psychological impacts on self and other rescuers and seek help when required.
 - 4.2. Contribute to a review of the first aid response as required.

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and not equivalent to HLTAID002 Provide basic emergency life support

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

Assessment Requirements for HLTAID010 Provide basic emergency life support

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the workplace or community setting.

There must be evidence that the candidate has completed the following tasks in line with State/Territory regulations, first aid codes of practice, first aid guidelines determined by the Australian Resuscitation Council (ARC) and other Australian national peak clinical bodies and workplace or site procedures:

- managed, in line with ARC guidelines, the unconscious, breathing casualty including appropriate positioning to reduce the risk of airway compromise
- managed, in line with ARC guidelines, the unconscious, non-breathing adult, including:
 - performing at least 2 minutes of uninterrupted single rescuer cardiopulmonary resuscitation (CPR) (5 cycles of both compressions and ventilations) on an adult resuscitation manikin placed on the floor
 - following the prompts of an automated external defibrillator (AED) to deliver at least one shock
 - demonstrating a rotation of single rescuer operators with minimal interruptions to compressions
 - responding appropriately in the event of regurgitation or vomiting
- managed, in line with ARC guidelines, the unconscious, non-breathing infant, including:
 - performing at least 2 minutes of uninterrupted single rescuer CPR (5 cycles both compressions and ventilations) on an infant resuscitation manikin placed on a firm surface
- managed casualties, with the following:
 - anaphylaxis
 - asthma
 - non-life-threatening bleeding
 - choking
 - shock
- responded to at least one simulated first aid incident contextualised to the candidate's workplace or community setting, where the candidate has no knowledge of the casualty's condition prior to starting treatment, including:
 - identifying the casualty's illness or injury through history, signs and symptoms
 - using personal protective equipment (PPE)

- providing appropriate first aid treatment
- conveying incident details to emergency services or advising casualty on any required post incident action
- providing an accurate verbal report of the incident
- reviewing the incident.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

guidelines and procedures including:

- ARC guidelines relevant to the provision of first aid
- first aid guidelines from Australian national peak clinical bodies
- potential incident hazards and risk minimisation processes when providing first aid
- infection control procedures, including use of standard precautions and resuscitation barrier devices
- requirements for currency of skill and knowledge
- first aid codes of practice
- appropriate workplace or site procedures relevant to the provision of first aid
- contents of first aid kits
- legal, workplace and community considerations, including:
 - duty of care requirements
 - own skills and limitations
 - consent and how it relates to the conscious and unconscious casualty
 - privacy and confidentiality requirements
 - awareness of potential need for stress management techniques and available support for rescuers
- considerations when providing CPR, including:
 - upper airway and effect of positional change
 - appropriate duration and cessation of CPR
 - appropriate use of an AED
 - safety and maintenance procedures for an AED
 - chain of survival
 - how to access emergency services
- techniques for providing CPR to adults, children and infants including:
 - how to recognise that a casualty is unconscious and not breathing normally
 - rate, ratio and depth of compressions and ventilations
 - correct hand positioning for compressions
 - basic anatomy, physiology and the differences between adults, children and infants relating to CPR
- Signs, symptoms and management of the following conditions or injuries:

- allergic reaction
- anaphylaxis
- asthma
- non-life-threatening and life-threatening bleeding
- cardiac conditions, including chest pain
- choking
- shock
- stroke.

Assessment Conditions

Each candidate to demonstrate skills in an environment that provides realistic in-depth, scenarios and simulations to assess candidates' skills and knowledge.

Due to the nature of this type of training, it is acceptable for the performance evidence to be collected in a simulated environment.

Compression and ventilation skills must be demonstrated on resuscitation manikins following ARC guidelines for the purpose of assessment of CPR procedures.

Assessment must ensure access to:

- adult and infant resuscitation manikins following ARC guidelines for the purpose of assessment of CPR procedures
- workplace first aid kit
- adrenaline auto-injector training device
- AED training devices
- placebo bronchodilator and spacer device
- different types of wound dressings and bandages
- blankets and items to treat for shock
- personal protective equipment (PPE).

Simulated assessment environments must simulate real-life situations where these skills and knowledge would be performed, with all the relevant equipment and resources of that workplace or community environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors and must hold this unit or demonstrate equivalent skills and knowledge to that contained within this unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

HLTAID011 Provide First Aid

Modification History

Not applicable.

Application

This unit describes the skills and knowledge required to provide a first aid response to a casualty in line with first aid guidelines determined by the Australian Resuscitation Council (ARC) and other Australian national peak clinical bodies.

The unit applies to all persons who may be required to provide a first aid response in a range of situations, including community and workplace settings.

Specific licensing/regulatory requirements relating to this competency, including requirements for refresher training should be obtained from the relevant national/state/territory Work Health and Safety Regulatory Authorities.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

1. Respond to an emergency situation.

- 1.1. Recognise and assess an emergency situation.
- 1.2. Ensure safety for self, bystanders and casualty.
- 1.3. Assess the casualty and recognise the need for first aid response.
- 1.4. Seek assistance from emergency services.

2. Apply appropriate first aid procedures.

- 2.1. Perform cardiopulmonary resuscitation (CPR) in accordance ARC guidelines.
- 2.2. Provide first aid in accordance with established first aid principles.
- 2.3. Display respectful behaviour towards casualty.
- 2.4. Obtain consent from casualty where possible.
- 2.5. Use available resources and equipment to make the casualty as comfortable as possible.
- 2.6. Operate first aid equipment according to manufacturers' instructions.
- 2.7. Monitor the casualty's condition and respond in accordance with first aid principles.

3. Communicate details of the incident.
 - 3.1. Accurately convey incident details to emergency services.
 - 3.2. Report details of incident in line with appropriate workplace or site procedures.
 - 3.3. Complete applicable workplace or site documentation, including incident report form.
 - 3.4. Maintain privacy and confidentiality of information in line with statutory or organisational policies.
4. Review the incident.
 - 4.1. Recognise the possible psychological impacts on self and other rescuers and seek help when required.
 - 4.2. Contribute to a review of the first aid response as required.

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and not equivalent to HLTAID003 Provide first aid

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

Assessment Requirements for HLTAID011 Provide First Aid

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the workplace or community setting.

There must be evidence that the candidate has completed the following tasks in line with State/Territory regulations, first aid codes of practice, first aid guidelines determined by the Australian Resuscitation Council (ARC) and other Australian national peak clinical bodies and workplace or site procedures:

- managed, in line with ARC guidelines, the unconscious, breathing casualty including appropriate positioning to reduce the risk of airway compromise
- managed, in line with ARC guidelines, the unconscious, non-breathing adult, including:
 - performing at least 2 minutes of uninterrupted single rescuer cardiopulmonary resuscitation (CPR) (5 cycles of both compressions and ventilations) on an adult resuscitation manikin placed on the floor
 - following the prompts of an automated external defibrillator (AED) to deliver at least one shock
 - demonstrating a rotation of single rescuer operators with minimal interruptions to compressions
 - responding appropriately in the event of regurgitation or vomiting
- managed, in line with ARC guidelines, the unconscious, non-breathing infant, including:
 - performing at least 2 minutes of uninterrupted single rescuer CPR (5 cycles both compressions and ventilations) on an infant resuscitation manikin placed on a firm surface
- managed casualties, with the following:
 - anaphylaxis
 - asthma
 - non-life-threatening bleeding
 - choking
 - envenomation, using pressure immobilisation
 - fractures, dislocations, sprains and strains, using appropriate immobilisation techniques
 - minor wound cleaning and dressing
 - nosebleed
 - shock

- responded to at least one simulated first aid incident contextualised to the candidate's workplace or community setting, where the candidate has no knowledge of the casualty's condition prior to starting treatment, including:
 - identifying the casualty's illness or injury through history, signs and symptoms
 - using personal protective equipment (PPE) as required
 - providing appropriate first aid treatment
 - conveying incident details to emergency services or advising casualty on any required post incident action
 - providing an accurate verbal and written report of the incident
 - reviewing the incident.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- guidelines and procedures including:
 - ARC guidelines relevant to the provision of first aid
 - first aid guidelines from Australian national peak clinical bodies
 - potential incident hazards and risk minimisation processes when providing first aid
 - infection control procedures, including use of standard precautions and resuscitation barrier devices
 - requirements for currency of skill and knowledge
 - first aid codes of practice
 - appropriate workplace or site procedures relevant to the provision of first aid
 - contents of first aid kits
- legal, workplace and community considerations including:
 - duty of care requirements
 - own skills and limitations
 - consent and how it relates to the conscious and unconscious casualty
 - privacy and confidentiality requirements
 - awareness of potential need for stress management techniques and available support for rescuers
- considerations when providing CPR, including:
 - upper airway and effect of positional change
 - appropriate duration and cessation of CPR
 - appropriate use of an AED
 - safety and maintenance procedures for an AED
 - chain of survival
 - how to access emergency services
- techniques for providing CPR to adults, children and infants including:
 - how to recognise that a casualty is unconscious and not breathing normally

- rate, ratio and depth of compressions and ventilations
- correct hand positioning for compressions
- basic anatomy, physiology and the differences between adults, children and infants relating to CPR
- signs, symptoms and management of the following conditions and injuries:
 - allergic reaction
 - anaphylaxis
 - asthma
 - non-life-threatening and life-threatening bleeding
 - burns
 - cardiac conditions, including chest pain
 - choking
 - diabetes
 - drowning
 - envenomation - all current treatments
 - eye injuries
 - fractures, dislocations, strains and sprains
 - head, neck and spinal injuries
 - hypothermia
 - hyperthermia
 - minor wounds
 - nose-bleed
 - poisoning
 - seizures
 - shock
 - sharps injuries
 - stroke.

Assessment Conditions

Each candidate to demonstrate skills in an environment that provides realistic in-depth, scenarios and simulations to assess candidates' skills and knowledge.

Due to the nature of this type of training, it is acceptable for the performance evidence to be collected in a simulated environment.

Compression and ventilation skills must be demonstrated on resuscitation manikins following ARC guidelines for the purpose of assessment of CPR procedures.

Assessment must ensure access to:

- adult and infant resuscitation manikins following ARC guidelines for the purpose of assessment of CPR procedures
- adrenaline auto-injector training device

- AED training devices
- workplace first aid kit
- placebo bronchodilator and spacer device
- different types of wound dressings and bandages
- blankets and items to treat for shock
- personal protective equipment (PPE)
- workplace injury, trauma or illness record, or other applicable workplace or site incident report form.

Simulated assessment environments must simulate real-life situations where these skills and knowledge would be performed, with all the relevant equipment and resources of that workplace or community environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors and must hold this unit or demonstrate equivalent skills and knowledge to that contained within this unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

HLTAID013 Provide First Aid in remote or isolated site

Modification History

Not applicable.

Application

This unit describes the skills and knowledge required to provide a first aid response to a casualty in a remote or isolated site over an extended period of time until medical assistance is provided, or evacuation occurs.

This unit applies to any site where medical assistance is likely to be delayed.

First aid is to be provided in line with guidelines determined by the Australian Resuscitation Council (ARC) and other Australian national peak clinical bodies.

Specific licensing/regulatory requirements relating to this competency, including requirements for refresher training should be obtained from the relevant national/state/territory Work Health and Safety Regulatory Authorities.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|---|--|
| 1. Prepare equipment for first aid response in remote or isolated site. | 1.1. Evaluate information about remote or isolated site and identify potential injuries and illnesses requiring extended management.
1.2. Select first aid equipment and resources to manage a range of potential incidents, according to organisational emergency response and first aid procedures.
1.3. Select communication equipment to facilitate emergency response in remote or isolated site.
1.4. Complete pre-departure safety and serviceability checks on equipment. |
| 2. Assess the situation. | 2.1. Recognise and assess an emergency situation.
2.2. Ensure safety for self, bystanders and casualty.
2.3. Assess casualty to determine extent of first aid response.
2.4. Identify need for medical assistance and relay initial and |

- concise information.
- 2.5. Triage when multiple casualties are involved.
3. Apply appropriate first aid procedures.
- 3.1. Perform single-rescuer or two-rescuer cardiopulmonary resuscitation (CPR) in accordance with the ARC guidelines and availability of rescuers.
- 3.2. Provide first aid in accordance with established first aid principles.
- 3.3. Display respectful behaviour towards casualty.
- 3.4. Obtain consent from casualty where possible.
- 3.5. Use available resources and equipment to make the casualty as comfortable as possible.
- 3.6. Operate first aid equipment according to manufacturers' instructions.
- 3.7. Monitor the casualty's condition and respond in accordance with first aid principles.
- 3.8. Assess need to evacuate casualty, ability to transport to medical assistance or need for external assistance.
- 3.9. Administer medication as required according to medical instructions.
4. Communicate details of the incident.
- 4.1. Accurately convey incident details to emergency services.
- 4.2. Report details of incident in line with appropriate workplace or site procedures.
- 4.3. Complete applicable workplace or site documentation, including incident report form.
- 4.4. Maintain privacy and confidentiality of records and information in line with applicable statutory or organisational policies.
5. Coordinate evacuation and first aid activities until assistance arrives.
- 5.1. Determine need, in consultation with external services, to evacuate casualty.
- 5.2. Provide accurate information about location of incident, number of casualties, their condition and their position to enable deployment of appropriate resources.
- 5.3. Continue to provide treatment using available resources until help arrives.
- 5.4. Prepare site for evacuation of patient.
- 5.5. On approach, assist emergency services to locate the site of the incident.
- 5.6. Follow instructions and provide assistance to emergency services personnel during evacuation.
6. Review the incident.
- 6.1. Recognise the possible psychological impacts on self and other rescuers and seek help when required.
- 6.2. Contribute to a review of the first aid response as required.

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and not equivalent to HLTAID005 Provide first aid in remote situations.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

Assessment Requirements for HLTAID013 Provide First Aid in remote or isolated site

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the workplace or community setting.

There must be evidence that the candidate has completed the following tasks in line with State/Territory regulations, first aid codes of practice, first aid guidelines determined by the Australian Resuscitation Council (ARC) guidelines and workplace or site procedures:

- managed, in line with ARC guidelines, the unconscious, breathing casualty including appropriate positioning to reduce the risk of airway compromise
- managed, in line with ARC guidelines, the unconscious, non-breathing adult including:
 - performing at least 2 minutes of uninterrupted single rescuer cardiopulmonary resuscitation (CPR) (5 cycles of both compressions and ventilations) on an adult resuscitation manikin placed on the floor
 - performing at least 2 minutes of ventilation and at least 2 minutes of compressions during a two-rescuer procedure on an adult resuscitation manikin placed on the floor
 - following the prompts of an automated external defibrillator (AED) to deliver at least one shock
 - responding appropriately in the event of regurgitation or vomiting
 - demonstrating a rotation of operators with minimal interruptions to compressions
- managed, in line with ARC guidelines, the unconscious, non-breathing infant, including:
 - performing at least 2 minutes of uninterrupted single rescuer CPR (5 cycles both compressions and ventilations) on an infant resuscitation manikin placed on a firm surface
- managed casualties, with the following:
 - anaphylaxis
 - asthma
 - non-life-threatening bleeding
 - choking
 - minor wound cleaning and dressing
 - nosebleed
 - shock
 - envenomation, using pressure immobilisation
 - fractures, dislocations, sprains and strains, using appropriate immobilisation techniques for remote situations and appropriate equipment improvisations

- head, neck and spinal injuries
- hypothermia and hyperthermia
- life threatening bleeding requiring use of tourniquets and haemostatic dressings
- responded to at least one simulated first aid incident contextualised to the candidate's workplace or community setting, where the candidate has no knowledge of the casualty's condition prior to starting treatment, including:
 - identifying the casualty's illness or injury through history, signs and symptoms
 - using personal protective equipment (PPE) as required
 - conducting a secondary survey assessment
 - assessing vital signs respirations, pulse, temperature
 - level of consciousness
 - providing appropriate first aid treatment
 - conveying incident details to emergency services or advising casualty on any required post incident action
 - providing an accurate verbal and written report of the incident
 - reviewing the incident
- conducted a basic triage for a multiple casualty incident.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- guidelines and procedures including:
 - ARC guidelines relevant to the provision of first aid
 - first aid guidelines from Australian national peak clinical bodies including those relevant to remote or isolated sites
 - potential incident hazards and risk minimisation processes when providing first aid
 - infection control procedures, including use of standard precautions and resuscitation barrier devices
 - requirements for currency of skill and knowledge
 - first aid codes of practice
 - appropriate workplace or site procedures relevant to the provision of first aid
 - contents of first aid kits
- legal, workplace and community considerations including:
 - duty of care requirements
 - own skills and limitations
 - consent and how it relates to the conscious and unconscious casualty
 - privacy and confidentiality requirements
 - awareness of potential need for stress management techniques and available support for rescuers
- in relation to the administration of medication

- legal requirements
- the five rights
- the responsibilities of the first aider
- considerations when providing CPR, including:
 - upper airway and effect of positional change
 - appropriate duration and cessation of CPR
 - appropriate use of an AED
 - safety and maintenance procedures for an AED
 - chain of survival
 - how to access emergency services
- techniques for providing CPR to adults, children and infants including:
 - how to recognise that a casualty is unconscious and not breathing normally
 - rate, ratio and depth of compressions and ventilations
 - correct hand positioning for compressions
 - basic anatomy, physiology and the differences between adults, children and infants relating to CPR
- signs, symptoms and management of the following conditions or injuries:
 - allergic reaction
 - anaphylaxis
 - asthma
 - non-life-threatening bleeding
 - burns
 - cardiac conditions, including chest pain
 - choking
 - diabetes
 - drowning
 - envenomation - all current treatments
 - eye injuries
 - fractures, dislocations, sprains and strains
 - head, neck and spinal injuries
 - hypothermia
 - hyperthermia
 - minor wounds
 - nose-bleed
 - poisoning
 - seizures
 - shock
 - sharps injuries
 - stroke
 - life threatening bleeding including use of tourniquets and haemostatic dressings

- considerations when providing first aid including:
 - assessment, interpretation and documentation of vital signs, including normal clinical values for respirations, temperature, pulse and level of consciousness
 - how to conduct a secondary assessment of a casualty
 - basic triage processes
 - ongoing care requirements of casualty beyond initial treatment
- remote considerations in the provision of first aid, including:
 - the nature of remote or isolated sites and how this may impact on first aid management
 - key features, functions and limitations of different types of emergency communication equipment used in remote or isolated sites, and factors that affect choice:
 - radio equipment
 - mobile phones
 - satellite phones
 - alerting and tracking devices including personal locator beacons (PLBs)
 - management options relating to transporting casualty, including aero-medical evacuation
 - specific considerations contextualised to alpine, desert, marine, rural or remote settings and tropical environments
 - methods used to assist emergency services to locate incident sites and the key features, functions and limitations of resources used to assist:
 - verbal directions
 - flags
 - flares or smoke
 - fires
 - use of man-made and natural resources to supplement first aid equipment
 - content of remote area first aid kits
 - content of remote area medication boxes
- psychological impacts of first aid incidents on rescuers and how to seek help.
-

Assessment Conditions

Each candidate to demonstrate skills in an environment that provides realistic in-depth, scenarios and simulations to assess candidates' skills and knowledge.

Scenarios must concentrate on the significance of remote or isolated site circumstances.

Due to the nature of this type of training, it is acceptable for the performance evidence to be collected in a simulated environment.

Compression and ventilation skills must be demonstrated on resuscitation manikins following ARC guidelines for the purpose of assessment of CPR procedures.

Assessment must ensure access to:

- adult and infant resuscitation manikin following ARC guidelines for the purpose of assessment of CPR procedures
- adrenaline auto-injector training device
- AED training devices
- placebo bronchodilator and spacer device
- haemostatic dressings
- haemostatic wound packing trainer
- thermometers
- tourniquets
- tourniquet trainer
- different types of wound dressings and bandages
- blankets and items to manage a casualty for shock
- personal protective equipment (PPE)
- workplace injury, trauma or illness record, or other appropriate workplace or site incident report form, which includes space for recording vital signs of casualties
- remote first aid kits
- immobilisation devices.

Simulated assessment environments must simulate real-life situations where these skills and knowledge would be performed, with all the relevant equipment and resources of that workplace or community environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors and must hold this unit or demonstrate equivalent skills and knowledge to that contained within this unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

HLTAID015 Provide advanced resuscitation and oxygen therapy

Modification History

Release	Comments
Release 2	Minor grammatical changes to ensure clarity. Equivalent outcome. Updated mapping details.
Release 1	HLTAID015 Provide advanced resuscitation and oxygen therapy supersedes and is not equivalent to HLTAID007 Provide advanced resuscitation.

Application

This unit describes the skills and knowledge required to use specialised equipment in the provision of resuscitation and oxygen therapy in line with the Australian Resuscitation Council (ARC) guidelines.

This unit applies to persons who may be required to use specialised equipment to provide resuscitation or oxygen therapy in a range of complex situations, including community and workplace settings.

Specific licensing/regulatory requirements relating to this competency, including requirements for refresher training should be obtained from the relevant national/state/territory Work Health and Safety Regulatory Authorities.

Pre-requisite Unit

HLTAID011 Provide First Aid

Elements and Performance Criteria

ELEMENT

Elements define the essential outcomes.

1. Respond to an emergency situation.

PERFORMANCE CRITERIA

Performance criteria specify the level of performance needed to demonstrate achievement of the element.

- 1.1. Recognise and assess an emergency situation.
- 1.2. Ensure safety for self, bystanders and casualty.
- 1.3 Assess the casualty and recognise the need for CPR,

ELEMENT**PERFORMANCE CRITERIA**

Elements define the essential outcomes.

Performance criteria specify the level of performance needed to demonstrate achievement of the element.

	advanced resuscitation response or oxygen therapy.
	1.4. Manage life-threatening bleeding.
	1.5. Seek assistance from emergency services.
	1.6. Ensure environment is safe for delivery of oxygen.
2. Perform resuscitation procedures.	2.1. Perform single-rescuer cardiopulmonary resuscitation (CPR) or two-rescuer resuscitation procedures, including use of oxygen, in accordance with the ARC guidelines and availability of rescuers.
	2.2. Display respectful behaviour towards casualty.
	2.3. Use available resources and equipment according to manufacturers' instructions.
3. Deliver oxygen therapy.	3.1. Identify need for oxygen therapy, including by using a pulse oximeter.
	3.2. Use appropriate delivery device to provide oxygen.
	3.3. Monitor casualty condition and rectify issues preventing adequate treatment.
4. Communicate details of the incident.	4.1. Accurately convey incident details to emergency services.
	4.2. Report details of incident in line with appropriate workplace or site procedures.
	4.3. Complete applicable documentation, including incident report form.
	4.4. Maintain privacy and confidentiality of information in line with statutory or organisational policies.
5. Review the incident.	5.1. Recognise the possible psychological impacts on self and other rescuers and seek help when required.
	5.2. Contribute to a review of the first aid response as required.
	5.3. Check, maintain and clean equipment ready for future use.

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and

employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

HLTAID015 Provide advanced resuscitation and oxygen therapy supersedes and is not equivalent to HLTAID007 Provide advanced resuscitation.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

Assessment Requirements for HLTAID015 Provide advanced resuscitation and oxygen therapy

Modification History

Release	Comments
Release 2	Minor grammatical changes to ensure clarity, equivalent outcome. Updated mapping details.
Release 1	HLTAID015 Provide advanced resuscitation and oxygen therapy supersedes and is not equivalent to HLTAID007 Provide advanced resuscitation.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the workplace or community setting.

There must be evidence that the candidate has completed the following tasks in line with State/Territory regulations, first aid codes of practice, first aid guidelines determined by the Australian Resuscitation Council (ARC) and other Australian national peak clinical bodies and workplace or site procedures:

- managed, in line with ARC guidelines, the unconscious, breathing casualty including appropriate positioning to reduce the risk of airway compromise
- managed, in line with ARC guidelines, the unconscious, non-breathing adult including:
 - performing at least 2 minutes of uninterrupted single rescuer cardiopulmonary resuscitation (CPR) (5 cycles of both compressions and ventilations) on an adult resuscitation manikin placed on the floor
 - performing at least 2 minutes of bag-valve-mask (with oxygen) ventilation and at least 2 minutes of compression during resuscitation procedures involving at least two rescuers on an adult resuscitation manikin placed on the floor
 - selecting and inserting an appropriate basic airway adjunct
 - responding appropriately using positioning and suctioning in the event of regurgitation or vomiting
 - demonstrating a rotation of operators with minimal interruptions to compressions
 - following the prompts of an Automated External Defibrillator (AED) to deliver at least one shock
 - managing oxygen equipment appropriately
 - handing over to emergency services
- managed, in line with ARC guidelines, the unconscious, non-breathing infant, including:

- performing at least 2 minutes of uninterrupted single rescuer CPR (5 cycles both compressions and ventilations) on an infant resuscitation manikin placed on a firm surface
- managed a casualty with life-threatening bleeding requiring use of tourniquets and haemostatic dressings
- used personal protective equipment (PPE) as required
- managed a conscious casualty who requires supplemental oxygen, including:
 - assessing vital signs respirations, pulse, oxygen saturation
 - level of consciousness
 - selecting and preparing correct oxygen equipment
 - checking area for ventilation and sources of ignition
 - administering oxygen safely at correct flow rate
 - managing an equipment malfunction
 - providing an accurate verbal and written report of the incident
 - reviewing the incident
- monitored and coordinated maintenance of resuscitation equipment and oxygen therapy equipment, including:
 - dismantling
 - storage
 - disposal
 - cleaning and decontamination
 - checking and diagnosis of faults.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- guidelines and procedures including:
 - ARC guidelines relevant to life threatening bleeding, managing the unconscious breathing and non-breathing casualty and provision of CPR and oxygen therapy
 - potential incident hazards and risk minimisation processes when providing first aid, including Oxygen Therapy and Advanced Resuscitation Techniques
 - infection control procedures, including use of standard precautions and resuscitation barrier devices
 - safe work practices to deal with oxygen cylinders and associated equipment
 - first aid codes of practice
 - appropriate workplace or site procedures relevant to the provision of first aid
 - contents of first aid kits
 - requirements for currency of skill and knowledge
- legal, workplace and community considerations, including:
 - duty of care requirements

- own skills and limitations
- consent and how it relates to the conscious and unconscious casualty
- privacy and confidentiality requirements
- awareness of potential need for stress management techniques and available support for rescuers
- in relation to the administration of oxygen:
 - legal requirements
 - the five rights
 - the responsibilities of the first aider
- considerations when providing resuscitation, including:
 - upper airway and effect of positional change
 - appropriate duration and cessation of CPR
 - appropriate use of an AED
 - safety and maintenance procedures for an AED
 - chain of survival
 - how to access emergency services
 - use of suction devices
 - benefits, contraindications and complications with the use of a basic airway adjunct
- techniques for providing CPR to adults, children and infants including:
 - how to recognise that a casualty is unconscious and not breathing normally
 - rate, ratio and depth of compressions and ventilations
 - correct hand positioning for compressions
 - basic anatomy, physiology and the differences between adults, children and infants relating to CPR
- assessment and interpretation of vital signs including normal clinical values for respirations, pulse, oxygen saturation
- level of consciousness
- how to use a suction device
- signs, symptoms and management of life-threatening bleeding including use of tourniquets and haemostatic dressings
- considerations when providing oxygen to a casualty, including:
 - circumstances and conditions where oxygen is beneficial
 - circumstances and conditions where oxygen should not be used
 - contraindications and complications associated with providing oxygen
 - benefits, contraindications and complications of suction during advanced resuscitation
 - complications with the use of a bag-valve-mask device and suitable strategies to minimise these
 - selection and operation of oxygen masks and other appropriate oxygen therapy devices
- methods for cleaning, replenishing, recharging and maintaining resuscitation and oxygen equipment including:
 - actions to rectify problems

- procedures to ensure operational readiness as per manufacturers' guidelines and site procedures
- storage, cleaning, decontamination and safe disposal of consumables
- troubleshooting to identify minor and major faults
- psychological impacts of first aid incidents on rescuers and how to seek help.

Assessment Conditions

Each candidate to demonstrate skills in an environment that provides realistic in-depth, scenarios and simulations to assess candidates' skills and knowledge.

Due to the nature of this type of training, it is acceptable for the performance evidence to be collected in a simulated environment. Evidence of the learner's currency as required by the first aid codes of practice must be confirmed prior to assessment.

Compression and ventilation skills must be demonstrated on resuscitation manikins following ARC guidelines for the purpose of assessment of CPR procedures.

Assessment must ensure access to:

- adult and infant resuscitation manikins following ARC guidelines for the purpose of assessment of CPR procedures
- anatomical model for use with a basic airway adjunct
- AED training devices
- bag-valve-mask
- basic airway adjunct
- oxygen resuscitation system with oxygen cylinder and regulator
- pulse oximeter
- selection of oxygen masks and tubes
- suction devices
- personal protective equipment (PPE)
- haemostatic dressings
- haemostatic wound packing trainer
- tourniquet trainer
- tourniquets
- workplace incident, injury, trauma or illness record or other appropriate workplace or site incident report form, which includes space for recording vital signs of casualties.

Simulated assessment environments must simulate real-life situations where these skills and knowledge would be performed, with all the relevant equipment and resources of that workplace or community environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors and must hold this unit or demonstrate equivalent skills and knowledge to that contained within this unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

HLTWHS001 Participate in workplace health and safety

Modification History

Release	Comments
Release 3	<p>Updated:</p> <ul style="list-style-type: none"> • assessor requirements statement • foundation skills lead in statement • licensing statement • modification history to reflect 2012 standards <p>Equivalent outcome.</p>
Release 2	<p>Minor corrections to formatting to improve readability. Equivalent competency outcome.</p>
Release 1	<p>This version was released in <i>HLT Health Training Package release 1.0</i> and meets the requirements of the 2012 Standards for Training Packages.</p> <p>Updated to incorporate content of unit HLTWHS200A. Revised scope of unit to reflect requirements of workers. New evidence requirements for assessment.</p>

Application

This unit describes the skills and knowledge required for workers to participate in safe work practices to ensure their own health and safety, and that of others.

The unit applies to all workers who require knowledge of workplace health and safety (WHS) to carry out their own work, either under direct supervision or with some individual responsibility.

The skills in this unit must be applied in accordance with Commonwealth and State/Territory legislation, Australian/New Zealand standards and industry codes of practice.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements define the essential outcomes.

Performance criteria specify the level of performance needed to demonstrate achievement of the element.

1. Follow safe work practices

1.1 Follow workplace policies and procedures for safe work practices

1.2 Identify existing and potential hazards in the workplace, report them to designated persons, and record them according to workplace procedures

1.3 Follow workplace emergency procedures

2. Implement safe work practices

2.1 Identify and implement WHS procedures and work instructions

2.2 Identify and report incidents and injuries to designated persons according to workplace procedures

2.3 Take actions to maintain safe housekeeping practices in own work area

3. Contribute to safe work practices in the workplace

3.1 Raise WHS issues with designated persons according to organisational procedures

3.2 Participate in workplace safety meetings, inspections and consultative activities

3.3 Contribute to the development and implementation of safe workplace policies and procedures in own work area

4. Reflect on own safe work practices

4.1 Identify ways to maintain currency of safe work practices in regards to workplace systems, equipment and processes in own work area

4.2 Reflect on own levels of stress and fatigue, and report to designated persons according to workplace procedures

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

- *Reading* – in order to accurately read and interpret workplace safety policies and

procedures including safety signs, dangerous goods classifications and safety instructions

The remaining foundation skills essential to performance are explicit in the performance criteria of this unit

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

Assessment Requirements for HLTWHS001 Participate in workplace health and safety

Modification History

Release	Comments
Release 3	<p>Updated:</p> <ul style="list-style-type: none"> • assessor requirements statement • foundation skills lead in statement • licensing statement • modification history to reflect 2012 standards <p>Equivalent outcome.</p>
Release 2	<p>Minor corrections to formatting to improve readability. Equivalent competency outcome.</p>
Release 1	<p>This version was released in <i>HLT Health Training Package release 1.0</i> and meets the requirements of the 2012 Standards for Training Packages.</p> <p>Updated to incorporate content of unit HLTWHS200A. Revised scope of unit to reflect requirements of workers. New evidence requirements for assessment.</p>

Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the job role.

There must be demonstrated evidence that the candidate has completed the following tasks at least once in line with state/territory WHS regulations, relevant codes of practice and workplace procedures:

- contributed to a WHS meeting or inspection in workplace
- conducted a workplace risk assessment and recorded the results
- consistently applied workplace safety procedures in the day-to-day work activities required by the job role
- followed workplace procedures for reporting hazards
- followed workplace procedures for a simulated emergency situation.

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge required to effectively complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the work role. This includes knowledge of:

- state/territory legislation and how it impacts on workplace regulations, codes of practice and industry standards, including:
 - state/territory WHS authorities
 - rights and responsibilities of employers and workers, including duty of care
 - hazardous manual tasks
 - infection control
- safety signs and their meanings, including signs for:
 - dangerous goods classifications
 - emergency equipment
 - personal protective equipment (PPE)
 - specific hazards such as sharps, radiation
- hazard identification, including:
 - definition of a hazard
 - common workplace hazards relevant to the industry setting
 - workplace procedures for hazard identification
- workplace emergency procedures
- workplace policies and procedures for WHS

Assessment Conditions

Skills must be demonstrated:

- in the workplace

OR

- in an environment that provides realistic in-depth industry validated scenarios and simulations to assess candidates' skills and knowledge.

Assessment must ensure use of:

- current workplace policies and procedures for WHS
- PPE relevant to the workplace and job role of the worker

In addition, assessors must satisfy the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

ICTICT203 Operate application software packages

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to identify, select and operate three commercial software packages, including a word-processing and a spreadsheet application package.

It applies to individuals who utilise different software applications within a small to large office environment to produce diverse documents.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

General ICT

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Use appropriate workplace health and safety (WHS) office work practices	1.1 Use safe work practices to ensure ergonomic, work organisation, energy and resource conservation requirements are addressed 1.2 Use wrist rests and document holders where appropriate 1.3 Use monitor anti-glare and radiation reduction screens where appropriate
2. Use appropriate	2.1 Select word-processing software appropriate to perform

ELEMENT	PERFORMANCE CRITERIA
word-processing software	activity 2.2 Identify document purpose, audience and presentation requirements, and clarify with personnel as required 2.3 Identify organisational requirements for text-based business documents, and design document structure and layout to ensure consistency of style and image 2.4 Match document requirements with software functions to provide efficient production of documents 2.5 Use technical functions, other data and formatting to finalise documents 2.6 Ensure the naming and storing of documents in appropriate directories or folders and the printing of documents to the required specifications
3. Use appropriate spreadsheet software	3.1 Select spreadsheet software appropriate to perform activity 3.2 Identify document purpose, audience and presentation requirements, and clarify with personnel as required 3.3 Enter simple formulas and functions using cell referencing where required 3.4 Customise spreadsheet settings to meet requirements 3.5 Ensure the naming and storing of documents in appropriate directories or folders and the printing of documents to the required specifications
4. Use a third application software package	4.1 Select software application package appropriate to perform activity 4.2 Identify purpose, audience and presentation requirements, and clarify with personnel as required 4.3 Use technical functions, other data and formatting to finalise documents 4.4 Ensure documents are named and stored in appropriate directories or folders and printed to required specifications

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	2.2-2.5, 3.2-3.4, 4.2, 4.3	<ul style="list-style-type: none"> Recognises and interprets textual information to determine organisational standards and job requirements Interprets and comprehends symbols, icons and text associated with applications software
Writing	2.3-2.6, 3.3- 3.5, 4.3, 4.4	<ul style="list-style-type: none"> Enters both written and verbally received information and data into a format suitable for the software application Selects vocabulary, syntax, terminology, labelling and naming conventions suitable for the program
Oral Communication	2.2, 2.3, 3.2, 4.2	<ul style="list-style-type: none"> Uses simple, relevant language, effective questioning, and active listening techniques to clarify work requirements
Numeracy	3.2-3.4	<ul style="list-style-type: none"> Adds, subtracts, multiplies and divides whole numbers and decimals, identifying and selecting the correct formulas and functions to use Applies the order of operations in calculations
Navigate the world of work	1.1	<ul style="list-style-type: none"> Takes some personal responsibility for adherence to legal and regulatory requirements
Get the work done	1.2, 1.3, 2.1-2.6, 3.1-3.5, 4.1-4.4	<ul style="list-style-type: none"> Follows routine procedures for using digital technology to enter, store and retrieve information directly relevant to role Understands purposes, specific functions and key features of common digital systems and tools, and operates them effectively to complete routine tasks, adapting some functions to improve personal efficiency Plans routine tasks with familiar goals and outcomes, taking some limited responsibility for decisions regarding sequencing

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTICT203 Operate application software packages	ICAICT203A Operate application software packages	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTICT203 Operate application software packages

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- produce workplace documents using a minimum of three different software application packages
- open, amend and save files and documents according to organisational requirements
- apply workplace health and safety (WHS) principles and responsibilities for ergonomics, such as work periods and breaks
- use help manuals and online help.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify application software packages used by the organisation and list the purpose of each
- explain basic technical terminology related to reading help files and responding to system help prompts
- outline current business practices related to using software to prepare reports
- list features and functions of commercial computing packages
- describe import and export software functions
- describe the process of linking documents
- outline WHS principles and responsibilities for ergonomics, such as work periods and breaks
- explain the purpose of input and output devices.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the general information and communications technology (ICT) industry, and include access to:

- a personal computer (PC) and printer
- software currently used in industry
- documents detailing organisational style guide and policy
- documents or information containing data suitable for developing software application documents.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

ICTICT214 Operate application software packages

Modification History

Release	Comments
Release 2	This version first released with the Information and Communications Technology Training Package Version 8.0. Minor typographical correction in Knowledge Evidence.
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to identify, select and operate commercial software packages, including a word-processing and a spreadsheet application package.

It applies to individuals who utilise different software applications within a small to large office environment to produce diverse documents.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

General ICT

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to operate software packages	1.1 Set up workstation according to work health and safety standards and organisational requirements 1.2 Determine word-processing software task requirements 1.3 Determine spreadsheet software task requirements 1.4 Determine software application according to task

ELEMENT	PERFORMANCE CRITERIA
	<p>requirements</p> <p>1.5 Identify document purpose, audience and presentation requirements and clarify with required personnel</p>
2. Use word-processing software	<p>2.1 Identify document purpose, audience and presentation requirements and clarify with required personnel</p> <p>2.2 Determine text-based business document style guide requirements</p> <p>2.3 Finalise documents using software and technical functions and formatting according to task requirements</p> <p>2.4 Name, save and print to a Portable Document Format (PDF) according to task requirements</p>
3. Use spreadsheet software	<p>3.1 Identify document purpose, audience and presentation requirements and clarify with personnel as required</p> <p>3.2 Enter formulas and functions and customise spreadsheet settings according to task requirements</p> <p>3.3 Name, save and print to PDF document according to task requirements</p>
4. Use third application software package	<p>4.1 Select software application package according to task requirements</p> <p>4.2 Determine purpose, audience and presentation requirements</p> <p>4.3 Use technical functions, other data and formatting to finalise document</p> <p>4.4 Name, save and print to PDF document according to task requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Adds, subtracts, multiplies and divides whole numbers and decimals, identifying and selecting formulas and functions to use Applies order of operations in calculations
Oral communication	<ul style="list-style-type: none"> Clarifies work requirements using required language, questioning and active listening techniques
Reading	<ul style="list-style-type: none"> Interprets textual information and determines organisational standards and job requirements Identifies and applies symbols, icons and text associated with

Skill	Description
	applications software
Writing	<ul style="list-style-type: none"> Enters both written and verbally received information and data into a format applicable to software application Selects vocabulary, syntax, terminology, labelling and naming conventions applicable to program
Planning and organising	<ul style="list-style-type: none"> Plans routine tasks with goals and outcomes, taking some limited responsibility in decisions regarding sequencing
Self-management	<ul style="list-style-type: none"> Follows routine procedures in using digital technology and enters, stores and retrieves information directly applicable to own role
Technology	<ul style="list-style-type: none"> Identifies and evaluates purposes, specific functions and key features of basic digital systems and tools Operates digital systems and tools in completing routine tasks and adapting some functions

Unit Mapping Information

Supersedes and is equivalent to ICTICT203 Operate application software packages.

Links

Companion Volume Implementation Guide is found on VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTICT214 Operate application software packages

Modification History

Release	Comments
Release 2	This version first released with the Information and Communications Technology Training Package Version 8.0. Minor typographical correction in Knowledge Evidence.
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- produce three workplace documents using three different software packages including word processing, spreadsheets and one additional software application package on at least one occasion.

In the course of the above, the candidate must:

- apply workplace health and safety (WHS) principles and responsibilities
- follow organisational requirements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- organisational application software packages
- technical terminology applicable to reading help files and responding to system help prompts
- industry standard business practices applicable to preparing reports
- features and functions of commercial computing packages and of the industry standard software
- functions and features of Portable Document Formats (PDFs)
- import and export software functions
- document linking functions
- WHS principles and responsibilities

- purpose of input and output devices.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- required hardware device
- industry standard software
- documents detailing organisational style guide and policy
- data required in developing software application documents.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

ICTICT402 Determine project specifications and secure client agreement

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to develop agreed acceptance criteria for information and communications technology (ICT) projects.

It applies to individuals who are competent in a wide range of general ICT technologies and support small to medium enterprises (SMEs) that require broader rather than more specialised ICT support.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

General ICT

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine milestones and quality attributes with client	1.1 Interview client to determine project deliverables and acceptance criteria 1.2 Document project milestones and associated deliverables in measurable terms, taking into account constraints 1.3 Determine and document criteria to evaluate each deliverable

ELEMENT	PERFORMANCE CRITERIA
	1.4 Negotiate and document quality standards with client 1.5 Confirm project direction with appropriate person
2. Formulate metrics and milestones	2.1 Define the units of measurement (metrics) that will be used in the project, including consideration of project milestones, timeframe and costs 2.2 Schedule the measurement of project milestones and associated deliverables 2.3 Document the process for analysing variances and their impact on the project 2.4 Schedule quality reviews into project plan
3. Obtain client agreement to acceptance criteria	3.1 Obtain client agreement for project delivery dates 3.2 Communicate acceptance criteria clearly and coherently to the client 3.3 Obtain client agreement to acceptance criteria and anticipated timeframes for the project

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Writing	1.2-1.4, 2.2-2.4	<ul style="list-style-type: none"> Uses plain English; appropriate grammatical structures and specialised terminology; diagrams and flow charts; logical document structures and formatting relevant to the job role and organisation to record project deliverables and benchmarks Enters text, data and financial information into project planning tools to produce output for the project plan that is appropriate to the audience
Oral Communication	1.1, 1.4, 1.5, 3.1-3.3	<ul style="list-style-type: none"> Uses open questioning and effective listening techniques to elicit information, clarify requirements and conduct effective negotiations Uses appropriate vocabulary, grammatical structure, voice tone, body language and reflective responses to negotiate deliverables, present project plan and gain consensus

Numeracy	1.1-1.4, 2.1-2.3	<ul style="list-style-type: none"> Applies mathematical calculations and financial functions relating to timelines and project budgets
Interact with Others	1.1, 1.4, 1.5, 3.1-3.3	<ul style="list-style-type: none"> Identifies and takes steps to follow accepted communication practices and protocols Uses a limited range of accepted practices for communicating in a work environment
Get the work done	1.1-1.3, 1.5, 2.1, 2.2, 2.4	<ul style="list-style-type: none"> Uses a combination of formal, logical planning processes and an increasingly intuitive understanding of context to identify relevant information, including strategic initiatives and resources Considers purpose, needs and limitations when selecting digital devices and applications for different tasks Uses digital technology for basic reading, recording and searching information, and for communications following routine procedures and security requirements

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTICT402 Determine project specifications and secure client agreement	ICAICT402A Determine project specifications and secure client agreement	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTICT402 Determine project specifications and secure client agreement

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- develop acceptance criteria for a project
- document acceptance criteria according to organisational standards
- present the document to stakeholders and obtain approval.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- describe the client business area
- outline project planning methodologies and tools
- identify and apply quality processes
- interpret system development plans
- identify technical tools and their use relating to task list when formulating metrics and milestones
- explain the theory and purpose of metrics.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the general information and communications technology (ICT) industry, and include access to:

- client requirements
- technical specifications

- organisational and process goals
- critical business requirements
- predefined high-level acceptance criteria
- project deliverables
- future organisational business processes test plan
- project budget timeframe.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

ICTWOR304 Manage spare parts

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to manage spare parts in all areas of telecommunications and includes maintenance of a database, stock control and dispatch.

It applies to individuals who may be involved in assessing installation requirements, planning and performing installations, testing installed equipment and fault finding. It involves a degree of autonomy and may include limited supervision of others.

Work functions in the occupational areas where this unit may be used are subject to regulatory requirements. Refer to the ICT Implementation Guide Companion Volume or the relevant regulator for details of licensing, legislative or certification requirements.

Unit Sector

Telecommunications – workplace effectiveness

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Manage receipt and dispatch of spare parts	1.1 Obtain relevant legislation, codes, regulations and standards, and follow work health and safety (WHS) and environmental requirements for given work 1.2 Identify hazards and make worksite safe according to relevant safety legislation and company work practices, and use personal

	<p>protective equipment</p> <p>1.3 Unload, unpack and store incoming spare parts using appropriate methods and enterprise procedures, and check off delivered items on documentation</p> <p>1.4 Package, label and relocate outgoing spare parts ready for dispatch using enterprise procedures</p> <p>1.5 Update parts database to reflect current spare parts movements and holdings, following each dispatch or delivery, and complete any other administrative task required by enterprise</p>
2. Store spare parts	<p>2.1 Label spare parts using appropriate identification scheme and place in predefined storage locations</p> <p>2.2 Observe antistatic precautions when handling equipment susceptible to damage by electrostatic discharge</p> <p>2.3 Display, maintain and update material safety data sheets (MSDS) on site</p>
3. Manage stock flow	<p>3.1 Action spare parts requests by checking database for availability and location, and organise the dispatch</p> <p>3.2 Monitor levels of spare parts stock by examining database reports against enterprise usage and replenishing stock when necessary</p> <p>3.3 Investigate and keep records of alternative suppliers of spare parts to minimise impact of availability and cost issues with regular suppliers</p> <p>3.4 Monitor spare parts with limited shelf life, and dispose of and replace when necessary</p> <p>3.5 Audit spare parts holdings for ready supply of items to minimise disruptions to job completions</p> <p>3.6 Update database from appropriate documentation each time a store's transaction occurs to maintain validity of data</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.5, 2.2, 3.1, 3.3, 3.4	<ul style="list-style-type: none"> Recognises and interprets written and visual text to determine key information, and specific requirements and responsibilities

Writing	1.3-1.5, 2.1, 2.3, 3.1, 3.3	<ul style="list-style-type: none"> • Develops material for a specific audience, using clear and detailed language to convey explicit information, requirements and recommendations • Uses expected writing conventions and forms
Oral Communication	3.1	<ul style="list-style-type: none"> • Participates in a verbal exchange of ideas and elicits the view and opinions of others by listening and questioning
Numeracy	1.3-1.5, 3.2-3.5	<ul style="list-style-type: none"> • Uses mathematical skills to estimate materials and evaluate and predict resource requirements
Navigate the world of work	1.1-1.4, 2.1-2.3	<ul style="list-style-type: none"> • Takes personal responsibility for adherence to legal and regulatory requirements relevant to spare parts work context, and draws attention to any issues that may affect self or others • Recognises and follows explicit and implicit company and health and safety protocols, and meets expectations associated with own role
Get the work done	All	<ul style="list-style-type: none"> • Takes responsibility for planning and organising own workload, identifying ways of sequencing and combining elements for greater efficiency, when managing receipt and dispatch, storage and stock flow • Uses systematic, analytical processes when monitoring and auditing, setting goals, gathering relevant information, and identifying and evaluating options against agreed criteria • Initiates standard problem solving procedures when identifying hazards within immediate context • Seeks to improve a future response through investigating alternative suppliers • Uses database systems and tools to access, organise, analyse and display information relevant to role

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTWOR304	ICTWOR3093A Manage spare	Updated to meet	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
Manage spare parts	parts	Standards for Training Packages	

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTWOR304 Manage spare parts

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Performance Evidence

Evidence of the ability to:

- safely apply spare parts management procedures
- efficiently arrange for storage and ordering of spare parts
- research alternative parts replacements
- accurately update spare parts management database.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- explain computer and database operation
- describe handling of:
 - chemicals and dangerous materials
 - sensitive electronic equipment using antistatic procedures and safeguards
- outline modern storage practices and identification of parts location
- outline work health and safety (WHS) procedures
- identify service level agreements
- describe stocktake and audit of spare parts holdings
- identify telecommunications components and assemblies.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the telecommunications – workplace effectiveness field of work and include access to:

- a site where work may be conducted
- current equipment
- a database for relevant regulations
- organisational procedures
- equipment documentation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

LGACOM404B Establish cooperative arrangements with other organisations

Modification History

LGACOM404B Release 1: Primary release.

Unit Descriptor

The unit covers identifying, developing, implementing and monitoring cooperative arrangements with other organisations in an effort to improve services provided to the community. The unit is appropriate for staff working in areas of council where community and business development are a major focus.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where **bold italicised** text is used, further information is detailed in the Range Statement. Assessment of performance is to be

consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Identify opportunities for cooperative arrangements</p>	<p>1.1. Opportunities for <i>cooperative arrangements</i> are identified through consultation with <i>other organisations</i>.</p> <p>1.2. Opportunities identified are analysed to ensure they will provide an increased level, or at least an equivalent level, of service to the community.</p>
<p>2. Develop and implement cooperative policies and projects with other organisations</p>	<p>2.1. Cooperative policies are agreed upon by all participating organisations and disseminated to all involved staff.</p> <p>2.2. Project objectives and <i>performance indicators</i> are determined and plans are drawn up to facilitate the smooth implementation and conduct of collaborative projects.</p> <p>2.3. Implementation methods are organised and agreed actions and work programs are allocated to relevant staff.</p> <p>2.4. Communications strategies are put in place to enable efficient and coherent implementation and conduct.</p> <p>2.5. Resources are identified and accessed in the most cost-effective manner.</p> <p>2.6. Communities are informed of the changes and benefits in service delivery due to the new collaborative arrangements.</p>
<p>3. Monitor and evaluate the effectiveness of the collaborative venture</p>	<p>3.1. Project progress is evaluated with reference to planned time lines and performance criteria at predetermined intervals to assess effectiveness for council and community.</p> <p>3.2. Project is reviewed and project plan and resource allocations are revised when necessary.</p> <p>3.3. Information gathered from project evaluation is used to provide input to continuous improvement and planning processes.</p> <p>3.4. Problems or contingencies that arise are managed and resolved professionally and promptly in conjunction with relevant personnel.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- negotiation with a range of personnel and other agencies
- research and evaluation, including cost-benefit analysis
- written and verbal communication with public and council personnel affected by implementation
- strategic and business planning
- planning and organisational
- time management
- ability to work as part of a team particularly with people from diverse backgrounds
- problem solving
- using appropriate software and technology

Required Knowledge

- relevant council policies and procedures
- sustainable practices
- council operations
- council goals, objectives and strategies
- other organisations potentially interested in cooperative arrangements

Evidence Guide

Overview of assessment requirements

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.

Critical aspects of evidence to be considered

The demonstrated ability to:

- establish cooperative arrangements with other organisations on behalf of council that create measurable benefits to the organisation, incorporate effective evaluation mechanisms and support corporate direction and strategies
- communicate cooperative arrangements and their benefit effectively throughout the organisation.

Context of assessment	Assessment of performance requirements in this unit should be undertaken within the context of the local government framework. Competency is demonstrated by performance of all stated criteria, including the Range of Variables applicable to the workplace environment.
Method of assessment	The following assessment methods are suggested: <ul style="list-style-type: none"> • observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies • written and/or oral questioning to assess knowledge and understanding • completion of workplace documentation • third-party reports from experienced practitioners • completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor.
Evidence required for demonstration of consistent performance	Evidence will need to be gathered over time across a range of variables depending on council work flow and planning cycle as long as the critical aspects of evidence can be demonstrated.
Resource implications	Access to organisations with whom cooperative arrangements are to be developed or to simulated case studies.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<i>Cooperative arrangements</i> may include:	<ul style="list-style-type: none"> • joint funding for projects • shared promotional resources • joint ventures to build or construct community facilities • sponsorship arrangements
<i>Other organisations</i> may include:	<ul style="list-style-type: none"> • other councils within the region, state or nation • regional organisations of councils • state or commonwealth agencies • private or business enterprises • community groups
<i>Performance indicators</i> may include:	<ul style="list-style-type: none"> • increases in revenue • customer satisfaction reports • increases in service usage

- increased tourism to the region or municipality

Unit Sector(s)

Common.

Competency field

Not applicable.

LGACOM502B Devise and conduct community consultations

Modification History

LGACOM502B Release 2: Layout adjusted. Range statement edited.

LGACOM502B Release 1: Primary release.

Unit Descriptor

This unit covers devising and conducting community consultations and reporting on results. The vital and unique responsibility councils have to engage and consult with communities in order to respond to the needs of the community in a timely and effective manner is recognised.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be

consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Devise consultation strategies	<p>1.1. A range of consultation strategies is identified and assessed for suitability.</p> <p>1.2. <i>Interested and affected parties</i> are identified.</p> <p>1.3. <i>Resources</i> required to conduct consultation are assessed.</p> <p>1.4. <i>Consultation strategies</i> are chosen that <i>enable and encourage relevant groups</i> or individuals to be involved.</p> <p>1.5. <i>Legislative</i> and council requirements are reviewed to ensure strategies meet all criteria.</p>
2. Conduct consultations	<p>2.1. <i>Information</i> is prepared that is clear, accurate and appropriate to the needs of all parties.</p> <p>2.2. All people involved in conducting the consultations are briefed on the process of consultation and the parties involved.</p> <p>2.3. <i>Information is presented</i> to affected parties at an appropriate time and place.</p> <p>2.4. <i>Access and equity</i> requirements are implemented in the consultations.</p> <p>2.5. Measures to expedite community consultation are taken to ensure consultation occurs within an identified time frame.</p> <p>2.6. Consultation is undertaken in an orderly manner to ensure all viewpoints are canvassed.</p>
3. Record, analyse and report on results	<p>3.1. Public consultation responses and processes are formatted to enable informed decision making to proceed.</p> <p>3.2. Appropriate suggestions for improvement are incorporated into design parameters.</p> <p>3.3. Summaries of responses and adopted amendments are provided to interested parties to ensure public consultation is recognised.</p> <p>3.4. Other issues raised during consultation are directed to relevant department or person to respond to community concern.</p> <p>3.5. An accurate report on community consultation that includes recommendations is prepared to enable informed decision making to occur.</p>

ELEMENT**PERFORMANCE CRITERIA**

- 3.6. The overall effectiveness of the consultation process is reviewed and evaluated and action is taken where necessary.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- consultation, presentation, negotiation and report writing
- research
- planning and organising
- information gathering and analysis

Required Knowledge

- relevant council policies and procedures
- relevant legislation, including planning and anti-discrimination
- relevant sections of local government act
- access and equity issues
- strategies for consultation
- codes of conduct and ethics

Evidence Guide**Overview of assessment requirements**

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.

Critical aspects of evidence to be considered

The demonstrated ability to devise and conduct community consultations where:

- consultation ensures council's image or reputation is maintained or enhanced
- community consultation produces valid and useful information

Context of assessment	Assessment of performance requirements in this unit should be undertaken within the context of the local government framework. Competency is demonstrated by performance of all stated criteria, including the Range of Variables applicable to the workplace environment.
Method of assessment	The following assessment methods are suggested: <ul style="list-style-type: none"> • observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies • written and/or oral questioning to assess knowledge and understanding • completion of workplace documentation • third-party reports from experienced practitioners • completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor
Evidence required for demonstration of consistent performance	Evidence should be gathered over a period of time in a range of actual or simulated management environments.
Resource implications	Access to a range of real or simulated consultation processes including: <ul style="list-style-type: none"> • public and community meetings and forums • surveys and door knocks • appropriate communications equipment and aids such as overhead projectors and computer-based presentations

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<i>Interested and affected parties</i> may include:	<ul style="list-style-type: none"> • community groups • other authorities • individuals • emergency authorities (police, fire and ambulance) • private sector business interests • special interest groups • experts
<i>Resources</i> may include:	<ul style="list-style-type: none"> • human

- financial
 - locations
- Consultation strategies*** may include:
- public meetings
 - phone-ins
 - questionnaires
 - informal gatherings
 - door knocks
 - council meetings
- Enabling and encouraging relevant groups*** to be involved may include:
- physical accessibility
 - diverse language needs
 - culture, including Indigenous, youth and non-English speaking background
 - physical environment
 - number of people
- Legislation*** may include:
- local government
 - anti-discrimination
 - planning
- Information*** may include:
- written and oral records
 - anecdotes
 - reports
 - instructions
 - directions from supervisor or management
 - interviews
 - formal and informal team meetings
 -
- Access and equity*** may include:
- subject matter
 - manner in which consultations are conducted
 - physical accessibility
 - community profile
 -
 -
- Presentation of information*** may include:
- graphics
 - models
 - computer animations
 - video displays
 - overhead transparencies
 - handouts
 - display plans
 - interpreter service

Unit Sector(s)

Common

Competency field

Competency Field

co-requisite unit/s

Co-requisite Unit/s

LGACOMP008A Apply conflict resolution strategies

Modification History

LGACOMP008A Release 2: Layout adjusted.

LGACOMP008A Release 1: Primary release.

Unit Descriptor

This unit covers dealing effectively with conflict, both in the workplace and outside the organisation. The unit outlines the knowledge and skills required to assess potential conflict situations and deal appropriately with the situation to achieve a resolution. The unit is suitable for all people working within the organisation.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where **bold italicised** text is used, further information is detailed in the Range Statement. Assessment of performance is to be

consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess potential conflict situations	1.1 Signs, stages and possible <i>causes of conflict</i> are identified and anticipated. 1.2 Appropriate responses are evaluated against organisational procedures and <i>legal requirements</i> . 1.3 Additional information is identified and sought as required to assist in the assessment of the conflict situation.
2. Implement conflict resolution strategies	2.1 Factors and issues relevant to the conflict are clarified. 2.2 Strategies for dealing with conflict situations are developed in accordance with organisational procedures. 2.3 Assistance is sought as required and is appropriate to the person's skill and responsibility. 2.4 Options for resolution of the conflict are identified which allow for constructive responses to be negotiated. 2.5 <i>Negotiation techniques</i> are used to maintain positive interaction and to divert and minimise aggressive behaviour. 2.6 Effective <i>communication techniques</i> are used to ensure understanding of information received or relayed. 2.7 <i>Social and cultural differences</i> are taken into account in the negotiation style and approach taken. 2.8 Mutual agreement to the situation and its resolution is confirmed and follow up action is agreed upon by all parties. 2.9 Systems, records and reporting procedures are maintained according to organisational procedures.
3. Evaluate response and outcome	3.1 Effectiveness of response is evaluated and reviewed according to information available and organisational practices. 3.2 Accurate and constructive observations of incidents are provided in reviewing and debriefing the situation. 3.3 Records and reports are provided and maintained according to organisational requirements. 3.4 Effects of stress are recognised and addressed through stress management techniques and debriefing.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- problem-solving strategies to know how to deal with unexpected questions or attitudes
- interpersonal skills to develop rapport with other parties in the conflict
- capacity to evaluate own response to situations of conflict and manage own emotions
- communication skills to effectively come to an agreed outcome
- negotiation skills to negotiate difficult situations and resolve problems as they arise
- flexibility to adjust quickly to differing situations
- empathy to develop rapport and understanding with and for the other party
- dealing with difficult people and situations

Required Knowledge

- legislative and/or other legal provisions
- conflict resolution strategies
- organisational policies and procedures relating to managing conflict through negotiation
- recording and reporting procedures
- principles of cooperative team work
- different social and cultural practices

Evidence Guide

Overview of assessment requirements

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.

Critical aspects of evidence to be considered

The demonstrated ability to:

- interpret accurately and comply with legal and procedural requirements
- identify typical symptoms and causes of conflict in the workplace and ways of resolving conflict situations
- select conflict resolution strategies that are most effective for the objective
- use negotiation techniques to defuse and resolve conflict
- use communication techniques to give clear and accurate

Context of assessment

information in a form that is preferred and understood by the receiver

Competency is demonstrated by performance of all stated criteria, with particular attention to the critical aspects of evidence and the knowledge and skills elaborated in the Evidence Guide, and within the scope of the Range Statement.

Assessment must take account of the endorsed Assessment Guidelines in the Local Government Training Package.

Assessment of performance requirements in this unit should be undertaken in an actual workplace or simulated environment.

Assessment should reinforce the integration of the key competencies for the particular AQF level. Refer to the key competency levels at the end of this unit.

Relationship to other units (prerequisite or co-requisite units)

To enable holistic assessment this unit may be assessed with other units that form part of the job role.

Method of assessment

The following assessment methods are suggested:

- observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies
- written and/or oral questioning to assess knowledge and understanding
- completion of workplace documentation
- third-party reports from experienced practitioners
- completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor

Evidence required for demonstration of consistent performance

Evidence should be collected over a set period of time that is sufficient to include dealings with an appropriate range and variety of formal and informal situations, involving different types of problems and clients.

Resource implications

The learner and trainer should have access to appropriate documentation and resources normally used in the workplace.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- Causes of conflict*** may include:
- refusal to follow directions and guidance
 - dissatisfaction of client with council service or information
 - disagreement between members of the public
 - disagreement between members of the organisation
 - ejection of persons
 - persons suffering from emotional distress
 - bystander behaviour
- Legal requirements*** may include:
- relevant state and commonwealth legislation
 - decisions of relevant tribunals
 - roles and responsibilities
 - terms and conditions of employment
- Negotiation techniques*** may include:
- strategic questioning and listening to gather information and direct the focus of the people involved
 - positive, confident and cooperative language
 - control of tone of voice and body language
 - using language and concepts appropriate to the people involved
 - using clear presentations of options and consequences
 - demonstrating flexibility and willingness to compromise
 - summarising positions and agreements made to confirm understanding between the negotiating parties
- Communication techniques*** may include:
- verbal and non-verbal language
 - two-way interaction
 - constructive feedback
 - active listening
 - reflection and summarising
- Social and cultural differences*** may include:
- verbal and non-verbal language
 - beliefs and values
 - religious or spiritual observances
 - relationships and family structures
 - social conventions
 - codes of conduct

Unit Sector(s)

Common

LGAGCM710A Manage contracts and contractors

Modification History

LGAGCM710A Release 2: Layout adjusted.

LGAGCM710A Release 1: Primary release.

Unit Descriptor

This unit covers the skills and knowledge required of senior managers responsible for overseeing the development of tenders and the subsequent management of contracts and contractors.

Effective and efficient management of external contracts is now a major component of many managers' roles. The need for high levels of accountability and transparency while managing commercial relationships is addressed in this unit.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations that provide the boundaries for the operation of councils is essential. The unique nature of councils, as a tier of government, directed by elected members and reflecting the needs of local communities must be appropriately reflected.

This unit may also be contextualised to other public or private sectors as long as the essential outcomes of the unit are not changed.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Scope council process and service requirements

- 1.1 ***Council procedures and protocols for management of tenders and contracts*** are identified, considered and used.
- 1.2 Council's strategic and operational plans are reviewed and considered to determine scope and nature of project or service to be contracted.
- 1.3 Size and scope of ***project or service to be contracted*** are determined and documented.
- 1.4 Process to manage tender and contract is documented and appropriate sign-off is secured in line with standard operating procedures.

2. Ensure tender process is planned and managed effectively

- 2.1 Anticipated expense levels of tender are identified and justified.
- 2.2 Tender objectives, including quality, quantity, location, time frame requirements and price limits are clearly defined and documented.
- 2.3 Processes for letting of tender are put in place in line with standard operating procedures.
- 2.4 ***Selection processes*** are developed that comply with legislative requirements, council policies and procedures.
- 2.5 Choice of contractor is justifiable, agreed upon and recorded according to council policies.
- 2.6 Contract is negotiated and agreement reached to maximise benefits for council and following appropriate legal scrutiny and advice.
- 2.7 Contract is drafted and signed according to legislative and organisational requirements and project objectives, reflecting agreement outcomes.

3. Manage contract to achieve desired outcomes

- 3.1 Management plan is developed to ensure effective management of contract.
- 3.2 Performance of contractual obligations is managed in accordance with agreed contract and management plan.

ELEMENT	PERFORMANCE CRITERIA
4. Manage relationships with contractors	<p>3.3 Performance by contractor is reviewed using agreed processes, with any variances analysed and agreed changes implemented to ensure project objectives are met within legal framework of contract.</p> <p>3.4 Reports of project progress and outcomes are prepared and presented in accordance with management plan and standard organisational procedures.</p> <p>3.5 Contracts are concluded in line with management plan and contractual requirements.</p> <p>4.1 Code of conduct is used and communicated to contractors to ensure relationship between parties is managed ethically, transparently and in accordance with legal requirements and council policies and procedures.</p> <p>4.2 Regular and formalised communication processes with contractors are established and rigorously applied.</p> <p>4.3 Sound business relationships with contractors are established and maintained to ensure effective communication and the early identification of potential service delivery problems.</p> <p>4.4 Contractual disputes that arise are managed in accordance with contractual requirements and using established mediation mechanisms.</p>
5. Plan for improved contract management and service delivery processes	<p>5.1 Effectiveness and benefits of contracting process and related service delivery are analysed.</p> <p>5.2 Opportunities for process and service delivery improvements are identified and communicated to appropriate senior personnel within council.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- tender management
- high-level negotiation
- literacy and numeracy skills to manage contracts
- project management
- high-level written and oral communication
- analysis of organisational systems, processes and activities
- developing a range of possible options in solving problems

- time management

Required Knowledge

- legal and council requirements for letting and managing tenders
- council code of conduct for the management of relationships with contractors

Evidence Guide

Overview of assessment requirements

A person who demonstrates competency in this unit will be able to perform the outcomes described in the elements to the required performance level detailed in the performance criteria. The unit's skill and knowledge requirements must also be demonstrated. The candidate will demonstrate the capacity to manage contracts and contractors effectively, ethically and leading to the attainment of stated council objectives.

Critical aspects of evidence to be considered

The demonstrated ability to:

- manage contracts and contractors within council

Context of assessment

Assessment of performance requirements in this unit should be undertaken with the context of the local government framework. Competency is demonstrated by performance of all stated criteria, including the range of variables applicable to the workplace environment.

Method of assessment

The following assessment methods are suggested:

- preparation of a major workplace project report/portfolio (that may incorporate assessment of related units) as a key form of assessment that enables candidates to integrate the learning and assessment project into their regular work responsibilities, which enables integrated and holistic assessment of the complex skills and knowledge addressed in this unit
- observation of the learner performing a range of workplace tasks over sufficient time to demonstrate his/her handling of a range of contingencies
- written and oral questioning to assess knowledge and understanding
- completion of workplace documentation
- third-party reports from experienced practitioner
- completion of self-paced learning materials, including personal reflection and feedback from trainer, coach or supervisor

Evidence required for demonstration of consistent performance

Evidence should be gathered over a period of time in a range of actual or simulated management environments.

Resource implications

Access to a workplace or simulated case study that provides the following resources:

- relevant council documents, such as strategic and operational plans
- relevant local government legislation and regulations

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Council procedures and protocols for the management of tenders and contracts may include:

- codes of conduct for transparent and accountable management of contracts and contractors
- tendering procedures
- reporting requirements

Contracts may cover provision of:

- short-term, one-off services
- lengthy and complex relationships with external service providers offering services to the community

Project or service to be contracted may relate to any sphere of council operation but typically may include:

- capital works
- parks and gardens maintenance
- provision of community care services, such as family care, disability services or child care
- provision of waste and recycling service

Tender selection processes may include:

- advertising period
- use of selective tenders, tender panels and 'open' tenders for contracts of differing values
- establishment of weighted selection criteria
- establishment of a selection panel with complementary expertise

Reports of project progress may include:

- compliance with required timelines
- indicators of service levels and quality
- actual cost against budgeted cost
- customer satisfaction

Unit Sector(s)

Common

LGALAND503A Develop agreements with native title holders/traditional owners

Modification History

LGALAND503A Release 2: Layout adjusted.

LGAGLAND503A Release 1: Primary release.

Unit Descriptor

This unit covers developing agreements with traditional owners about native title and other matters of mutual concern.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Conduct background research to identify traditional owners	1.1 <i>Protocols for consultation</i> with Aboriginal or Torres Strait Islander people are researched and documented. 1.2 <i>Appropriate research</i> is undertaken to identify the correct traditional owners, including consultation with the relevant native title representative body and the National Native Title Tribunal (NNTT). 1.3 Expert advice is sought where appropriate.
2 Identify key stakeholders	2.1 NNTT is consulted about the requirements for registering an Indigenous land use agreement (ILUA). 2.2 <i>Other stakeholders</i> or potential parties to the agreement are identified through consultation with relevant government agencies. 2.3 Other Indigenous people with interests are identified. 2.4 Meetings are held with traditional owners to establish rapport and credibility.
3 Negotiate with traditional owners	3.1 The range of issues to be addressed through an agreement is clarified with council. 3.2 Highly desirable, unacceptable, or possible trade-off positions on each issue are identified for discussion with the traditional owners. 3.3 The scope of the negotiations is identified and agreed with traditional owners. 3.4 <i>Culturally appropriate protocols</i> for negotiations are established. 3.5 Levels of confidentiality and liaison with the media are agreed. 3.6 Processes and timing for consultation with the wider community are agreed. 3.7 Arrangements for liaison with the media are agreed. 3.8 Negotiations are appropriately managed and focussed on mutual outcomes. 3.9 Agreement is reached through negotiation and terms and conditions of agreement are drafted.
4 Register the agreement	4.1 <i>Expert advice</i> is sought on the draft terms and conditions of the agreement. 4.2 Draft terms and conditions of the agreement are documented. 4.3 NNTT is consulted about requirements prior to lodging an ILUA registration. 4.4 Application for registration is lodged with <i>appropriate</i>

ELEMENT**PERFORMANCE CRITERIA**

agencies and any queries or additional requirements are satisfied.

4.5 The agreement is registered.

4.6 *Arrangements* are established for implementation and fulfilment of commitments detailed in the agreement.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- oral and written communication
- research
- evaluation
- decision making
- negotiation
- consultation
- media liaison

Required Knowledge

- cultural context
- location and resources
- legal requirements
- organizational processes
- equity and diversity principles
- council policies and procedures
- state or territory and commonwealth government departments and agencies
- Indigenous land use agreements

Evidence Guide

Overview of assessment requirements

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also

	required to be demonstrated.
Critical aspects of evidence to be considered	<p>The demonstrated ability to:</p> <ul style="list-style-type: none">• conduct appropriate research to identify traditional owners• identify key stakeholders and establish rapport and credibility to facilitate the negotiation process• conduct negotiations with traditional owners to reach agreement• register an Indigenous land use agreement.
Context of assessment	<p>Competency is demonstrated by performance of all stated criteria, with particular attention to the critical aspects of evidence and the knowledge and skills elaborated in the Evidence Guide, and within the scope of the Range Statement.</p> <p>Assessment must take account of the endorsed Assessment Guidelines in the Local Government Training Package.</p> <p>Assessment of performance requirements in this unit should be undertaken in an actual workplace or simulated environment.</p> <p>Assessment should reinforce the integration of the key competencies for the particular AQF level. Refer to the key competency levels at the end of this unit.</p>
Relationship to other units (prerequisite or co-requisite units)	<p>To enable holistic assessment this unit may be assessed with other units that form part of the job role.</p>
Method of assessment	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none">• observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies• written and/or oral questioning to assess knowledge and understanding• completion of workplace documentation• third-party reports from experienced practitioners• completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor.
Evidence required for demonstration of consistent performance	<p>Evidence should be collected over a set period of time that is sufficient to include dealings with an appropriate range and variety of situations.</p>
Resource implications	<p>The learner and trainer should have access to appropriate documentation and resources normally used in the workplace.</p>

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- Protocols for consultation*** may include:
- use of interpreters
 - talking to the appropriate people
 - respecting cultural differences
 - respecting family, kinship and clan relationships
 - allowing sufficient time for the parties to receive, absorb and respond to information
- Appropriate research*** may include:
- register searches
 - consultation with the relevant native title representative body
 - NNTT decisions and records
 - state or territory government policies
- Other stakeholders*** may include:
- other landholders
 - lessees
 - state or territory government agencies
 - commonwealth departments and agencies
 - other Aboriginal or Torres Strait Islander people with historical connections to the area
- Culturally appropriate protocols*** may include:
- representation and mandate
 - methods of communication in face to face meetings
 - time frames
 - meeting times
 - venues
 - use of interpreters
 - levels of confidentiality
- Expert advice*** may include:
- solicitors and barristers
 - native title representative bodies
 - native title holders/applicants
 - NNTT
 - the federal court
 - state or territory governments
 - other professionals with relevant expertise, including anthropologists, archaeologists, valuers, planners and mediators
- Appropriate agencies*** may include:
- federal court
 - NNTT
 - federal attorney-general's department
 - native title representative bodies

Arrangements may include:

- state or territory governments
- formal or registered agreements
- informal agreements

Unit Sector(s)

Land Management

LGALAND504A Undertake effective consultation with Indigenous people on matters of cultural heritage

Modification History

LGALAND504A Release 2: Layout adjusted.

LGAGLAND504A Release 1: Primary release.

Unit Descriptor

This unit covers undertaking effective consultation with Aboriginal or Torres Strait Islander people on matters relating to their cultural heritage.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where **bold italicised** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Conduct background research	<p>1.1 Previous Indigenous cultural heritage and resource surveys are identified and reviewed.</p> <p>1.2 Relevant commonwealth and state or territory legislation and peak local government associations and council policies are researched and documented.</p> <p>1.3 Extent to which cultural heritage of other non-Indigenous cultures should be acknowledged is identified and taken into consideration.</p>
2 Identify the correct Indigenous people that are authorised to speak for a place	<p>2.1 <i>Indigenous people with rights and interests in a place</i> are identified through the traditional owners, especially those authorised to speak for a place.</p> <p>2.2 Both men and women with rights and interests in an area or place are identified because men and women may be responsible for different heritage places and values and may need to be consulted separately.</p> <p>2.3 Other Indigenous people are identified who may not necessarily be traditional owners but who have interests in a place.</p> <p>2.4 Indigenous people from surrounding areas who may be affected by a project or activity are identified and consulted.</p> <p>2.5 <i>Protocols</i> that Indigenous people have established for consultation are identified and adhered to throughout the process.</p> <p>2.6 Consultation on each new project is undertaken, unless traditional owners and other Indigenous people agree that this is not necessary.</p> <p>2.7 Non-Indigenous people with rights or interests in the place are identified and consulted.</p>
3 Consult with relevant Indigenous people to discuss the project or activity	<p>3.1 <i>Potential implications of the project or activity</i> are outlined factually and clearly.</p> <p>3.2 All <i>relevant documentation and information</i> are provided to the traditional owners and all other Indigenous people with rights and interests in a place.</p> <p>3.3 Sufficient time is allowed for all Indigenous people to decide whether they wish to become involved in the activity or project and to provide informed consent.</p> <p>3.4 All Indigenous groups with an interest in a place are provided with the same information and given sufficient time to provide informed consent.</p> <p>3.5 Where groups are in dispute, a process for developing</p>

ELEMENT	PERFORMANCE CRITERIA
	separate but consistent and similar agreements is established.
4 Establish a process for addressing Indigenous cultural heritage matters	<p>4.1 Manner, timing and level of consultation and involvement with the project or activity are agreed.</p> <p>4.2 The copyright holders of any work undertaken with Indigenous people and the management regime for Indigenous heritage places are identified.</p> <p>4.3 Need for separate reports for male and female traditional owners and a further report that is publicly available is established.</p> <p>4.4 Dissemination of reports is carried out effectively.</p> <p>4.5 The process for obtaining informed consent for displaying any gathered information is identified and agreed.</p> <p>4.6 Protocols and agreements are formalised and documented.</p> <p>4.7 Indigenous people are involved in the development of any terms of reference for, and selection of, consultants.</p> <p>4.8 Resources required to maintain community involvement are identified and secured.</p> <p>4.9 Relevant documentation for council is prepared, including presentation of alternative options.</p>
5 Consult with relevant Indigenous people in identifying their cultural heritage places and values	<p>5.1 Commonwealth and state or territory laws relating to Aboriginal and Torres Strait heritage are complied with by obtaining necessary permits for surveys and other activities required to identify Indigenous heritage values.</p> <p>5.2 Sensitive information collected in the course of identifying Indigenous heritage places and values is protected from further unnecessary disclosure.</p> <p>5.3 Details relating to custodians of information are recorded and protected from further unnecessary disclosure.</p>
6 Implement project or activity	<p>6.1 Meetings are held with identified stakeholders that enable Indigenous people to explain issues relating to Indigenous heritage to non-Indigenous stakeholders.</p> <p>6.2 Processes for mediation and dispute resolution are identified and established.</p> <p>6.3 A precautionary approach is identified in cases where Indigenous people refuse to be involved in a project.</p> <p>6.4 A process to prevent damage or desecration to any Indigenous heritage place is identified and established.</p> <p>6.5 Proposal or activity is revised or rejected in light of Indigenous people not agreeing because of unacceptable impact on their cultural heritage.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- oral and written communication
- cross-cultural competence
- gender and disability
- evaluation
- decision making
- research
- networking
- negotiation and dispute resolution

Required Knowledge

- cultural context
- community controls
- location and resources
- organisational processes
- equity and diversity principles
- legal requirements

Evidence Guide

Overview of assessment requirements

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.

Critical aspects of evidence to be considered

The demonstrated ability to:

- conduct research into cultural heritage and protect any sensitive information collected in the course of the research process
- identify Indigenous people with rights and interests in a place
- meet with Indigenous people to discuss a project or activity

and reach agreement about involvement and consent to their involvement in the project or activity

- establish a process for addressing Indigenous cultural heritage matters in relation to a project or activity.

Context of assessment

Competency is demonstrated by performance of all stated criteria, with particular attention to the critical aspects of evidence and the knowledge and skills elaborated in the Evidence Guide, and within the scope of the Range Statement.

Assessment must take account of the endorsed Assessment Guidelines in the Local Government Training Package.

Assessment of performance requirements in this unit should be undertaken in an actual workplace or simulated environment.

Assessment should reinforce the integration of the key competencies for the particular AQF level. Refer to the key competency levels at the end of this unit.

Relationship to other units (prerequisite or co-requisite units)

To enable holistic assessment this unit may be assessed with other units that form part of the job role.

Method of assessment

The following assessment methods are suggested:

- observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies
- written and/or oral questioning to assess knowledge and understanding
- completion of workplace documentation
- third-party reports from experienced practitioners
- completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor.

Evidence required for demonstration of consistent performance

Evidence should be collected over a set period of time that is sufficient to include dealings with an appropriate range and variety of situations.

Resource implications

The learner and trainer should have access to appropriate documentation and resources normally used in the workplace.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in

the Performance Criteria is detailed below.

- Indigenous people with rights and interests in a place*** may include:
- traditional owners
 - men
 - women
 - Indigenous people authorised to speak for a place
- Protocols*** may include:
- use of interpreters
 - talking to the appropriate people
 - laws and customs relating to places
 - respecting family, kinship and clan relationships
- Non-Indigenous people with rights or interests in a place*** may include:
- landholders
 - lessees
 - tourists and recreational users
 - state or territory government agencies
 - commonwealth departments and agencies
- Potential implications of the project or activity*** may include:
- economic or financial
 - cultural
 - social
 - environmental
 - educational
 - others
- Relevant documentation and information*** may include:
- maps
 - reports

Unit Sector(s)

Land Management

LGAPLEM508A Manipulate and analyse data within geographic information systems

Modification History

LGAPLEM508A Release 2: Layout adjusted.

LGAPLEM508A Release 1: Primary release.

Unit Descriptor

This unit relates to extracting, comparing and manipulating data in response to customer requests.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where **bold italicised** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop procedures for manipulation and analysis of data	1.1 Desired data format is specified and based on job requirements. 1.2 Parameters are specified for manipulation of the data sets. 1.3 New procedures are documented clearly explaining the procedure and rationale for development.
2 Establish models required to provide outcome	2.1 Applicability of existing tools, models, theories, applications and solutions is evaluated. 2.2 Feasible parameters, equations and assumptions are specified. 2.3 Models required to provide specified outcome are established.
3 Analyse data	3.1 Steps to be undertaken to analyse and manipulate data are specified. 3.2 <i>Source data limitations</i> and other restricting <i>factors</i> are taken into account when selecting techniques for analysis. 3.3 Data is isolated and retrieved from its source. 3.4 Data is interrogated to ensure reliability. 3.5 Data is prepared for presentation media.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- analysing options
- using tools within software to manipulate data
- reading external data sets into data model

Required Knowledge

- database structures
- scripting and commands
- line instructions and programming
- operating systems:
- range of tools, models, theories, applications and solutions
- data analysis and manipulation techniques.

- UNIX
- DOS
- Windows
- NT

Evidence Guide

Overview of assessment requirements	A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.
Critical aspects of evidence to be considered	<p>Suitable procedures are developed.</p> <p>New procedures are documented.</p> <p>Appropriate models are used and/or created.</p>
Context of assessment	On the job or in a simulated work environment.
Method of assessment	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> • observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies • written and/or oral questioning to assess knowledge and understanding • completion of workplace documentation • third-party reports from experienced practitioners • completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor
Evidence required for demonstration of consistent performance	Evidence will need to be gathered over time across a range of variables.
Resource implications	Access to geographic information systems databases and operating systems.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Source data limitations may include:

- currency
- structure
- accuracy
- source of data

Factors may include:

- time
- command line operation
- menu drivers options

Unit Sector(s)

Planning

LGAPLEM512A Provide geographic information systems data

Modification History

LGAPLEM512A Release 2: Layout adjusted.

LGAPLEM512A Release 1: Primary release.

Unit Descriptor

This unit covers developing and applying data management and analytical tools to produce specified outcomes.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Analyse request to develop solution	<p>1.1 Specific problem or question is clarified in consultation with <i>end user</i> to establish <i>end result specifications</i> .</p> <p>1.2 Information required to achieve result is defined and required <i>data</i> sets are correctly determined.</p>
2 Assess data availability	<p>2.1 Availability of required data sets is ascertained through research of <i>internal</i> and <i>external sources</i> .</p> <p>2.2 Custodianship of data is confirmed and access and pricing are determined.</p> <p>2.3 Data is obtained in line with <i>industry standards</i>, statutory requirements and council policy.</p> <p>2.4 Where appropriate, <i>procedures</i> are developed to capture data.</p>
3 Assess data quality	<p>3.1 Data is assessed for <i>integrity</i> to determine suitability for task.</p> <p>3.2 Disparities between data sets are investigated and resolved to ensure integrity of data used.</p>
4 Run standard query	<p>4.1 Appropriate standard query is selected.</p> <p>4.2 Selected query is run to achieve required outcome .</p>
5 Validate outcome	<p>5.1 Appropriate data validation procedures are determined.</p> <p>5.2 <i>Outcome</i> is validated in line with predetermined procedures.</p> <p>5.3 Procedures to refine model or analytical procedures are developed.</p> <p>5.4 End user is consulted regarding suitability of outcome and amendments are negotiated as necessary.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- analysing options
- researching and accessing information
- attention to detail
- negotiating with customers

Required Knowledge

- database structures
- scripting and commands
- line instructions and programming
- operating systems
- SQL or other generic query language
- relationship of spatial features of database
- specific geographic information systems software, such as Genamap, MapInfo or ArcInfo
- potential inaccuracies and problems
- internal and external policies and practices relating to custodianship of data, pricing and access including industry standards, statutory requirements and council policies
- legislation relating to trade practices, copyright, intellectual property, local government acts, roads act and freedom of information legislation.
- UNIX
- DOS
- Windows
- NT

Evidence Guide

Overview of assessment requirements	A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.
Critical aspects of evidence to be considered	The demonstrated ability to: consider integrity of data ensure end result meets customer needs, including time frames.
Context of assessment	Assessment of performance requirements in this unit should be undertaken within the context of the local government framework. Competency is demonstrated by performance of all stated criteria applicable to the workplace environment, within the scope of the Range Statement.
Method of assessment	The following assessment methods are suggested: <ul style="list-style-type: none"> • observation of the learner performing a range of workplace

tasks over sufficient time to demonstrate handling of a range of contingencies

- written and/or oral questioning to assess knowledge and understanding
- completion of workplace documentation
- third-party reports from experienced practitioners
- completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor

Evidence required for demonstration of consistent performance

Evidence should be gathered over a period of time in a range of actual or simulated management environments.

Resource implications

Access to a workplace or simulated case study that provides the following resources:

- relevant hardware and software such as geographic information systems, CAD, desktop publishing, desktop mapping, spreadsheets, word processing, multimedia, graphic animation, plotters, printers and terminals

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

End users may be:

- council departments
- residents and rate payers
- real estate agents
- general public
- council management
- elected members
- state and federal departments
- neighbouring councils
- bus companies
- statutory bodies including land titles office
- land information council
- utilities

End result specification may include:

- graph
- map
- table
- equations

- Data** may include:
- parameters
 - graphical
 - spatial
 - textual
 - hard copy and paper documents, including work registers, rate books, plans and maps
 - computer records using applications programs (databases, spreadsheets and accounting packages) relating to physical or virtual features, including council assets, community facilities, demographic data, census data, property ownership, property boundaries, zonings, organisations, rateable land, dog ownership, bus routes, property classifications, utilities and services and council facilities
- External sources of data sets** may include:
- other councils
 - water authority
 - telecommunications industry
 - gas authority
 - electricity authority
 - land titles office
 - valuer general
 - private industry
 - land information council
 - street directory companies
 - surveys
 - orthophotography
- Internal sources of data sets** may include:
- old plans
 - rates books
 - deeds books
 - transaction books
 - surveys
 - aerial photographs
- Industry standards** may include:
- protocols
 - de facto standards
 - confidentiality
 - privacy
- Procedures for manipulation of data sets** may include:
- command lines
 - SQL or other generic query language
 - scripts
 - programming language
- Integrity of data** may include:
- accuracy
 - quality, which may be affected by age or condition of hard copy documents

- Outcome* may include:
- currency
 - completeness
 - resolution
 - confidence limits
 - scale
 - information for external or internal client
 - creation of map layer
 - building up elements of database

Unit Sector(s)

Planning

LGAPLEM612B Protect heritage and cultural assets

Modification History

LGAPLEM612B Release 2: Layout adjusted.

LGAPLEM612B Release 1: Primary release.

Unit Descriptor

This unit covers establishing an inventory, assessing opportunities and threats and developing strategies for heritage and cultural assets.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare inventory of heritage and cultural assets	<p>1.1 <i>Heritage</i> and cultural assets within the community, and council expectations and requirements relating to them, are identified.</p> <p>1.2 The <i>significance</i> of each heritage and cultural asset is assessed according to established criteria and community expectations.</p> <p>1.3 An adequate <i>information</i> base of significant places is obtained through comprehensive field investigation and research.</p> <p>1.4 <i>Data</i> is collected accurately and objectively on heritage and cultural assets.</p> <p>1.5 A comprehensive inventory of heritage and cultural assets is prepared with full and detailed descriptions of history and significance.</p>
2 Assess threats and opportunities for the protection of heritage and cultural assets	<p>2.1 <i>Threats</i> and opportunities are identified to ensure all factors are fully assessed.</p> <p>2.2 Based on input from council and the community, criteria are established to enable threats and opportunities to be prioritised.</p>
3 Identify and develop strategies for the protection of heritage and cultural assets	<p>3.1 <i>Criteria</i> are established to identify priorities.</p> <p>3.2 Consultation with the community and property owners is undertaken to seek views on the conservation action required to protect the significant attributes of the area.</p> <p>3.3 A framework for the legal protection of heritage and cultural assets is established through existing legislation.</p> <p>3.4 Practical and appropriate strategies to conserve heritage and cultural assets are determined.</p> <p>3.5 The effectiveness of strategies is assessed through a comparison with methods used elsewhere.</p> <p>3.6 The policy elements of the proposed heritage program are determined.</p> <p>3.7 Innovative approaches are developed to protect heritage and cultural assets in response to the local community need.</p>
4 Implement strategies for the protection of heritage and cultural assets	<p>4.1 The study and program are adopted by the local authority.</p> <p>4.2 Consultation is undertaken with the community and property owners about the study and proposed heritage program.</p> <p>4.3 Financial resources are identified and procured within budget cycles to support the achievement of required</p>

ELEMENT**PERFORMANCE CRITERIA**

- outcomes.
- 4.4 Personnel are identified, trained and assigned to tasks so that requirements for skills and knowledge are met.
- 4.5 Physical facilities and equipment are identified and procured within budget cycles to support the achievement of required outcomes.
- 4.6 Community education and *information* materials are prepared and distributed to ensure ongoing support for the strategy.
- 4.7 The strategy is incorporated into council policies and procedures and relevant legislation.
- 4.8 A timetable for implementation is established and priorities are set.
- 5 **Monitor and review the effectiveness of strategies to protect heritage and cultural assets**
- 5.1 Further research is undertaken on *places* listed as being of local significance in the study.
- 5.2 Additional plans of significance are identified and reviewed.
- 5.3 An annual heritage report is prepared if required.
- 5.4 Information received from monitoring and review is used to develop new strategies that are based on accumulated knowledge and experience.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- research
- collation of information from local, national and international sources
- evaluation methodologies
- consultation with a range of community and government agencies
- strategic planning
- budgeting and lifecycle costings
- community education strategies
- project management

Required Knowledge

- heritage assets
- cultural assets
- asset classification

- council structures and services
- town planning
- community needs and expectations
- regulations, standards and policies
- community information

Evidence Guide

Overview of assessment requirements	A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.
Critical aspects of evidence to be considered	The demonstrated ability to: <ul style="list-style-type: none"> • identify and protect heritage and cultural assets • identify and implement strategies to protect heritage and cultural assets • put in place monitoring processes
Context of assessment	Assessment of performance requirements in this unit should be undertaken within the context of the local government framework. Competency is demonstrated by performance of all stated criteria, including the Range of Variables applicable to the workplace environment.
Method of assessment	The following assessment methods are suggested: <ul style="list-style-type: none"> • observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies • written and/or oral questioning to assess knowledge and understanding • completion of workplace documentation • third-party reports from experienced practitioners • completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor
Evidence required for demonstration of consistent performance	Evidence should be gathered over a period of time in a range of actual or simulated management environments.

- Resource implications** Access to a workplace or simulated case study that provides the following resources:
- relevant data such as survey information
 - historical research
 - existing reports
 - studies and texts
 - financial and budget information
 - real or simulated consultation process
 - copies of relevant regulations, standards and policies

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- Heritage*** may include:
- cultural and environmental issues
 - national and local area significance
 - danger component of heritage element or structure

- Significance*** may be:
- aesthetic, historical, scientific and social aspects
 - community expectations.
 - national
 - state
 - regional
 - local
 - contributory

- Data*** includes:
- survey information
 - historical research
 - existing reports
 - studies and texts

- Information*** may include:
- written and oral records
 - reports
 - instructions
 - directions from supervisor and management
 - formal and informal interviews
 - team meetings
 - reports from other services, agencies, specialists and experts
 - media

- Threats*** may include:
- political emphasis

Criteria may include:

- reductions in maintenance
- lack of planning
- other authorities' planning
- competing interests
- community attitudes
- community preferences
- budget constraints
- legislative provisions
- resources
- time frames
- age
- outstanding craftsmanship
- architectural style
- construction technology
- an association with important events or figures
- building type
- rarity
- technical or creative achievement
- representing a way of life
- artistic
- religious or cultural associations

Places of significance
may include:

- buildings
- structures
- plantings
- subsurface remains

Unit Sector(s)

Land Management

LGAREGS305A Undertake animal or reptile control duties

Modification History

LGAREGS305A Release 2: Layout adjusted.

LGAREGS305A Release 1: Primary release.

Unit Descriptor

This unit covers the capture, assessment of transport and care needs, impounding, monitoring, release and reporting of animals and/or reptiles.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of varying size and locations. Knowledge of the legislation and regulations within which councils must operate is essential. The role of councils, as the third tier of government, in managing the application of a broad range of by-laws and regulations must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Capture animals or reptiles	1.1 Response to request for assistance is timely and efficient use of resources is observed. 1.2 Traffic control precautions are used and access to incident site is controlled to ensure safety of public. 1.3 Safe and humane methods of handling <i>animals or reptiles</i> are observed. 1.4 Where appropriate, animals or reptiles are disposed of in accordance with legislative and council requirements and relevant statutes.
2 Assess transport or care needs	2.1 <i>Transport</i> or intermediate care is provided according to protocols or legislation. 2.2 Containment and loading are secure and safe. 2.3 Temporary holding facilities are arranged or negotiated with landowners where necessary.
3 Impound animals or reptiles	3.1 Impounding decision is consistent with legislative and council requirements. 3.2 <i>Ownership</i> of animals is determined using council records or stock brands. 3.3 Advisory/penalty notices are issued according to council regulations.
4 Monitor or care for animals or reptiles	4.1 Feeding and handling of animals during care is undertaken in accordance with pound procedures and legislative and council requirements. 4.2 Safe work practices, procedures and environmental conditions are observed during handling, monitoring and care duties.
5 Release animals or reptiles to owners/carers or return to environment	5.1 Decision to release or restore animal to environment is in accordance with relevant legislation and procedures. 5.2 Auction of unclaimed stock is performed according to council procedures. 5.3 Recovery of costs and revenue is assessed and enforced according to relevant legislation and procedures.
6 Report on animals or reptiles that are captured, impounded or disposed of	6.1 Reports containing accurate information drawn from council registers are forwarded to relevant officers or authorities.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit

Required Skills

- computers
- video, voice recorders and radio communication
- preparing and issuing instructions and/or explanations to the public
- reporting to council

Required Knowledge

- animal and reptile behaviour
- predators
- dominance
- fear
- aggression
- applicable impounding techniques
- animal and reptile handling and disabling techniques
- animal and reptile dietary and impounding needs
- routine medicinal, chemical and dipping application
- animal health treatment
- humane disposal techniques
- safe and effective use of firearms
- stock brands
- identification tags
- microchip reading
- local area geography
- terrain
- urban and rural navigation
- relevant statutes
- notice-serving process
- court evidence
- traffic control licensing requirements and direction

Evidence Guide

Overview of assessment requirements

A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work

	practices that underpin the performance of the unit are also required to be demonstrated.
Critical aspects of evidence to be considered	<p>Impounding techniques used are appropriate to animal or reptile species and the condition of the animal or reptile.</p> <p>Assessments of animal or reptile health and condition, and the appropriate disposal of animals or reptiles, are in accordance with council policies and procedures.</p> <p>Traffic control is in accordance with relevant licensing requirements.</p> <p>Use of firearms is in accordance with relevant licensing requirements.</p> <p>Notices are served in accordance with council regulations.</p> <p>Safe work practices and concern for public safety are displayed by care and control staff.</p>
Context of assessment	<p>On the job or in a simulated work environment.</p> <p>Written or oral testing.</p>
Method of assessment	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> • observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies • written and/or oral questioning to assess knowledge and understanding • completion of workplace documentation • third-party reports from experienced practitioners • completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor
Evidence required for demonstration of consistent performance	Competency in duties may be displayed with domestic animals, livestock, wildlife or reptiles.
Resource implications	Access to a workplace or simulated environment that encompasses impounding processes, techniques and equipment.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in

the Performance Criteria is detailed below.

Animals or reptiles may include:

- domestic pets
- livestock
- feral animals
- native animals
- reptiles

Capture or control may include:

- traps
- poles and ropes
- tongs
- tranquilliser guns
- firearms
- vehicles
- loading and yarding
- health, condition and behaviour of animal or reptile from observation or reports
- supervision of, or communication to, other staff or agency personnel
- disposal of deceased animals or reptiles

Transport may include:

- dedicated or contracted transport
- appropriate for care and human safety.

Ownership issues may include:

- verification of claims to ownership by such things as tags or microchips
- recovery of costs relating to transport, sustenance and penalties

Unit Sector(s)

Regulatory Services

MARC037 Operate inboard and outboard motors

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Application

This unit involves the skills and knowledge required to operate inboard and outboard motors, and to diagnose basic faults.

This unit applies to people working in the maritime industry in the capacity of:

- coxswain on vessels <12 m in length, with propulsion power that is unlimited for an outboard engine or <500 kW for an inboard engine, operating in inshore or designated waters or
- coxswain on tenders or auxiliary vessels operating within 3 nautical miles (nm) of a parent vessel within the exclusive economic zone (EEZ).

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit. This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a Coxswain Grade 2 NC and a Coxswain Grade 1 NC, as defined in the National Standard for Commercial Vessels (NSCV) Part D. The AMSA mandated practical assessment (AMPA) is a requirement for AMSA certification. The Australian Maritime Safety Authority (AMSA) mandated practical assessment (AMPA) will cover a range, but not all, of the requirements identified in the Performance Evidence and Knowledge Evidence. The AMPA shall be undertaken in accordance with its instructions.

Assessors of AMPA must hold as a minimum:

- a current certificate of competency issued under Marine Safety (Domestic Commercial Vessel) National Law Act 2012 at the same level as the qualification being assessed with at least 12 months relevant sea service, or
- a relevant seafarer certificate, as master, engineer or deck officer, issued under the Navigation Act 2012.

Pre-requisite Unit

Not Applicable

Competency Field

C – Equipment Operations

Unit Sector

Not Applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Operate inboard and outboard motors

- 1.1 Pre-start checks are performed on the motor
- 1.2 Fuel is checked to ensure there is adequate fuel, including a reserve, on board
- 1.3 Motor is started and stopped safely and correctly
- 1.4 Motor controls are used to manoeuvre the vessel safely to complete work tasks
- 1.5 Motor is operated within safe limits during normal manoeuvres

2 Secure vessel on completion of work task

- 2.1 Vessel is moored safely
- 2.2 Fuel system is closed down
- 2.3 Vessel is secured
- 2.4 Fuel is stored to minimise environmental and fire hazards as appropriate
- 2.5 Unserviceable equipment is reported and tagged out as unserviceable

3 Maintain inboard and outboard motors

- 3.1 Fuel filters are drained of excess water
- 3.2 Batteries and connections are maintained to ensure reliable electrical supply to the motor
- 3.3 Engine and gearbox oil is checked and lubrication is applied
- 3.4 Engine mounting gear is checked as necessary

- 4 Identify basic inboard and outboard motor faults**
- 4.1** Operating difficulties caused by fuel-related factors are identified
 - 4.2** Electrical faults are identified, tagged out and reported
 - 4.3** Motor propulsion faults are identified, tagged out and reported

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to MARC005 Operate inboard and outboard motors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARC037 Operate inboard and outboard motors

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices
- conducting pre-start checks, including checking:
 - fuel
 - lubricating oil
 - cooling system
 - motor attachment points
 - water depth
- conducting shutdown checks on inboard and outboard motors, and tagging out and reporting faults
- estimating fuel consumption
- reading and interpreting company standard operating procedures (SOPs) about operating inboard and outboard engines
- storing inboard or outboard motors
- using inboard and outboard motor steering system.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- battery connection and hazards
- International Convention for the Prevention of Pollution from Ships (MARPOL) requirements as it applies to operating inboard and outboard motors
- motor:
 - cooling systems
 - fuel systems
 - lubricating systems
- risks associated with portable fuel tanks

- standard procedures to tag out and report faults
- starting motors
- troubleshooting techniques
- WHS/OHS requirements and work practices.

Assessment Conditions

Assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions. Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, safety management system, workplace procedures and operational manuals
- a vessel ≥ 5.0 metres in length with propulsion power of ≥ 75 kW, or appropriate engine ashore
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

MARF027 Apply basic survival skills in the event of vessel abandonment

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Application

This unit involves the skills and knowledge required to apply basic survival skills in the event of vessel abandonment. This unit applies to people working in the maritime industry in a deck and or engine room capacity on vessels up to 80 m and with propulsion power <3000 kW within the exclusive economic zone (EEZ). They could be working independently or as part of a vessel crew.

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit. This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a General Purpose Hand NC, Coxswain Grade 2 NC, Coxswain Grade 1 NC, Marine Engine Driver Grade 3 NC, Master (Inland waters), Master <24 m NC, Marine Engine Driver Grade 2 NC, Mate <80m NC, Master < 35 m NC and Marine Engine Driver Grade 1 NC, as defined in the National Standard for Commercial Vessels (NSCV) Part D. The AMSA mandated practical assessment (AMPA) is a requirement for AMSA certification. The Australian Maritime Safety Authority (AMSA) mandated practical assessment (AMPA) will cover a range, but not all, of the requirements identified in the Performance Evidence and Knowledge Evidence. The AMPA shall be undertaken in accordance with its instructions.

Assessors of AMPA must hold as a minimum:

- a current certificate of competency issued under Marine Safety (Domestic Commercial Vessel) National Law Act 2012 at the same level as the qualification being assessed with at least 12 months relevant sea service, or
- a relevant seafarer certificate, as master, engineer or deck officer, issued under the Navigation Act 2012 or relevant skills and experience.

Pre-requisite Unit

Not Applicable

Competency Field

F – Operational Quality and Safety

Unit Sector

Not Applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|--|--|
| 1 Prepare to abandon vessel | <p>1.1 Nature of emergency is determined to minimise potential dangers and threats</p> <p>1.2 Muster and abandon vessel signals are responded to according to vessel safety procedures</p> <p>1.3 Survival equipment is organised to maximise chances of survival</p> <p>1.4 Emergency position indicating radio beacon (EPIRB) is operated to transmit distress signal</p> <p>1.5 Distress calls are made using radio equipment on distress call frequency, if time allows, to communicate the nature of the emergency</p> <p>1.6 Others are assisted to maximise their chances of survival</p> |
| 2 Determine operational safety requirements | <p>2.1 Relevant maritime legislation is identified and implemented</p> <p>2.2 Safety requirements for a range of near coastal vessels are identified, accessed and reviewed</p> <p>2.3 Lifesaving and survival equipment required on board a near coastal vessel are accurately identified</p> <p>2.4 Lifesaving equipment on board is checked and confirmed as serviceable</p> <p>2.5 Lifesaving and survival equipment certificates and documentation are checked for validity</p> <p>2.6 Vessel safety management systems (SMS) and plans are located, interpreted and applied</p> |
| 3 Practise survival techniques | <p>3.1 Typical emergency alarms and types of alarm systems are accurately identified</p> |

- 3.2 Need to abandon vessel is determined according to established safety practice and procedures
 - 3.3 In-water survival techniques are implemented according to established safety practice and procedures
 - 3.4 Threats to survival are identified and treatment options are outlined
- 4 Apply survival techniques**
 - 4.1 Lookout for vessels and aircraft is maintained and distress signals are released on sighting
 - 4.2 During an emergency, work is carried out collaboratively with other shipboard personnel and passengers as required
 - 4.3 During emergency and survival situations, appropriate communication skills and techniques are implemented
 - 4.4 Instructions given by rescue personnel to safely access rescue craft are followed
- 5 Operate lifesaving and survival equipment**
 - 5.1 Range of pyrotechnic and distress signals are operated according to established safety practice and procedures
 - 5.2 Survival equipment is operated according to instructions and accepted survival practice
 - 5.3 Survival radio equipment is operated according to manufacturer instructions and regulatory protocols
 - 5.4 Lifejackets and other lifesaving equipment are operated and used according to instructions
- 6 Participate in abandon vessel drills**
 - 6.1 Regulatory requirements and company procedures for musters and drills are identified and implemented
 - 6.2 Actions required for a range of muster signals are correctly identified
 - 6.3 Action is taken promptly to address problems that may arise when following vessel abandonment procedures
 - 6.4 Hazards are identified that may occur when abandoning vessel risks are minimised according to SMS, and established safety practice and procedures
 - 6.5 Information relevant to use of lifesaving equipment is accessed and applied

6.6 Range of emergencies that may lead to vessel abandonment are outlined

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to MARF001 Apply basic survival skills in the event of vessel abandonment.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARF027 Apply basic survival skills in the event of vessel abandonment

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- collecting, managing and interpreting information on the use of lifesaving equipment and procedures to be followed when order to abandon vessel is given
- communicating effectively with other personnel and passengers during simulated and/or actual abandon vessel musters and emergencies
- determining type and extent of emergency and appropriate survival action to be taken
- donning a lifejacket in water and:
 - assisting a survivor to don a lifejacket
 - holding heat escape lessening posture for at least 5 minutes
 - maintaining a group huddle for at least 10 minutes
 - swimming in a group conga line for a minimum of 50 metres
 - swimming in a lifejacket for a minimum of 50 metres
 - towing with a life jacket for a minimum of 25 metres
- ensuring behaviour reflects statutory requirements pertaining to lifesaving appliances
- operating radio equipment, including very high frequency (VHF) or high frequency (HF) radios
- operating and using lifesaving and survival equipment, including:
 - orange smoke flares or red handheld flares
 - life buoys
 - life jacket or personal floatation devices
- planning timing and sequence of individual survival actions to be appropriate to prevailing circumstances and conditions of emergency, and minimising potential dangers and threats to other survivors
- reading and interpreting instructions on emergency procedures, safety management systems (SMS) and plans
- recognising and interpreting alarms and muster signals appropriately
- remaining afloat without a lifejacket for at least 5 minutes.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- appropriate techniques for:
 - first aid
 - maritime communication
 - survival with a swamped, semi-submerged tender or dingy
 - using survival equipment
- action to be taken in an emergency situation
- certificates and documentation, including:
 - instructions for use of lifesaving equipment
 - lifesaving and survival equipment certificates
 - pyrotechnic expiry dates
 - record of inspection of equipment
- crew and passenger safety briefing
- construction, outfit and particular characteristics of various types of applicable survival equipment
- distress signals, their use and penalty for misuse
- emergency muster and abandon vessel signals
- emergencies that may lead to vessel abandonment
- established safety practice and procedures
- hazards, including:
 - expired pyrotechnics
 - inaccessible lifejackets
 - no defined abandon ship procedures established
 - poorly maintained equipment
- importance of being ready for any shipboard emergency, including initial actions for survival on vessel; abandonment
- location of:
 - lifesaving appliances on a vessel
 - survival equipment on vessel
- maintenance of lifesaving appliances
- person overboard combination light and smoke float
- purpose and use of relevant personal protective equipment (PPE)
- procedures for:
 - abandoning vessel
 - correctly operating and using lifesaving appliances on board vessels and survival craft, specifically donning a lifejacket, using a lifejacket light and whistle and using handheld pyrotechnics
 - emergency response on board vessels, including abandoning vessel

- regulatory requirements and company procedures for musters and drills
- relevant manufacturer guidelines relating to operating and using survival equipment, including instructions on equipment capability and limitations
- relevant maritime regulations related to required survival equipment on a vessel
- relevant work health and safety (WHS)/occupational health and safety (OHS) legislation and policies, including SMS, plans, processes and techniques
- signs of hypothermia and appropriate treatment
- search and rescue transponders (SARTs)
- standard safety symbols
- steps taken after collision, grounding or other marine casualty and resulting hull damage
- symptoms of hypothermia, its prevention and treatment and related use of protective covers and garments
- threats to survival after abandoning vessel, including dehydration and ingestion of seawater and:
 - appropriate strategies for countering these threats
 - how to minimise dangers
- using survival equipment, including:
 - emergency position indicating radio beacons (EPIRBs)
 - immersion suits
 - SARTs
- value of training and emergency drills for enhancing chances of survival at sea
- ways of maximising detectability using pyrotechnic distress signals, portable high frequency (HF) radios and EPIRBs.

Assessment Conditions

Assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions. Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, safety management systems, workplace procedures and operational manuals, including:
 - abandon vessel procedures
 - emergency procedures

- information on the use of lifesaving equipment
- instructions for the use of lifesaving and survival equipment
- lifesaving and survival equipment certificates
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

MARF028 Follow procedures to minimise and fight fires on board a vessel

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Application

This unit involves the skills and knowledge required to apply defined policies and procedures when carrying out fire minimisation procedures and fighting a fire on board a vessel. This unit applies to people working in the maritime industry in a deck and or engine room capacity on vessels up to 80 m and with propulsion power <3000 kW within the exclusive economic zone (EEZ). They could be working independently or as part of a vessel crew.

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit. This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a General Purpose Hand NC, Coxswain Grade 2 NC, Coxswain Grade 1 NC, Marine Engine Driver Grade 3 NC, Master (Inland waters), Master <24 m NC, Marine Engine Driver Grade 2 NC, Mate <80 m NC, Master <35 m NC and Marine Engine Driver Grade 1 NC, as defined in the National Standard for Commercial Vessels (NSCV) Part D. The AMSA mandated practical assessment (AMPA) is a requirement for AMSA certification. The Australian Maritime Safety Authority (AMSA) mandated practical assessment (AMPA) will cover a range, but not all, of the requirements identified in the Performance Evidence and Knowledge Evidence. The AMPA shall be undertaken in accordance with its instructions.

Assessors of AMPA must hold as a minimum:

- a current certificate of competency issued under Marine Safety (Domestic Commercial Vessel) National Law Act 2012 at the same level as the qualification being assessed with at least 12 months relevant sea service, or
- a relevant seafarer certificate, as master, engineer or deck officer, issued under the Navigation Act 2012 or relevant skills and experience.

Pre-requisite Unit

Not Applicable

Competency Field

F – Operational Quality and Safety

Unit Sector

Not Applicable

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Carry out fire minimisation procedures

1.1 Fire hazards and risks on board vessel are identified and reported to designated personnel according to workplace procedures

1.2 Workplace procedures and work instructions for controlling fire risks are followed

1.3 Firefighting equipment is regularly checked and appropriate action is taken to ensure it is operational

1.4 Participation in fire drills and musters is undertaken to ensure readiness for fire emergencies

2 Follow instructions during response to a fire emergency

2.1 Location and class of fire are identified and alarm is raised and or responded to according to workplace procedures

2.2 Appropriate personal protective equipment (PPE) requirements are made ready

2.3 Instructions to contain the spread of fire and smoke are acted upon

2.4 Fire is attacked using appropriate method, firefighting equipment and extinguishing media or agent according to instructions

2.5 Collaboration and communication is maintained with others to support the safety and efficiency of the firefighting operation

3 Support post-fire operations

3.1 Fire watch is carried out as instructed to prevent further outbreak

3.2 Equipment is restored to operational condition according to workplace instructions

3.3 Assistance is provided to preserve fire scene prior to

investigation, as required

3.4 Information relevant for fire incident debrief is provided

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to MARF002 Follow procedures to minimise and fight fires on board a vessel.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARF028 Follow procedures to minimise and fight fires on board a vessel

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying extinguishing media to a fire, including:
 - water
 - dry chemical powder
- applying work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices
- communicating and working collaboratively as a member of a team in a firefighting operation
- correctly using vessel closure and shutdown systems
- conducting effective boundary cooling
- identifying fire hazards and risks
- using fire hose lines (jet spray to fog stream)
- using a fire blanket to extinguish a fire.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- chemistry of fire and its relationship to flash point, vapour density, auto ignition temperature and spontaneous combustion
- classes of fire applicable to Australian and New Zealand Standards, including:
 - A – Carbonaceous solids
 - B – Flammable liquids
 - C – Flammable gases
 - E – Electrically energised equipment
 - F – Cooking fats or oils
- detection and suppression systems, including fixed firefighting systems
- extinguishing media, and their use, including:

- extinguishing powders
- firefighting foams
- gaseous extinguishing agents
- water
- fire alarms and signals during on-board fire emergency
- firefighting tactics, techniques and procedures, including team dynamics
- fire hazards and risks, including:
 - cargo
 - clothing
 - cooking oils
 - cordage
 - electrical arcing
 - fuels and lubricants
 - furnishings
 - paints
 - poor housekeeping
 - poor work practices
 - smoking
 - spontaneous combustion
- hazards and threats to life or health during on-board firefighting operations
- international shore connections
- methods of heat transfer
- on-board fire emergency response organisation and procedures
- portable fire extinguishers – colour codes and suitability for class of fire
- principles underlying spread of fire on a vessel
- principles and methods of extinguishment of each class of fire
- fire pumps
- procedure for restoring equipment to operational condition, including:
 - cleaning
 - re-stowing
- types of fire detection, firefighting equipment and systems used on vessels, their features, principles of operation, procedures for their use and problems that can occur
- using a fire bucket
- ventilation procedures
- vessel construction as it relates to fire prevention or protection
- WHS/OHS requirements and safe work practices.

Assessment Conditions

Assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. As a

minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions. Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) that are currently used in industry.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

MARF030 Survive at sea using survival craft

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Application

This unit involves the skills and knowledge required to survive at sea using survival craft. This unit applies to people working in the maritime industry in a deck and or engine room capacity on vessels up to 80 m and with propulsion power <3000 kW within the exclusive economic zone (EEZ). They could be working independently or as part of a vessel crew.

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit. This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a General Purpose Hand NC, Coxswain Grade 1 NC, Marine Engine Driver Grade 3 NC, Master <24 m NC, Marine Engine Driver Grade 2 NC, Mate <80 m NC, Master < 35 m NC and Marine Engine Driver Grade 1 NC as defined in the National Standard for Commercial Vessels (NSCV) Part D. The AMSA mandated practical assessment (AMPA) is a requirement for AMSA certification. The Australian Maritime Safety Authority (AMSA) mandated practical assessment (AMPA) will cover a range, but not all, of the requirements identified in the Performance Evidence and Knowledge Evidence. The AMPA shall be undertaken in accordance with its instructions.

Assessors of AMPA must hold as a minimum:

- a current certificate of competency issued under Marine Safety (Domestic Commercial Vessel) National Law Act 2012 at the same level as the qualification being assessed with at least 12 months relevant sea service, or
- a relevant seafarer certificate, as master, engineer or deck officer, issued under the Navigation Act 2012 or relevant skills and experience.

Pre-requisite Unit

Not Applicable

Competency Field

F – Operational Quality and Safety

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|--|---|
| 1 Prepare to abandon vessel | <p>1.1 Nature of emergency is determined to minimise potential dangers and threats</p> <p>1.2 Muster and abandon vessel signals are responded to according to vessel safety procedures</p> <p>1.3 Survival equipment is organised to maximise chances of survival</p> <p>1.4 Emergency position indicating radio beacon (EPIRB) is operated to transmit distress signal</p> <p>1.5 Distress calls are made using radio equipment</p> <p>1.6 Others are assisted to maximise their chances of survival</p> <p>1.7 Prevailing circumstances and emergency conditions are used as the basis for timing and sequencing individual survival actions, and potential dangers and threats to other survivors are minimised</p> |
| 2 Operate lifesaving and survival equipment | <p>2.1 Location and accessibility of lifesaving and survival equipment is established</p> <p>2.2 Survival craft is launched in a timely and effective manner</p> <p>2.3 Survival equipment is operated according to instructions and accepted survival practice</p> <p>2.4 Survival radio equipment is operated according to manufacturer instructions and regulatory protocols</p> <p>2.5 Lifejacket and other lifesaving equipment are correctly used according to instructions</p> |
| 3 Abandon vessel safely | <p>3.1 Need to abandon vessel is established according to safety management system (SMS) or plan</p> |

- 3.2 Survival craft is launched according to instructions
 - 3.3 Survival craft is checked to ensure it is safe to board
 - 3.4 Survival craft is boarded observing safety of other survivors
 - 3.5 Survival craft is released from abandoned vessel
 - 3.6 Exposure cover is deployed on survival craft according to accepted survival practice and manufacturer instructions
- 4 Apply survival techniques**
- 4.1 Survival craft is checked for seaworthiness
 - 4.2 Sea anchors and drogues are deployed according to accepted nautical practice
 - 4.3 Occupants are checked for signs of hypothermia or other injuries and first aid is applied as required
 - 4.4 Water and food is rationed
 - 4.5 Lookout for vessels and aircraft in vicinity is maintained and distress signals are released on sighting
 - 4.6 Instructions given by rescue personnel are followed to safely access rescue craft

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to MARF005 Survive at sea using survival craft.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARF030 Survive at sea using survival craft

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying appropriate handling strategies to manoeuvre survival craft in rough weather and sea conditions
- boarding a life raft unassisted while wearing a lifejacket and assisting others to board
- collecting, managing and interpreting information on the use of lifesaving equipment
- communicating with other crew members
- determining type and extent of emergency
- jumping safely from a height into the water while wearing a lifejacket and according to established survival practice
- operating radio equipment
- participating in training, musters and emergency drills
- reading and interpreting instructions for emergency procedures and for use of lifesaving and survival equipment
- recognising and interpreting muster signals
- righting an inverted life raft unassisted while wearing a lifejacket according to established survival practice
- swimming while wearing a lifejacket and floating without a lifejacket according to established survival practice
- using a rescue quoit to assist a person to the life raft
- using paddles to manoeuvre survival craft
- using survival equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- action to be taken in emergency situations
- calculations required to ration food and water
- technique used to deploy a sea anchor or drogue from the survival craft

- emergency muster and abandon vessel signals
- equipment found in survival craft, its function and procedures for correct operation
- established survival practice
- first aid techniques
- how to launch survival craft
- importance of being ready for shipboard emergencies
- International Convention for the Safety of Life at Sea (SOLAS) regulations
- location of survival equipment on vessel
- maintenance of lifesaving appliances
- means of activating gas release line to inflate life raft
- procedures for abandoning vessel including use of:
 - inflatable life raft
 - life buoys
 - life jackets
- relevant maritime regulations relating to required survival equipment on a vessel
- relevant work health and safety (WHS)/occupational health and safety (OHS) legislation and policies
 - search and rescue transponders (SARTs)
- steps to be taken after collision, grounding or other marine casualty and resulting hull damage
- survival at sea techniques
- survival craft:
 - characteristics of different types of survival craft
 - construction
- techniques for using survival equipment
- time required to make distress calls safely
- threats to survival on vessel abandonment and appropriate strategies for countering these threats
- use and purpose of personal protective equipment (PPE)
- use of distress signals, including flares and penalty for misuse.

Assessment Conditions

Assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions. Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe,

impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, workplace procedures, instructions for use of lifesaving and survival equipment, emergency procedures and operational manuals
- survival craft
- tools, equipment, machinery, materials and relevant PPE currently used in industry.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

MARI003 Comply with regulations to ensure safe operation of a vessel up to 12 metres

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Application

This unit involves the skills and knowledge required to apply current Commonwealth, state and territory Acts, legislation, codes of practice and other publications pertaining to the safe operation of a vessel up to 12 m in length.

This unit applies to people working in the maritime industry commanding and operating the engines of a commercial vessel:

- <12 m in length
- with propulsion power that is unlimited for an outboard engine or <500 kW for an inboard engine
- in inshore waters or designated waters or
- as a tender or auxiliary vessel within 3 nautical miles (nm) of a parent vessel within the exclusive economic zone (EEZ).

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit. This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a Coxswain Grade 2 NC and a Coxswain Grade 1 NC as defined in the National Standard for Commercial Vessels (NSCV) Part D. The AMSA mandated practical assessment (AMPA) is a requirement for AMSA certification. The Australian Maritime Safety Authority (AMSA) mandated practical assessment (AMPA) will cover a range, but not all, of the requirements identified in the Performance Evidence and Knowledge Evidence. The AMPA shall be undertaken in accordance with its instructions.

Assessors of AMPA must hold as a minimum:

- a current certificate of competency issued under Marine Safety (Domestic Commercial Vessel) National Law Act 2012 at the same level as the qualification being assessed with at least 12 months relevant sea service, or
- a relevant seafarer certificate, as master, or deck officer, issued under the Navigation Act 2012.

Pre-requisite Unit

Not Applicable

Competency Field

I – Regulations and Port Operations

Unit Sector

Not Applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Determine relevant rules and regulations impacting on work practices

2 Comply with industry and professional codes of practice

3 Apply legislative and regulatory requirements to the operation of the vessel

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 International Regulations for Preventing Collisions at Sea are comprehended and implemented

1.2 Responsibilities as the person in charge of a vessel are identified and recorded

1.3 Relevant Commonwealth, state, territory and local legislation governing the vessel and the passage are comprehended

2.1 Relevant industry and professional codes of practice are sourced

2.2 Commitment to comply with industry and professional codes of practice is demonstrated through own behaviour

3.1 Regulatory requirements relating to operational aspects of the vessel are recognised and appropriate procedures are developed

3.2 Situations where rules must be applied in order to avoid collisions are recognised

3.3 Safety requirements are implemented according to legislative and regulatory requirements

3.4 Compliance with all relevant rules and legislation is demonstrated while operating the vessel

- | | | |
|---|------------|--|
| 4 Identify changes in laws and regulations and their implications for vessel operation | 4.1 | Changed legislation and regulations are accessed |
| | 4.2 | Changes in regulatory requirements are identified and applied |
| | 4.3 | Operational procedures are reviewed to reflect changes in legislation and regulations |
| 5 Maintain statutory records | 5.1 | Copies of relevant records are maintained |
| | 5.2 | Evidence of current authorisation, training and relevant licences is maintained according to legislative and regulatory requirements |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to MARI001 Comply with regulations to ensure safe operation of a vessel up to 12 metres.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARI003 Comply with regulations to ensure safe operation of a vessel up to 12 metres

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying regulations pertaining to the safe operation of a vessel
- applying safety management plan
- conducting inductions for crew
- demonstrating an understanding of the duties and responsibilities of a Coxswain
- obtaining and complying with information from Commonwealth, state and territory Acts, legislation, codes of practices and other publications relating to the safe navigation of a vessel.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- action that must be taken when assisting vessels in distress
- certificates on board a vessel
- contents of marine notices, annual notices to mariners
- distress signals
- duties and responsibilities of a Coxswain
- function of risk assessments
- International Association of Lighthouse Authorities (IALA) Buoyage System A
- International Regulations for Preventing Collisions at Sea, including:
 - large commercial traffic
- lifesaving and firefighting appliances
- logbook or vessel record book
- *Marine Safety (Domestic Commercial Vessel) National Law Act 2012*, *Marine Safety (Domestic Commercial Vessel) National Law Regulation 2013* and marine orders
- marine pollution prevention
- National Standard for Commercial Vessels (NSCV), in particular, Part B, Part C Section 7, Part D and Part E

- operational areas and classifications of vessels
- safety management systems
- state and territory marine legislation
- work health and safety (WHS)/occupational health and safety (OHS) legislation.

Assessment Conditions

Assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions. Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals including:
 - International Regulations for Preventing Collisions at Sea
 - marine orders 500 series
 - *Marine Safety (Domestic Commercial Vessel) National Law Act 2012*
 - *Marine Safety (Domestic Commercial Vessel) National Law Regulation 2013*
 - National Standard for Commercial Vessels (NSCV), in particular, Part B, Part C Section 7, Part D and Part E
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

MARK007 Handle a vessel up to 12 metres

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Application

This unit involves the skills and knowledge required to manoeuvre a vessel up to 12 metres in length. This includes the ability to berth, moor, anchor and manoeuvre a vessel during emergencies.

This unit applies to people working in the maritime industry in the capacity of:

- coxswain on vessels <12 m in length, with propulsion power that is unlimited for an outboard engine or <500 kW for an inboard engine, operating in inshore or designated waters or
- coxswain on tenders or auxiliary vessels operating within 3 nautical miles (nm) of a parent vessel within the exclusive economic zone (EEZ).

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit. This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a Coxswain Grade 2 NC and Coxswain Grade 1 NC as defined in the National Standard for Commercial Vessels (NSCV) Part D. The AMSA mandated practical assessment (AMPA) is a requirement for AMSA certification. The Australian Maritime Safety Authority (AMSA) mandated practical assessment (AMPA) will cover a range, but not all, of the requirements identified in the Performance Evidence and Knowledge Evidence. The AMPA shall be undertaken in accordance with its instructions.

Assessors of AMPA must hold as a minimum:

- a current certificate of competency issued under Marine Safety (Domestic Commercial Vessel) National Law Act 2012 at the same level as the qualification being assessed with at least 12 months relevant sea service, or
- a relevant seafarer certificate, as master or deck officer, issued under the Navigation Act 2012.

Pre-requisite Unit

Not Applicable

Competency Field

K – Manoeuvring Vessels

Unit Sector

Not Applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Handle vessel in normal conditions

- 1.1 Features of vessel that relate to its handling characteristics are recognised
- 1.2 Details of manoeuvres are communicated to relevant personnel clearly and concisely using standard maritime vocabulary
- 1.3 Situational awareness is maintained to ensure safety of manoeuvres
- 1.4 Manoeuvres are completed to meet passage requirements
- 1.5 Propulsion equipment is used and monitored to assist in completing manoeuvres safely
- 1.6 Safe operating limits of propulsion and steering equipment are not exceeded

2 Handle vessel in adverse weather conditions

- 2.1 Nature of adverse weather conditions is identified and potential impact on the manoeuvrability of the vessel is determined
- 2.2 Appropriate action is determined to ensure the safety of the vessel
- 2.3 Correct use of propulsion equipment is established to assist in completing manoeuvres safely
- 2.4 Safe operating limits of propulsion and steering equipment are not exceeded
- 2.5 Situational awareness is maintained at all times to review actions and ensure the safety of the vessel

3 Handle vessel in emergencies

- 3.1 Nature of emergency is established and required action is determined

- 3.2 Risks to vessel and safety of persons on board are assessed and safety of required action is confirmed
 - 3.3 Details of action are communicated to relevant personnel clearly and concisely using standard maritime vocabulary
 - 3.4 Appropriate manoeuvres are made during the emergency to maintain the safety of the vessel and those on board, and any other vessels or persons involved
 - 3.5 Propulsion equipment is used and monitored to assist in completing manoeuvres safely
 - 3.6 Safe operating limits of propulsion and steering equipment are not exceeded
- 4 Tow and be towed**
- 4.1 Preparations for towing are made safely according to established nautical practice
 - 4.2 Correct towing procedures and precautions are applied when towing and being towed

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to MARK001 Handle a vessel up to 12 metres.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARK007 Handle a vessel up to 12 metres

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- anchoring a vessel
- applying work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices
- handling a disabled or partially disabled vessel
- manoeuvring a vessel to:
 - berth and leave a berth
 - come to and leave a mooring
 - maintain a steady course
 - retrieve a person overboard
 - steer astern
 - turn short around
 - turn a vessel across the tide and across the wind
- maintaining situational awareness
- undertaking preparations for towing, including:
 - crew briefings that include the task at hand and risks to persons on both vessels
 - ensuring means of communication between the two vessels is available
 - ensuring tow ropes are in good condition and of adequate strength and length for the proposed tow
 - ensuring tow line is of sufficient length to minimise shock loading on tow-line
 - making tow fast to the towing vessel to ensure steerage can be maintained
 - making provision for rapid slipping of the tow in emergency situations
 - preparing messenger ropes for passing tow lines
- towing and being towed
- using appropriate communication.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- adverse weather conditions, including:
 - fog and restricted visibility
 - tropical revolving storms
 - wind and sea conditions that may affect the safety of the vessel
- avoidance of tropical revolving storm activity
- elliptical turn
- features of a vessel that relate to its handling characteristics, and their effects, including:
 - displacement and planing hulls
 - propellers
 - propulsion units, including:
 - jet units
 - inboard engines
 - outboard motors
 - rudders
 - trim and displacement
- manoeuvring in the event of emergencies, including:
 - collision
 - disabled or partially disabled vessel
 - grounding
 - person overboard
- manoeuvring characteristics of small power-driven vessels
- manoeuvring a vessel in the vicinity of large vessels
- manoeuvring to beach and re-float the vessel
- manoeuvring a vessel in adverse weather conditions, including:
 - altering course to minimise the effect of wind and sea
 - berth and leave a berth in various wind and tidal conditions
 - deploying a sea anchor to keep vessel head to sea
 - heading to wind and sea to ride out the adverse weather
 - reduction of speed
 - seeking shelter
- procedures for towing and being towed
- stability of a small vessel and stability terms
- techniques for crossing a coastal bar with and against the sea
- techniques for handling a vessel in heavy swell and surf
- trim and displacement
- use of a sea anchor

- Williamson turn
- WHS/OHS requirements and work practices.

Assessment Conditions

Assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions. Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, safety management system (SMS), workplace procedures, operational manuals and maritime publications and procedures relating to emergency response
- a vessel ≥ 5.0 m in length
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

MARN008 Apply seamanship skills aboard a vessel up to 12 metres

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Application

This unit involves the skills and knowledge required to apply practical seamanship skills and techniques as part of work duties aboard a vessel up to 12 m in length.

This unit applies to people working in the maritime industry in the capacity of:

- coxswain on vessels <12 m in length, with propulsion power that is unlimited for an outboard engine or <500 kW for an inboard engine, operating in inshore or designated waters or
- coxswain on tenders or auxiliary vessels operating within 3 nautical miles (nm) of a parent vessel within the exclusive economic zone (EEZ).

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit. This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a Coxswain Grade 2 NC and Coxswain Grade 1 NC as defined in the National Standard for Commercial Vessels (NSCV) Part D. The AMSA mandated practical assessment (AMPA) is a requirement for AMSA certification. The Australian Maritime Safety Authority (AMSA) mandated practical assessment (AMPA) will cover a range, but not all, of the requirements identified in the Performance Evidence and Knowledge Evidence. The AMPA shall be undertaken in accordance with its instructions.

Assessors of AMPA must hold as a minimum:

- a current certificate of competency issued under Marine Safety (Domestic Commercial Vessel) National Law Act 2012 at the same level as the qualification being assessed with at least 12 months relevant sea service, or
- a relevant seafarer certificate, as master, engineer or deck officer, issued under the Navigation Act 2012.

Pre-requisite Unit

Not Applicable

Competency Field

N – Seamanship

Unit Sector

Not Applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Use and maintain ropes	<p>1.1 Rope types and common areas of use are correctly identified</p> <p>1.2 Ropes are checked for wear and repairs are undertaken according to manufacturer guidelines</p> <p>1.3 Ropes are coiled and stowed correctly</p> <p>1.4 Knots and hitches are tied neatly and securely, and are used according to their correct application</p> <p>1.5 Ropes are spliced neatly and securely according to their correct application</p> <p>1.6 Rope ends are whipped where appropriate to maintain good condition</p>
2 Secure vessel at anchor	<p>2.1 Prior to letting go, anchor and equipment are prepared</p> <p>2.2 Quantity of anchor cable run out or recovered is appropriate to the depth of water, weather and sea conditions, and tidal range in area of operation</p> <p>2.3 During operation, control of cable is maintained within safe operating limits</p> <p>2.4 Degree to which anchor and equipment are secured on completion of anchoring operations is appropriate to forecast conditions</p> <p>2.5 During all operations, anchoring area is kept free of loose ropes, wires and debris</p>
3 Secure vessel at a berth	<p>3.1 At all times, mooring lines and associated equipment are handled safely</p>

- 3.2 Throughout operations, mooring area is kept free of loose ropes, wires and debris
 - 3.3 Tension on ropes is maintained at an appropriate level for the stage and nature of the operation
 - 4 **Check condition and seaworthiness of vessel**
 - 4.1 Coverage and frequency of checks and inspections on vessel seaworthiness are undertaken according to workplace procedures and organisational safety management system
 - 4.2 Watertight integrity is checked and appropriate action is taken to prepare for prevailing and forecast weather and sea conditions
 - 4.3 Degree to which vessel is secured is appropriate to prevailing and forecast conditions
 - 4.4 Irregularities are identified and appropriate action is taken to rectify the situation
 - 4.5 Irregularities beyond ability to rectify are reported in time to enable remedial action to be taken
 - 4.6 Reports of condition are completed according to workplace procedures
 - 5 **Conduct refuelling operations**
 - 5.1 All personal protective equipment (PPE) is accessed and used
 - 5.2 Safety boundary for the refuelling process is established
 - 5.3 Spill prevention systems are correctly deployed
 - 5.4 Refuelling operations are performed safely and according to organisational safety management system

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to MARN002 Apply seamanship skills aboard a vessel up to 12 metres.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARN008 Apply seamanship skills aboard a vessel up to 12 metres

Modification History

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices
- checking seaworthiness and general condition of a vessel up to 12 metres
- coiling and stowing ropes
- handling ropes
- identifying deterioration and causes in hull and fittings
- performing an eye splice
- performing common whipping on ropes
- performing preparations for and letting go and weighing anchor
- preparing and throwing a heaving line
- securing a vessel alongside using vessel mooring lines, including:
 - bow and stern lines
 - fore and aft springs
- securing anchor and equipment on completion of anchoring operations
- tying reef knot, bowline, clove hitch, round turn and two half hitches, rolling hitch and sheet bend - single and double.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- anchors, types and characteristics
- basic structural parts of a small vessel
- considerations to make when selecting an anchorage
- correct application of common knots and hitches
- coverage and frequency of checks of vessels seaworthiness
- factors affecting the safety and integrity of vessel; its equipment and materials on board
- how to make a vessel watertight

- identifying and rectifying irregularities in the condition and seaworthiness of the vessel
- large objects likely to move in a sea way
- loading, discharging and movement of weights
- maintenance of synthetic and natural fibre ropes
- materials on deck and below
- mooring line arrangements for securing at a berth
- openings including hatch covers and all other openings that water can enter
- principles of maintaining watertight integrity
- process for checking seaworthiness and general condition of a vessel up to 12 metres including:
 - accommodation and storage spaces
 - anchors
 - galley, stores and equipment
 - large objects likely to move in a sea way
 - materials on deck and below
 - opening
- procedure for anchoring
- refuelling a vessel according to safety regulations and organisational safety management system requirements
- rope types, characteristics and applications, dynamic and non-dynamic, including:
 - braided
 - natural fibre
 - plaited
 - polyester
 - wire core rope
 - wire rope
- safety precautions and pollution control measures during refuelling
- securing a vessel for sea
- types of anchors used on small vessels up to 12 metres
- WHS/OHS requirements and work practices.

Assessment Conditions

Assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment. Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions. Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating

to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage. With the exception of whipping, splicing and knot tying, the Australian Maritime Safety Authority (AMSA) mandated practical assessment (AMPA) must be undertaken on a vessel ≥ 5.0 metres in length.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, safety management system, workplace procedures and operational manuals
- a vessel ≥ 5.0 m in length
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

MEM05004 Perform routine oxy fuel gas welding

Modification History

Release 1. Supersedes and is equivalent to MEM05004C Perform routine oxy acetylene welding

Application

This unit of competency defines the skills and knowledge required to prepare materials and perform routine oxy fuel gas welding of mild/low carbon steel and cast iron where the welding is not required to meet an Australian Standard or equivalent.

Where welding is required to meet AS 1554 General Purpose or equivalent codes, work health and safety (WHS) regulations and/or licensing requirements MEM05055 Weld using oxy fuel gas welding process should also be selected.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measuring equipment is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use of tools is required unit MEM18001 Use hand tools and unit MEM18002 Use power tools/hand held operations should also be selected as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Fabrication

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Determine job requirements	1.1 Follow standard operating procedures (SOPs) 1.2 Comply with work health and safety (WHS) requirements at all times 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs 1.4 Identify job requirements from specifications, sketches, job sheets or work instructions
2	Prepare equipment for welding	2.1 Check condition of gas handling equipment 2.2 Assemble and set up fuel gas welding equipment according to SOPs 2.3 Determine and set gas pressures 2.4 Select consumables
3	Prepare materials for welding	3.1 Identify location of welds in accordance with job specifications 3.2 Clean and prepare materials ready for welding
4	Perform routine welding using oxy fuel gas	4.1 Weld materials to job requirements 4.2 Clean welds according to SOPs

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Fuel gases include one (1) or more of the following:

- acetylene
- liquefied petroleum gas (LPG)
- hydrogen

Materials include one (1) or more of the following:

- mild/low carbon steel
- cast iron

Consumables include one (1) or more of the following:

- filler rods
- fluxes

Welds include the following:

- butt
- fillet

Preparation includes one (1) or more of the following:

- preheating
- setting up jigs
- fixtures
- clamps
- joint preparation

Fuel gas welding equipment includes the following:

- gas cylinders
- hoses
- blowpipes
- tips and nozzles
- regulators
- flashback arrestors

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM05004C Perform routine oxy acetylene welding

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM05004 Perform routine oxy fuel gas welding

Modification History

Release 1. Supersedes and is equivalent to MEM05004C Perform routine oxy acetylene welding

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- cleaning and preparing materials for welding
- setting up:
 - gas cylinders
 - hoses
 - blowpipes
 - tips and nozzles
 - regulators
 - flashback arrestors
- selecting settings and consumables
- butt and fillet weld materials to comply with specifications
- cleaning welds according to SOPs.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe welding practices and procedures and use of personal protective equipment (PPE)
- preparatory requirements
- equipment and equipment settings
- purpose of, and setting up requirements, of:
 - gas cylinders
 - hoses
 - blowpipes
 - tips and nozzles
 - regulators
 - flashback arrestors

- fuel gas properties and applications
- weld characteristics.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing routine oxy fuel gas welding at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM05007 Perform manual heating and thermal cutting

Modification History

Release 1. Supersedes and is equivalent to MEM05007C Perform manual heating and thermal cutting

Application

This unit of competency defines the skills and knowledge required to perform manual heating, thermal cutting and gouging including the assembly and disassembly and operation of the equipment on a range of materials.

Where the selection and use of tools is required unit MEM18001 Use hand tools and unit MEM18002 Use power tools/hand held operations, should also be selected as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Fabrication

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|--|--|
| 1 Determine job requirements | 1.1 Follow standard operating procedures (SOPs) |
| | 1.2 Comply with work health and safety (WHS) requirements at all times |
| | 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs |
| | 1.4 Identify job requirements from specifications, drawings, job sheets or work instructions |
| 2 Select and set up heating and thermal cutting equipment | 2.1 Select cutting process and/or method appropriate for material |
| | 2.2 Select and assemble appropriate accessories and equipment |
| | 2.3 Ensure equipment is in safe working condition |
| | 2.4 Set up equipment following SOPs |
| 3 Perform heating and thermal cutting | 3.1 Follow equipment start-up procedures and make adjustments as required |
| | 3.2 Make appropriate cutting allowances |
| | 3.3 Minimise wastage of materials when performing manual heating and thermal cutting |
| | 3.4 Identify defects and take corrective action in accordance with SOPs |
| | 3.5 Heat and cut material to specification |
| | 3.6 Inspect shape/size/length of final product for compliance with specifications |

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Cutting includes one (1) or more of the following:

- hand held
- self-propelled straight line cutters

Methods include one (1) or more of the following:

- manual
- automatic

Fuel gases include one (1) or more of the following:

- acetylene
- liquefied petroleum gas (LPG)
- hydrogen

Material includes various thicknesses and types of one (1) or more of the following:

- ferrous
- non-ferrous
- non-metallic

Equipment includes the following:

- gas cylinders
- hoses
- blowpipes
- tips and nozzles
- regulators
- flashback arrestors

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM05007C Perform manual heating and thermal cutting

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM05007 Perform manual heating and thermal cutting

Modification History

Release 1. Supersedes and is equivalent to MEM05007C Perform manual heating and thermal cutting

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- selecting equipment appropriate to the material
- checking condition of equipment
- setting up:
 - gas cylinders
 - hoses
 - blowpipes
 - tips and nozzles
 - regulators
 - flashback arrestors
- operating equipment to cut materials making appropriate cutting allowances to ensure material is used in most economical way
- identifying defects and taking appropriate remedial action
- heating material to specification
- checking final product for compliance with specifications.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- cutting processes appropriate to various materials
- heating and cutting specifications
- purpose of, and setting up requirements, of:
 - gas cylinders
 - hoses
 - blowpipes

- tips and nozzles
- regulators
- flashback arrestors
- tools, equipment, techniques and procedures for heating and cutting
- potential equipment faults
- assembling procedures for equipment and accessories
- equipment pre-checks and operation
- procedures for adjusting heating and cutting equipment
- cutting allowances and reasons for applying them
- procedures and reasons for minimising waste material
- cutting defects and their causes and tools, equipment and techniques required to correct defects.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing manual heating and thermal cutting at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM05012 Perform routine manual metal arc welding

Modification History

Release 1. Supersedes and is equivalent to MEM05012C Perform routine manual metal arc welding

Application

This unit of competency defines the skills and knowledge required to carry out routine manual metal arc welding (MMAW) of low carbon mild steel where the welding is not required to meet an Australian Standard or equivalent.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measurement is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use of tools is required unit MEM18001 Use hand tools and unit MEM18002 Use power tools/hand held operations, should also be selected as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Fabrication

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|---|--|-----|---|
| 1 | Determine job requirements | 1.1 | Follow standard operating procedures (SOPs) |
| | | 1.2 | Comply with work health and safety (WHS) requirements at all times |
| | | 1.3 | Use appropriate personal protective equipment (PPE) in accordance with SOPs |
| | | 1.4 | Identify job requirements from specifications, job sheets or work instructions |
| | | | |
| 2 | Prepare materials and equipment for welding | 2.1 | Identify location of welds in accordance with procedures and job specifications |
| | | 2.2 | Clean and prepare materials ready for welding |
| | | 2.3 | Set up welding equipment according to SOPs |
| | | 2.4 | Select correct electrodes and adjust settings to suit application |
| | | | |
| 3 | Perform routine welding using MMAW | 3.1 | Weld materials to job requirements |
| | | 3.2 | Clean welds according to SOPs |

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Welds include the following:

- butt
- fillet

Preparing includes one (1) or more of the following:

- cleaning
- setting up jigs
- fixtures
- clamps
- joint preparation

Welding equipment includes the following:

- welding leads
- welding machines
- electrode holder

Cleaning includes one (1) or more of the following:

- slag and spatter
- cleaning
- using files
- grinders

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM05012C Perform routine manual metal arc welding

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM05012 Perform routine manual metal arc welding

Modification History

Release 1. Supersedes and is equivalent to MEM05012C Perform routine manual metal arc welding

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications from drawings, sketches and verbal or written job instructions for performing routine manual metal arc welding (MMAW)
- cleaning and preparing materials to specifications
- setting up welding equipment, selecting appropriate electrodes and adjusting settings to suit application
- welding materials to comply with specifications
- cleaning welds for slag and splatter in accordance with SOPs.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe welding practices and procedures and use of personal protective equipment (PPE)
- material and equipment preparation
- equipment set-up and settings
- appropriate welding consumables consistent with standard operating procedures
- MMAW processes and properties.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing routine manual metal arc welding at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires

- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM05015 Weld using manual metal arc welding process

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM05015 Weld using manual metal arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05015D Weld using manual metal arc welding process.

Application

This unit of competency has been developed for Engineering Tradesperson – Fabrication apprenticeship training and the recognition of trade-level skills in manual metal arc welding (MMAW) on heavy or light metal fabrications. It may also apply to other trade occupations requiring higher level MMAW welding skills.

Weld quality would typically conform to AS 1554 General Purpose, and American Bureau of Shipping (ABS) or equivalent.

Where manual thermal processes associated with preparation, pre-heat and/or post-heat is required unit MEM05007 Perform manual heating and thermal cutting and unit MEM05008 Perform advanced manual thermal cutting, gouging and shaping, should also be selected as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM05012	Perform routine manual metal arc welding
MEM05051	Select welding processes
MEM05052	Apply safe welding practices
MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling

MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations

Competency Field

Fabrication

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Prepare materials for MMAW	2.1	Prepare materials to achieve the required weld requirements
		2.2	Assemble/align materials to specification, where required
3	Select, assemble and set up	3.1	Identify and select welding equipment and electrodes, accessories and consumables appropriate to the material

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

	welding equipment and consumables	3.2	Assemble and set up AC or DC welding equipment
4	Minimise and rectify distortion	4.1	Apply appropriate distortion prevention measures
		4.2	Rectify any distortion using appropriate techniques
5	Weld to job specification using MMAW	5.1	Ensure weld deposit is to specifications
		5.2	Clean joints to specifications
6	Ensure weld conformance	6.1	Inspect weld joints visually for conformance to specifications
		6.2	Rectify any weld defects with minimum loss of sound metal using correct techniques and tools
		6.3	Complete weld records, where required

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Welds include the

- fillet and butt welds carried out in all positions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

following:

Materials include one (1) or more of the following:

- ferrous, including carbon or stainless steel
- non-ferrous metals
- alloys suitable for MMAW welding

Preparation of materials includes one (1) or more of the following:

- pre-heating
- setting up of jigs
- fixtures and clamps
- joint preparation (e.g. bevelling)

Distortion prevention measures include one (1) or more of the following:

- preheating
- setting up of jigs
- fixtures and clamps

Rectify includes the use of one or more of the following:

- oxy acetylene
- air arc equipment
- grinding devices

Defects include one (1) or more of the following:

- porosity
- slag inclusions
- discontinuities
- lack of penetration
- undercut

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM05015 Weld using manual metal arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05015D Weld using manual metal arc welding process.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM05015 Weld using manual metal arc welding process

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM05015 Weld using manual metal arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05015D Weld using manual metal arc welding process.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications from drawings, sketches and verbal or written job instructions for welding using manual metal arc welding process (MMAW) to the specified standard
- selecting appropriate weld and joint preparation methods
- consistently weld a range of materials to the specified standard or equivalent using AC or DC welding machines and electrodes while preventing distortion
- rectifying any defects
- completing weld records related to MMAW onto standard workplace forms.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe welding practices and procedures and use of personal protective equipment (PPE)
- material preparation for MMAW
- weld joint preparations
- welding electrode classification
- causes of distortion for materials when welded
- causes of weld defects and methods of rectification
- relationships between amperage, electrode and material
- standards for MMAW, including AS 1554 General Purpose any other equivalent standards.

Assessment Conditions

- Assessors must:

- have vocational competency in welding using MMAW process at least to the level being assessed with relevant industry knowledge and experience
- satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM05017 Weld using gas metal arc welding process

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM05017 Weld using gas metal arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05017D Weld using gas metal arc welding process.

Application

This unit of competency has been developed for Engineering Tradesperson - Fabrication apprenticeship training and the recognition of trade-level skills in gas metal arc welding (GMAW) on heavy or light metal fabrications. It may also apply to other trade occupations requiring higher level GMAW welding skills.

Weld quality would typically conform to Australian Standard 1554 General Purpose, and American Bureau of Shipping (ABS) or equivalent.

Where manual thermal processes associated with preparation, pre-heat and/or post-heat is required unit MEM05007 Perform manual heating and thermal cutting and unit MEM05008 Perform advanced manual thermal cutting, gouging and shaping, should also be selected as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM05050	Perform routine gas metal arc welding
MEM05051	Select welding processes
MEM05052	Apply safe welding practices
MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling

MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations

Competency Field

Fabrication

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Determine job requirements	<p>1.1 Follow standard operating procedures (SOPs)</p> <p>1.2 Comply with work health and safety (WHS) requirements at all times</p> <p>1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs</p> <p>1.4 Identify job requirements from specifications, drawings, job sheets or work instructions</p>
2 Prepare materials for GMAW	<p>2.1 Prepare materials to achieve the required weld requirements</p> <p>2.2 Assemble/align materials to specification where required</p>
3 Select, assemble and set up	<p>3.1 Identify and select welding equipment and electrodes, accessories and consumables appropriate to the material</p>

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.
welding equipment and consumables	3.2	Assemble and set up AC or DC welding equipment
4 Minimise and rectify distortion	4.1	Apply appropriate distortion prevention measures
	4.2	Rectify any distortion using appropriate techniques
5 Weld to job specification using GMAW	5.1	Ensure weld deposit is to specifications
	5.2	Clean joints to specifications
6 Ensure weld conformance	6.1	Visually inspect weld joints for conformance to specifications
	6.2	Rectify any weld defects with minimum loss of sound metal using correct techniques and tools
	6.3	Complete weld records, where required

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Welds include the

- fillet and butt welds carried out in all positions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

following:

Materials include one (1) or more of the following:

- ferrous, including carbon or stainless steel
- non-ferrous metals
- alloys suitable for GMAW

Preparation includes one (1) or more of the following:

- pre-heating
- setting up of jigs
- fixtures and clamps
- joint preparation (e.g. bevelling)

Distortion prevention measures include one (1) or more of the following:

- pre-heating
- setting up of jigs
- fixtures and clamps

Rectify includes the use of one (1) or more of the following:

- oxy acetylene
- air arc equipment
- grinding devices

Defects include one (1) or more of the following:

- porosity
- slag inclusions
- discontinuities
- lack of penetration
- undercut

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM05017 Weld using gas metal arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05017D Weld using gas metal arc welding process.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM05017 Weld using gas metal arc welding process

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM05017 Weld using gas metal arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05017D Weld using gas metal arc welding process.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications from drawings, sketches and verbal or written job instructions for welding using gas metal arc welding process (GMAW) to the specified standard
- selecting appropriate weld and joint preparation methods
- consistently weld materials to the specified standard or equivalent using AC or DC welding machines and electrodes while preventing distortion
- rectifying any defects
- completing weld records related to GMAW onto standard workplace forms.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe welding practices and procedures and use of personal protective equipment (PPE)
- types of gases and their uses
- relationships between amperage/wire feed, voltage, gas flow, electrode and material
- application of weld metal transfer (short arc and spray)
- correct welding machine, leads, hand pieces and electrodes
- material preparation
- weld joint preparations
- filler wire classification
- causes of distortion for materials when welded
- causes of weld defects and methods of rectification
- standards for GMA welding, including Australian Standard 1554 General Purpose and any other equivalent standards.

Assessment Conditions

- Assessors must:
 - have vocational competency in welding using GMAW process at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM05019 Weld using gas tungsten arc welding process

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM05019 Weld using gas tungsten arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05019D Weld using gas tungsten arc welding process.

Application

This unit of competency has been developed for Engineering Tradesperson - Fabrication apprenticeship training and the recognition of trade-level skills in gas tungsten arc welding (GTAW) on heavy or light metal fabrications. It may also apply to other trade occupations requiring higher level GTAW welding skills.

Weld quality would typically conform to AS 1554 General Purpose and American Bureau of Shipping (ABS), or equivalent.

Where manual thermal processes associated with preparation, pre-heat and/or post-heat is required unit MEM05007 Perform manual heating and thermal cutting and unit MEM05008 Perform advanced manual thermal cutting, gouging and shaping, should also be selected as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM05049	Perform routine gas tungsten arc welding
MEM05051	Select welding processes
MEM05052	Apply safe welding practices
MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling

MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations

Competency Field

Fabrication

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Prepare materials for GTAW	2.1	Prepare materials to achieve the required weld requirements
		2.2	Assemble/align materials to specification, where required
3	Select, assemble and set up	3.1	Identify and select welding equipment and electrodes, accessories and consumables appropriate to the material

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.
welding equipment and consumables	3.2	Assemble and set up AC or DC welding equipment
4 Minimise and rectify distortion	4.1	Apply appropriate distortion prevention measures
	4.2	Rectify any distortion using appropriate techniques
5 Weld to job specification using GTAW	5.1	Ensure weld deposit is to specifications
	5.2	Clean joints to specifications
6 Ensure weld conformance	6.1	Visually inspect weld joints for conformance to specifications
	6.2	Rectify any weld defects with minimum loss of sound metal using correct techniques and tools
	6.3	Complete weld records, where required

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Welds include the

- fillet and butt welds carried out in all positions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

following:

Materials include one (1) or more of the following:

- ferrous, including carbon steel or stainless steel
- non-ferrous metals
- aluminium and other materials suitable for GTAW welding

Preparation includes one (1) or more of the following:

- pre-heating
- setting up of jigs, fixtures and clamps
- joint preparation (e.g. bevelling)

Distortion prevention measures include one (1) or more of the following:

- pre-heating
- setting up of jigs
- fixtures and clamps

Rectify includes the use of one (1) or more of the following:

- oxy acetylene
- air arc equipment
- grinding devices

Defects include one (1) or more of the following:

- porosity
- slag inclusions
- discontinuities
- lack of penetration
- undercut

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM05019 Weld using gas tungsten arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05019D Weld using gas tungsten arc welding process.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM05019 Weld using gas tungsten arc welding process

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM05019 Weld using gas tungsten arc welding process (Release 1).

Release 1. Supersedes and is equivalent to MEM05019D Weld using gas tungsten arc welding process.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures and safe work practices
- identifying and interpreting specifications from drawings, sketches and verbal or written job instructions for welding using gas tungsten arc welding process (GTAW) to the specified standard
- selecting appropriate weld and joint preparation methods
- consistently weld materials to the specified standard using AC or DC welding machines and electrodes while preventing distortion
- rectifying any defects
- completing weld records related to GTAW onto standard workplace forms.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe welding practices and procedures and use of personal protective equipment (PPE)
- correct welding machine, leads, hand pieces and electrodes
- material preparation
- joint preparations
- electrode classification
- causes of distortion for materials when welded
- causes of defects and methods of rectification
- relationships between amperage, electrode and material
- types of gases and their uses
- types of electrodes, current settings and high frequency voltage
- filler materials and consumables
- standards for GTAW welding, AS 1554 General Purpose and other equivalent standards.

Assessment Conditions

- Assessors must:
 - have vocational competency in welding using GTAW process at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM05049 Perform routine gas tungsten arc welding

Modification History

Release 1. Supersedes and is equivalent to MEM05049B Perform routine gas tungsten arc welding

Application

This unit of competency defines the skills and knowledge required to prepare the materials and carry out routine gas tungsten arc welding (GTAW) and applies in a maintenance or manufacturing environment where the weld quality is not required to meet an Australian Standard.

Where welding is required to meet AS 1554 General Purpose or equivalent codes, work health and safety (WHS) regulations and/or licensing requirements Unit MEM05019 Weld using gas tungsten arc welding process should also be selected.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measurement is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use of tools is required unit MEM18001 Use hand tools and unit MEM18002 Use power tools/hand held operations, should also be selected as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Fabrication

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, sketches, job sheets or work instructions
2	Prepare materials and equipment for welding	2.1	Identify location of welds in accordance with procedures and job specifications
		2.2	Clean and prepare materials ready for welding
		2.3	Set up welding equipment to meet work requirement
		2.4	Select settings and consumables to suit application
3	Perform routine welding using GTAW	3.1	Weld materials to job requirements
		3.2	Clean welds according to SOPs

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Welds include the following:

- butt
- fillet

Materials include one (1) or more of the following:

- low carbon/mild steels
- aluminium

Prepared includes one (1) or more of the following:

- pre-heating
- setting up jigs
- fixtures
- clamps
- joint preparation

Welding equipment includes the following:

- hoses
- welding leads and gas shrouds
- electrodes
- gas regulator
- liners
- contact tips

Consumables include the following:

- tungsten electrodes, filler wire and shielding gas

Clean includes the following:

- slag and spatter

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM05049B Perform routine gas tungsten arc welding

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM05049 Perform routine gas tungsten arc welding

Modification History

Release 1. Supersedes and is equivalent to MEM05049B Perform routine gas tungsten arc welding

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications from sketches and verbal or written job instructions for performing routine gas tungsten arc welding (GTAW)
- cleaning and preparing materials for welding to specifications
- setting up welding equipment, including selecting settings and consumables to suit application
- consistently welding materials to specifications
- cleaning welds in accordance with SOPs.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe welding practices and procedures and use of personal protective equipment (PPE)
- preparatory requirements
- equipment and equipment settings
- shielding gas properties and applications
- weld characteristics.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing routine GTAW process at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires

- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM05050 Perform routine gas metal arc welding

Modification History

Release 1. Supersedes and is equivalent to MEM05050B Perform routine gas metal arc welding

Application

This unit of competency defines the skills and knowledge required to prepare materials and carry out routine gas metal arc welding (GMAW) and applies in a maintenance or manufacturing environment where the weld quality is not required to meet an Australian Standard or equivalent.

Where welding is required to meet AS 1554 General Purpose or equivalent codes, work health and safety (WHS) regulations and/or licensing requirements unit MEM05017 Weld using gas metal arc welding process should also be selected.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measurement is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use of tools is required unit MEM18001 Use hand tools and unit MEM18002 Use power tools/hand held operations, should also be selected as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Fabrication

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, sketches, job sheets or work instructions
2	Prepare materials and equipment for welding	2.1	Identify location of welds in accordance with procedures and job specifications
		2.2	Clean and prepare materials ready for welding
		2.3	Set up welding equipment to meet work requirement
		2.4	Select settings and consumables to suit application
3	Perform routine welding using GMAW	3.1	Weld materials to job requirements
		3.2	Clean welds according to SOPs

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Welds include the following:

- butt
- fillet

Materials include one (1) or more of the following:

- low carbon
- mild steels

Prepared includes one (1) or more of the following:

- pre-heating
- setting up jigs
- fixtures
- clamps
- joint preparation

Welding equipment includes the following:

- hoses
- welding leads and gas shrouds
- gas regulators
- liners
- contact tips

Consumables include the following:

- filler wire and shielding gas

Clean includes the following:

- slag and spatter

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM05050B Perform routine gas metal arc welding

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM05050 Perform routine gas metal arc welding

Modification History

Release 1. Supersedes and is equivalent to MEM05050B Perform routine gas metal arc welding

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures and safe work practices
- identifying and interpreting specifications from sketches and verbal or written job instructions for performing routine gas metal arc welding (GMAW)
- cleaning and preparing materials for welding to specifications
- setting up welding equipment, including selecting settings and consumables to suit application
- consistently welding materials to specifications
- cleaning welds in accordance with SOPs.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe welding practices and procedures and use of personal protective equipment (PPE)
- different current and voltage settings, gas flow rates wire diameters, wire feed speed and other variables to suit typical situations
- material and equipment preparation
- properties and characteristics of materials and consumables
- equipment and equipment settings
- shielding gas properties and applications
- post-welding treatments
- weld characteristics.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing routine GMAW process at least to the level being assessed with relevant industry knowledge and experience

- satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM07032 Use workshop machines for basic operations

Modification History

Release 1. Supersedes and is equivalent to MEM07032B Use workshop machines for basic operations

Application

This unit of competency defines the skills and knowledge required to use workshop machines for basic operations in maintenance or jobbing environment.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measurement is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use of power tools/hand held operations is required unit MEM18002 Use power tools/hand held operations should also be selected.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information
MEM18001	Use hand tools

Competency Field

Machine and process operations

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|---|-----------------------------------|-----|---|
| 1 | Determine job requirements | 1.1 | Follow standard operating procedures (SOPs) |
| | | 1.2 | Comply with work health and safety (WHS) requirements at all times |
| | | 1.3 | Use appropriate personal protective equipment (PPE) in accordance with SOPs |
| | | 1.4 | Identify job requirements from specifications, sketches, job sheets or work instructions |
| 2 | Set up machine | 2.1 | Select appropriate machine and tools to meet work requirements |
| | | 2.2 | Sharpen cutting tools, as required |
| | | 2.3 | Install tools according to procedures |
| | | 2.4 | Set guards and adjust, as required |
| 3 | Operate machine | 3.1 | Mount material to be machined and secure using clamping device/ appropriate to the material and work requirements |
| | | 3.2 | Operate machine to suit work and material requirements |
| | | 3.3 | Check machined component against work requirements and predetermined finish |
| | | 3.4 | Make adjustments, as required |

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, accessibility of the item, and local industry and regional contexts) are included.

Machines include one (1) or more of the following:

- lathe
- radial arm drill
- mill

Cutting tools include one (1) or more of the following:

- lathe tools
- milling cutters
- drills

Materials include one (1) or more of the following:

- ferrous
- non-ferrous

Clamping devices include one (1) or more of the following:

- chucks
- vices
- clamps
- bars and packing

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM07032B Use workshop machines for basic operations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM07032 Use workshop machines for basic operations

Modification History

Release 1. Supersedes and is equivalent to MEM07032B Use workshop machines for basic operations

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications and work instructions for machine operations
- setting up machines and selecting, sharpening and mounting tools required for the required job
- mounting the material to be processed and safely operating the machine
- checking machined components to ensure it meets specifications and making adjustments, as required.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- cutting tool sharpening methods and techniques
- units of measurement, tool geometry and numerical operations required for basic machining operations
- safe operation of tool sharpening equipment and consequences of incorrect sharpening
- machine set-up and consequences of incorrect speeds and feeds
- procedures for operating workshop machines
- reasons for poor surface finish.

Assessment Conditions

- Assessors must:
 - have vocational competency in using workshop machines for basic operations at least to the level being assessed with relevant industry knowledge and experience

- satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM11011 Undertake manual handling

Modification History

Release 1. Supersedes and is equivalent to MEM11011B Undertake manual handling

Application

This unit of competency defines the skills and knowledge required to lift and move materials manually and/or using basic manual handling equipment in a wide range of environments.

Maximum manual lifting weight is limited to Safe Work Australia recommendations.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Materials handling

Elements and Performance Criteria

Elements describe the essential outcomes. Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	<p>1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs</p> <p>1.4 Identify job requirements from specifications, job sheets or work instructions</p>
2 Lift materials manually	<p>2.1 Determine material weight correctly utilising most appropriate technique, and assess risks associated with lifting</p> <p>2.2 Undertake lifting techniques to Safe Work Australia recommended procedures and having regard to types of movement, methods, storage, height and position</p>
3 Move/shift materials manually	<p>3.1 Select appropriate equipment, as required</p> <p>3.2 Place material safely and securely on moving equipment</p> <p>3.3 Relocate material ensuring safety of personnel and security of material</p> <p>3.4 Unload material and place in a safe and secure manner</p>

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Material weight includes

- determined using scales

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

one (1) or more of the following:

- interpreting signage

Lifting techniques include one (1) or more of the following:

- individual
- team lifting
- use of appropriate lifting equipment

Appropriate equipment includes one (1) or more of the following:

- hand trolleys
- wheelbarrows
- motorised/hand pallet trucks (not sit on)
- hand carts
- dedicated production or process lifting equipment
- baskets, spreader bars, cradles or the like attached to lifting equipment

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM11011B Undertake manual handling

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM11011 Undertake manual handling

Modification History

Release 1. Supersedes and is equivalent to MEM11011B Undertake manual handling

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- assessing the risks associated with lifting materials manually and determining the most appropriate technique
- selecting and using the appropriate equipment to move/shift materials ensuring safety of personnel and security of material.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- manual handling techniques, including individual or team lifting
- appropriate equipment associated with move/shift materials
- hazards of incorrect procedures
- Safe Work Australia standards for manual handling.

Assessment Conditions

- Assessors must:
 - have vocational competency in undertaking manual handling at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires

- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM12024 Perform computations

Modification History

Release 1. Supersedes and is equivalent to MEM12024A Perform computations

Application

This unit of competency defines the skills and knowledge required to estimate approximate answers to arithmetical problems, carry out calculations involving percentages and proportions, and determine simple ratios and averages.

It also covers producing and interpreting simple charts and graphs in manufacturing, engineering or related environments.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 3

Pre-requisite Unit

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

Competency Field

Measurement

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|---|-----------------------------------|-----|---|
| 1 | Determine job requirements | 1.1 | Follow standard operating procedures (SOPs) |
| | | 1.2 | Comply with work health and safety (WHS) |

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. requirements at all times
	1.3 Identify job requirements from specifications, sketches, job sheets or work instructions
	1.4 Establish required calculation outcomes from job instructions
	1.5 Determine required calculation method to suit the application, including selection of relevant arithmetic operations and/or formulae
	1.6 Estimate expected results, including rounding off, as appropriate
2 Perform calculations	2.1 Apply calculation method
	2.2 Obtain answer and check against estimation to ensure it is correct
3 Produce charts and graphs from given information	3.1 Transpose data to produce charts or graphs
	3.2 Ensure charts or graphs reflect data on which they are based to meet specifications

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Calculations are performed using one (1) or more of the following:

- pen and paper
- a calculator
- tables
- tablets
- computers

Relevant sources include one (1) or more of the following:

- charts
- graphs
- diagrams
- measurement data
- reference manuals
- specifications

Applications include computations associated with one (1) or more of the following:

- pressure
- volume
- temperature
- heat
- speed
- power
- elasticity
- density
- mass
- force

Arithmetic operations include the following:

- application of subtraction, addition, multiplication and division
- manipulation of decimals, fractions and mixed numbers and whole numbers
- using formulas
- determining percentages
- calculation of proportions and ratios

Charts and graphs include one (1) or more of the following:

- simple histograms
- control charts
- pie charts

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM12024A Perform computations

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM12024 Perform computations

Modification History

Release 1. Supersedes and is equivalent to MEM12024A Perform computations

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- obtaining and interpreting data from job instructions and relevant sources to establish required outcomes
- determining the appropriate calculation method to suit the application
- performing calculations and confirming answer/s
- producing and interpreting simple charts and graphs from given data.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures
- formulae applicable to the determination of perimeter, area and volume of simple geometric shapes and the reasons for using dimensions with the same units
- techniques and procedures for rounding off figures when estimating approximate answers
- features and use of mixed numbers, decimals, fractions and whole numbers
- procedures for carrying out calculations involving fractions and using each of the four basic rules of addition, subtraction, multiplication and division
- concept of percentage and procedures to be followed in converting a decimal and fraction to a percentage
- concepts and calculations of ratio and proportion
- scales applicable to the axes of the graphs or charts
- types of charts and/or graphs used in the individual's field of work
- upper and lower limits of acceptability applicable to data entered on a graph or chart
- trends indicated by the slope or gradient of a graph
- action to be taken when given trends occur or set limits are approached on graphs or charts
- procedures for drawing 'lines of best fit'
- trends indicated by the graphs or charts drawn.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing computations at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM13015 Work safely and effectively in manufacturing and engineering

Modification History

Release 1. New unit. Supersedes and not equivalent to MEM13014A Apply principles of occupational health and safety in the work environment, MEM14004A Plan to undertake a routine task, MEM15002A Apply quality systems, MEM15024A Apply quality procedures, MEM16007A Work with others in a manufacturing, engineering or related environment.

Application

This unit of competency defines the skills and knowledge required to work effectively in manufacturing and engineering work situations, including planning routine work and participating in and following work health and safety (WHS) procedures. The unit applies to working either individually or in a team situation and includes contributing to work-related group activities in a manufacturing or engineering workplace.

This unit covers WHS skills associated with carrying out routine operational activities safely and in compliance with legislative and regulatory requirements.

The unit covers the skills associated with participation in quality systems, communication and cooperation with others. The unit applies to workplaces with informal or formal quality management and improvement systems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

Nil.

Competency Field

Work health and safety

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|---|--|-----|--|
| 1 | Determine job requirements | 1.1 | Identify goals, objectives and task requirements and clarify with appropriate persons, where required |
| | | 1.2 | Prioritise task requirements |
| 2 | Review and modify plan | 2.1 | Adjust timelines, priorities and other planning components to respond to contingencies, as necessary |
| | | 2.2 | Re-examine results of work activity against the plan and identify possible improvements to future performance of work tasks |
| 3 | Work effectively with others in the workplace | 3.1 | Identify own role and responsibilities and relationship to other employees, including employees performing related/interdependent activities |
| | | 3.2 | Identify supervisors and other sources of advice and assistance for own work |
| | | 3.3 | Apply effective interpersonal skills to interact with others and contribute to activities and objectives |
| | | 3.4 | Review and modify own work progress to complement the work of others |
| | | 3.5 | Report own work progress to supervisors and where required to fellow employees using standard operating procedures (SOPs) |
| 4 | Follow safe work practices | 4.1 | Check for and identify hazards in the work area before and during work |
| | | 4.2 | Follow procedures for avoiding or controlling hazards already identified in instructions, signage or other workplace communication |
| | | 4.3 | Identify and report risks and hazards not covered by procedures |

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	<p>4.4 Select, use and maintain relevant personal protective equipment (PPE) by procedures, as required</p> <p>4.5 Recognise emergency situations and take appropriate initial emergency action</p> <p>4.6 Follow procedures for responding to emergencies</p> <p>4.7 Report incidents, injuries and other WHS non-conformances according to procedures</p>
5 Work within a quality system	<p>5.1 Follow instructions and procedures and perform duties in accordance with standard operating procedures or quality system requirements</p> <p>5.2 Ensure conformance of product and process to specifications</p> <p>5.3 Report defects and non-conformance to specifications according to procedures</p> <p>5.4 Participate in process improvement procedures, where required</p>
6 Participate in workplace health and safety procedures	<p>6.1 Identify workplace health and safety policies and procedures relevant to own work and work area</p> <p>6.2 Identify relevant WHS managers and representatives for own work area</p> <p>6.3 Provide input to minimise hazards in work area in line with organisation WHS procedures and participative arrangements</p>

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Quality systems include one (1) or more of the following

- quality planning
- quality assurance
- quality control
- quality improvement procedures and processes

Task requirements include one (1) or more of the following:

- timeframe
- quality requirements
- outcome and performance requirements
- job history
- checks
- reporting requirements
- tools and equipment
- materials and parts
- supporting documents

Specifications include one (1) or more of the following:

- task lists
- instructions
- manufacturer manuals
- diagrams and schematics
- sketches
- parts lists
- SOPs

Planning includes one (1) or more of the following:

- preparing a plan to complete the task
- organising task into manageable steps including appropriate order and timing
- monitoring the progress of processes related to own responsibilities
- applying relevant WHS instructions
- collecting, sorting, recording results of work
- seeking advice and guidance on setting priorities and timeframes

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

- seeking feedback from supervisor, trainer or mentor

Unit Mapping Information

Release 1. New unit. Supersedes and not equivalent to MEM13014A Apply principles of occupational health and safety in the work environment, MEM14004A Plan to undertake a routine task, MEM15002A Apply quality systems, MEM15024A Apply quality procedures, MEM16007A Work with others in a manufacturing, engineering or related environment.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM13015 Work safely and effectively in manufacturing and engineering

Modification History

Release 1. New unit. Supersedes and not equivalent to MEM13014A Apply principles of occupational health and safety in the work environment, MEM14004A Plan to undertake a routine task, MEM15002A Apply quality systems, MEM15024A Apply quality procedures, MEM16007A Work with others in a manufacturing, engineering or related environment.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and avoiding or controlling hazards
- reporting hazards, incidents, injuries and other work health and safety (WHS) non-conformances following SOPs
- recognising and responding to emergencies following SOPs
- identifying and obtaining, instructions and information on job requirements, including one or more of the following:
 - verbal or written job instructions
 - specifications
 - SOPs
 - charts
 - lists
- identifying and responding to contingencies, including:
 - equipment breakdowns
 - non-conforming components
 - safety hazards
- recording information into proforma workplace documents, including:
 - production tally forms
 - quality control forms
 - safety incident forms
- performing assigned tasks and checking outcome of own work for conformance to specifications
- identifying own responsibilities within the workplace quality system
- giving and receiving feedback on own and group work
- seeking assistance from supervisors and mentors.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use and application of personal protective equipment
- basic quality system terminology and concept, including:
 - quality assurance
 - quality control
 - quality improvement
- procedures to be followed in performing own work
- objectives, requirements and specifications to which the individual's work is to comply
- costs and consequences of poor quality
- effective interpersonal skills:
 - effective listening
 - basic speaking skills
 - use of workplace terminology and jargon
 - giving and receiving feedback
 - checking and clarifying task-related information
 - verbal, visual and written instructions
 - appropriate modes and methods of communication
- barriers to effective communication
- sources of technical expertise/assistance
- hazards and control measures associated with workplace activities.

Assessment Conditions

- Assessors must:
 - have vocational competency in working safely and effectively in manufacturing and engineering at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills

- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM16006 Organise and communicate information

Modification History

Release 1. Supersedes and is equivalent to MEM16006A Organise and communicate information

Application

This unit of competency covers the skills and knowledge required to access, organise and communicate information related to production, maintenance or associated processes or tasks that apply in manufacturing, engineering or related environments.

For accessing and recording of data requiring system knowledge and judgement, Unit MEM16008 Interact with computing technology should be selected.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM13015 Work safely and effectively in manufacturing and engineering

Competency Field

Communication

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 **Access information**

1.1 Determine information requirements of tasks and access relevant information from a range of sources

1.2 Recognise and use workplace terminology correctly

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
2 Organise and analyse information	2.1 Interpret information and organise in accordance with work requirements
	2.2 Determine relevance and implications for immediate work requirements
3 Communicate organised information using established workplace methods	3.1 Identify purpose of communication and appropriate communication method
	3.2 Communicate information using established workplace methods

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Range of sources include using one (1) or more of the following:

- job instructions
- specifications
- standard operating procedures (SOPs)
- charts
- lists
- documents
- computer data
- drawings
- sketches
- tables

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

- technical manuals and/or charts
- other applicable reference material

Determining relevance of information includes one (1) or more of the following:

- checking relevance of information to own work
- selecting task relevant information from a larger document or from a diagram
- preparing an opinion based on analysis of simple facts
- expressing an opinion on the cause of faults

Workplace terminology refers to one (1) or more of the following:

- equipment
- processes
- workplace areas
- staff
- procedures

Established workplace methods include using one (1) or more of the following:

- proforma reports
- data entry
- verbal
- drawings

Purpose of communication includes one (1) or more of the following:

- simple incident/non-conformance report
- maintenance request
- production records
- material usage records
- work records
- other standard workplace records

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM16006A Organise and communicate information

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM16006 Organise and communicate information

Modification History

Release 1. Supersedes and is equivalent to MEM16006A Organise and communicate information

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- accessing and recording relevant information from a range of sources
- recognising and using workplace appropriate terminology
- reading, interpreting and following information in workplace documentation
- checking and clarifying information
- organising, categorising and sequencing information
- communicating using appropriate methods and procedures for a variety of situations.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures
- types of information relevant to the workplace and required tasks
- terminology used in the workplace relevant to own work
- available sources of information
- information analysis techniques appropriate to tasks and position
- methods of categorising and organising information including correct sequencing of information
- methods of recording and communicating information.

Assessment Conditions

- Assessors must:
 - have vocational competency in organising and communicating information at least to the level being assessed with relevant industry knowledge and experience

- satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM18001 Use hand tools

Modification History

Release 1. Supersedes and is equivalent to MEM18001C Use hand tools

Application

This unit of competency defines the skills and knowledge required to use a range of hand tools for a variety of general engineering applications.

This unit should not be selected if the hand tool is dedicated to a single operation or machine or when a machine-specific/customised tool is used.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measuring equipment is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use of power tools/hand held operations is required unit MEM18002 Use power tools/hand held operations should also be selected.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Maintenance and diagnostics

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Use hand tools for general engineering applications	2.1	Select hand tools appropriate to the task requirements
		2.2	Use hand tools to produce outcomes that meet job specifications
		2.3	Identify unsafe or faulty tools and mark for repair according to designated procedures before, during and after use
		2.4	Undertake routine maintenance of tools using engineering principles, tools, equipment and procedures
		2.5	Store hand tools safely in appropriate location according to procedures and manufacturers' recommendations

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Hand tools include one (1) or more of the following:

- hacksaws
- hammers
- punches
- screwdrivers
- sockets
- wrenches
- scrapers
- chisels
- gouges
- wood planes
- files of all cross-sectional shapes and types
- hand held taps and dies

Applications include one (1) or more of the following:

- adjusting
- dismantling
- assembling and finishing of items or components
- finishing, cutting, scraping of metallic and non-metallic material to size and shape
- tapping/retapping and threading/rethreading new/damaged threads

Drawings include one (1) or more of the following:

- drawings and sketches not covered by AS 1100 Technical drawing or AS 1102 Graphical symbols for electrotechnical documentation, and their equivalents
- work specifications that include graphic representations that do not require interpretation

Job specifications include one (1) or more of the following:

- finish
- tension
- size
- shape

Routine maintenance includes one (1) or more of the following:

- cleaning
- lubricating
- tightening
- simple tool repairs
- adjustments

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM18001C Use hand tools

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM18001 Use hand tools

Modification History

Release 1. Supersedes and is equivalent to MEM18001C Use hand tools

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- selecting and using hand tools to produce the desired outcome to job specifications
- following designated procedures for dealing with unsafe or faulty tools
- undertaking routine maintenance and cleaning of hand tools, including storage.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- features and applications of different hand tools used in a general engineering context, including hacksaws, hammers, punches, screwdrivers, sockets, wrenches, scrapers, chisels, gouges, wood planes and files of all cross-sectional shapes and sizes
- common faults and/or defects in hand tools
- procedures for marking unsafe or faulty tools for repair
- routine maintenance requirements for a range of hand tools, including lubricating, tightening, simple tool repairs and adjustments using engineering principles and relevant equipment
- storage location and procedures for a range of hand tools.

Assessment Conditions

- Assessors must:
 - have vocational competency in using hand tools at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires

- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM18001C Use hand tools

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers using a range of hand tools for a variety of general engineering applications.
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Application of the Unit

Application of the unit	<p>Applications may include hand tools used for adjusting, dismantling, assembling and finishing of items or components, and the finishing, cutting, scraping of metallic and non-metallic material to size and shape. This includes simple tapping and threading and routine maintenance of hand tools.</p> <p>This unit should not be selected if the hand tool is dedicated to a single operation or machine and if only a machine specific/customised tool is used.</p> <p>When using hand held power tools or power tools used for hand held operations, refer to Unit MEM18002B (Use power tools/hand held operations).</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Use hand tools	<p>1.1. Hand tools are selected appropriate to the task requirements.</p> <p>1.2. Hand tools are used to produce desired outcomes to job specifications which may include finish, tension, size or shape.</p> <p>1.3. All safety requirements are adhered to before, during and after use.</p> <p>1.4. Unsafe or faulty tools are identified and marked for repair according to designated procedures before, during and after use.</p> <p>1.5. Routine maintenance of tools, including hand sharpening is undertaken according to standard</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>operational procedures, principles and techniques.</p> <p>1.6. Hand tools are stored safely in appropriate location according to standard operational procedures and manufacturers' recommendations.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- reading and following information on standard operating procedures
- following verbal instructions
- selecting hand tools appropriate to the task
- using hand tools safely
- identifying hand tool defects and marking for repair
- maintaining/sharpening hand tools using appropriate techniques
- storing hand tools in accordance with manufacturers'/standard operating procedures

Required knowledge

Look for evidence that confirms knowledge of:

- applications of different hand tools in a general engineering context
- common faults and/or defects in hand tools
- procedures for marking unsafe or faulty tools for repair
- routine maintenance requirements for a range of hand tools
- storage location and procedures for a range of hand tools
- hazards and control measures associated with using hand tools
- use and application of personal protective equipment
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	<p>A person who demonstrates competency in this unit must be able to use hand tools for a range of general engineering applications.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with using hand tools or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Hand tools	Hacksaws, hammers, punches, screwdrivers, sockets, wrenches, scrapers, chisels, gouges, wood planes and files of all cross-sectional shapes and types
Job specifications	Finish, tension, size or shape etc.
Routine maintenance	Cleaning, lubricating, tightening, simple tool repairs, hand sharpening and adjustments using engineering principles, tools, equipment and procedures

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Maintenance and diagnostics
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MEM18002 Use power tools/hand held operations

Modification History

Release 1. Supersedes and is equivalent to MEM18002B Use power tools/hand held operations

Application

This unit of competency defines the skills and knowledge required to use a range of hand held power tools and fixed power tools for hand held operations used in a variety of general engineering applications.

This unit should not be selected if the power tools used are dedicated to an operation or machine, e.g. nut-runner, air drill and power driver.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measuring equipment is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use hand tools is required unit MEM18001 Use hand tools should also be selected.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM11011 Undertake manual handling

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

Competency Field

Maintenance and diagnostics

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Determine job requirements	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Use power tools for general engineering applications	2.1	Select power tools appropriate to the task requirements
		2.2	Use power tools for a determined sequence of operations to produce desired outcomes to job specifications
		2.3	Identify unsafe or faulty tools and mark for repair before, during and after use according to SOPs
		2.4	Undertake operational maintenance of tools according to principles, techniques and SOPs
		2.5	Store power tools safely in appropriate location according to manufacturers' recommendations and SOPs

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

- Power tools include one (1) or more of the following:**
- electric or pneumatic/hydraulic drills
 - grinders
 - jigsaws
 - nibblers
 - cutting saws
 - sanders
 - planers
 - routers
 - pedestal drills
 - pedestal grinders
- Power tool operations include one (1) or more of the following:**
- clamping
 - alignments
 - adjustments
- Applications include one (1) or more of the following:**
- loosening and fastening items or components
 - shaping, finishing, cutting, grinding of metallic and non-metallic materials and/or tool bits to size and shape
- Drawings include one (1) or more of the following:**
- drawings and sketches not covered by AS 1100 Technical drawing or AS 1102 Graphical symbols for electrotechnical documentation, and their equivalents
 - work specifications that include graphic representations that do not require interpretation
- Clamping includes one (1) or more of the following:**
- multigrips
 - vices
 - jigs and fixtures
 - clamps
- Job specifications include one (1) or more of the following:**
- finish
 - size
 - shape
- Operational maintenance includes one (1) or more of the following:**
- cleaning
 - lubricating
 - tightening

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM18002B Use power tools/hand held operations

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM18002 Use power tools/hand held operations

Modification History

Release 1. Supersedes and is equivalent to MEM18002B Use power tools/hand held operations

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- selecting and using a range of hand held and fixed power tools for a variety of general engineering applications
- following designated procedures for dealing with unsafe or faulty power tools
- undertaking routine maintenance and cleaning of power tools, including storage.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- features and application of different power tools
- clamping/securing methods
- adjustments/alignments to a range of power tools
- common faults and/or defects in power tools
- procedures for marking unsafe or faulty power tools for repair
- routine maintenance requirements and cleaning of a range of power tools
- storage location and procedures of a range of power tools.

Assessment Conditions

- Assessors must:
 - have vocational competency in using power tools/hand held operations at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires

- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

MEM18002B Use power tools/hand held operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers using a range of hand held power tools and fixed power tools for hand held operations for a variety of general engineering applications.
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Application of the Unit

Application of the unit	<p>This unit applies to loosening and fastening items or components and shaping, finishing, cutting, grinding metallic and non-metallic materials and/or tool bits to size and shape.</p> <p>This unit should not be selected if the power tools used are dedicated to an operation or machine, e.g. nut-runner, air drill, power driver, etc.</p> <p>For using hand tools, see Unit MEM18001C (Use hand tools).</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	
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Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Use power tools	<p>1.1. Power tools are selected appropriate to the task requirements.</p> <p>1.2. Power tools are used for a determined sequence of operations - which may include clamping, alignment and adjustment to produce desired outcomes - to job specifications which may include finish, size or shape.</p> <p>1.3. All safety requirements are adhered to before, during and after use.</p> <p>1.4. Unsafe or faulty tools are identified and marked for repair before, during and after use according to designated procedures.</p> <p>1.5. Operational maintenance of tools, including hand sharpening, is undertaken according to standard</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>workplace procedures, principles and techniques.</p> <p>1.6. Power tools are stored safely in appropriate location according to standard workshop procedures and manufacturers' recommendations.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- reading and following information on standard operating procedures
- following verbal instructions
- selecting power tools appropriate to the task
- using power tools safely
- using clamping/securing devices
- identifying power tool defects
- maintaining power tools using appropriate techniques
- sharpening tools/tool bits within the scope of this unit
- storing power tools according to manufacturers'/ standard operating procedures.

Required knowledge

Look for evidence that confirms knowledge of:

- application of different power tools
- clamping/securing methods
- adjustments/alignments to a range of power tools
- common faults and/or defects in power tools
- procedures for marking unsafe or faulty power tools for repair
- routine maintenance requirements of a range of power tools
- tool sharpening techniques for a range of power tools
- storage location and procedures of a range of power tools
- hazards/control measures associated with power tools
- use and application of personal protective equipment
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	<p>A person who demonstrates competency in this unit must be able to use power tools/hand held operations.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with using power tools/hand held operations or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning should not require language, literacy and numeracy skills beyond those required in this unit. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>

EVIDENCE GUIDE

Guidance information for assessment	
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Power tools

Electric or pneumatic/hydraulic drills, grinders, jigsaws, nibblers, cutting saws, sanders, planers, routers, pedestal drills and pedestal grinders

Clamping

Multigrips, vices, jigs and fixtures, clamps etc.

Job specifications

Finish, size or shape etc.

Operational maintenance

Hand sharpening, cleaning, lubricating, tightening
Simple tool repairs and adjustments using engineering principles, tools, equipment and procedures to statutory and regulatory requirements

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Maintenance and diagnostics
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MEMPE001A Use engineering workshop machines

Modification History

New unit - Release 1

Unit Descriptor

This unit of competency involves setting up and machining components using lathes and other machines, such as milling machines, cut off saws, pedestal grinders and fixed position drilling machines. Tooling might need to be re-sharpened but not ground up from a blank.

The settings for the machines will be calculated by the learner from given formulas, surface speeds and feed rates.

Application of the Unit

This unit is designed for use in a pre-employment skills introduction program and is suitable for use in institutional-based vocational programs. Skills development will take place under direct supervision.

This unit is not to be used in a traineeship or apprenticeship training program or associated qualifications. It is only to be used in pre-employment programs and carries no credit towards apprenticeship/trade and other qualification types in manufacturing and engineering.

This unit should be integrated with the work in the project unit, *MEMPE006A Undertake a basic engineering project*, and skills developed when required by the project.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | | |
|---|------------------------------|-----|---|
| 1 | Prepare a job plan | 1.1 | Identify job requirements from drawings or <i>other relevant materials</i> in consultation with an instructor/teacher/trainer |
| | | 1.2 | Identify <i>appropriate machines</i> in accordance with job requirements |
| | | 1.3 | Identify appropriate tooling in accordance with job requirements |
| | | 1.4 | Calculate cutting speeds and feeds |
| | | 1.5 | Prepare a job/project plan showing machines, tooling, cutting speeds and feeds and an appropriate sequence of operations |
| | | 1.6 | Confirm plan with instructor |
| 2 | Prepare for machining | 2.1 | Obtain appropriate tooling and materials |
| | | 2.2 | Set up tools and materials as required |
| | | 2.3 | Set speeds and feeds |
| 3 | Perform machining operations | 3.1 | Use and wear appropriate personal protective equipment |
| | | 3.2 | Follow safe machining practices |
| | | 3.3 | Machine materials to job requirements |
| | | 3.4 | Use <i>measuring equipment</i> as required |

		3.5	Store completed work in a manner which will prevent/minimise potential damage
4	Complete work requirements	4.1	Clear work area of waste and clean according to requirements
		4.2	Maintain and/or store machines, tools and equipment according to instructions

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- preparing a job plan
- preparing for machining
- performing machining
- calculating speeds and feeds
- using measuring equipment as required
- appropriately cleaning and storing of equipment
- applying safe working practices
- using and applying personal protective equipment

Required knowledge

Required knowledge includes:

- safe machine operation procedures
- material and equipment preparation requirements
- basic marking out techniques
- use and care of measuring tools
- types of machines for cutting, grinding, drilling, turning and milling
- work and tool holding methods for each machine
- safe working practices
- use and application of personal protective equipment

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria required skills and knowledge range statement and the Assessment Guidelines for the Training Package.

<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to prepare materials and use engineering workshop machines to produce engineering components.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Assessors must be satisfied that the candidate can:</p> <ul style="list-style-type: none"> • work safely • prepare job plans • prepare for machining • perform machining • calculate speeds and feeds • use measuring equipment as required • clean and store equipment as instructed.
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • This unit must be assessed in a learning institution. • Assessment must cover the successful use of a lathe and other relevant workshop machines. • The skills covered by this unit would usually be demonstrated by an individual working alone under direct supervision. • The assessment environment should not disadvantage the candidate. • This unit may be assessed in conjunction with any other units addressing the safety, quality, communication, hand tools, machine operation, recording and reporting associated with using workshop machines.
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the MEM05 Metal and Engineering Training Package. • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application.

	<ul style="list-style-type: none"> • Assessment must confirm a reasonable inference that competency is not only able to be satisfied under the particular circumstance, but is able to be transferred to other circumstances. • Assessment should be in conjunction with assessment of the project unit and other units integrated into the project.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Other relevant materials	<p>Other relevant materials may include but are not limited to:</p> <ul style="list-style-type: none"> • drawings • sketches • job instructions • schematics • diagrams • technical manuals
Appropriate machines	<p>Appropriate machines may include but are not limited to:</p> <ul style="list-style-type: none"> • milling machines • cut off saws • pedestal grinders • fixed position drilling machines • computer controlled machines

Measuring equipment	Measuring equipment may include but is not limited to: <ul style="list-style-type: none">• micrometers• vernier scaled measuring devices• rules• calipers• gauges

Unit Sector(s)

Competency field Pre-employment

Unit sector

Custom Content Section

Not applicable.

MSFFL3063 Install synthetic textile floor coverings to sports facilities and outdoor spaces

Modification History

Release 1. Supersedes and is equivalent to MSFFL3010 Install synthetic textile floor coverings to sports facilities.

Application

This unit describes the skills and knowledge required to install synthetic synthetic turf and needle- punch floor coverings to indoor and outdoor sporting facilities and outdoor spaces, including the preparation, cutting, laying out, joining, fixing and finishing of the synthetic textile floor covering material.

This unit applies to flooring technicians installing coverings in accordance with pre-determined work orders.

Licensing, legislative or certification requirements may apply to this unit and relevant state/territory and local government agencies should be consulted to determine any necessary certification or licensing for undertaking flooring work. Industry standards and codes of practice within Australia must also be applied. Access to construction sites requires certification of general induction training specified by the National Code of Practice for Induction for Construction Work (ASCC 2007).

Pre-requisite Unit

N/A

Unit Sector

Flooring technology

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for installation	1.1 Identify and follow work health and safety, legislative and organisational requirements 1.2 Read documentation and identify work requirements and process

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Select and check tools, equipment and materials for suitability, serviceability and safety prior to use</p> <p>1.4 Confirm sub-floor suitability for installation consistent with Australian Standards and manufacturer recommendations</p> <p>1.5 Select suitable adhesives, trims and accessories in accordance with work requirements</p> <p>1.6 Plan sequence of work, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1 Check synthetic floor covering material to be installed against work order and acclimatise in accordance with manufacturer recommendations</p> <p>2.2 Cut and lay required shock padding / underlays for synthetic turf floor coverings to specification</p> <p>2.3 Establish working lines and starting point</p> <p>2.4 Prepare adhesives and edge strips for use in accordance with job requirements</p>
3. Lay floor covering	<p>3.1 Identify and follow instructions and sequence for laying and fixing</p> <p>3.2 Organise and use materials for fixing in accordance with safety management requirements</p> <p>3.3 Lay out synthetic floor coverings to meet pattern and specification requirements and to minimise waste and joins</p> <p>3.4 Accurately and clearly mark synthetic floor coverings for cutting</p> <p>3.5 Cut synthetic floor coverings to length and cut joins in preparation for final laying</p> <p>3.6 Join synthetic floor coverings using adhesive and seam tape to in accordance with manufacturer instructions</p> <p>3.7 Complete required line marking in accordance with specification</p> <p>3.8 Fit and finish cover trims to required standards</p> <p>3.9 Check completed installation for flaws in installation and rectify materials and faults</p>
4. Complete housekeeping	<p>4.1 Store and recycle unused materials in accordance with workplace procedures</p> <p>4.2 Check, clean and store tools and equipment in accordance with workplace procedures</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.3 Clean work area and dispose of rubbish safely 4.4 Accurately complete required workplace documentation

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to MSFFL3010 Install synthetic textile floor coverings to sports facilities.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFFL3063 Install synthetic textile floor coverings to sports facilities and outdoor spaces

Modification History

Release 1. Supersedes and is equivalent to MSFFL3010 Install synthetic textile floor coverings to sports facilities.

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- installed the following in accordance with job requirements:
 - 1 synthetic turf grass to an outdoor installation, or recreational or sports area
 - 1 synthetic needle-punch to an indoor installation or recreational or sports area.
 -

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- mathematical procedures for estimation and measurement, including calculation of area and estimation of material requirements
- synthetic floor covering installation in sport and outdoor spaces:
 - Australian Standards requirements
 - workplace safety system requirements
 - how to access manufacturer instructions
 - environmental protection and sustainability requirements
 - work flow
 - types of installation locations
 - characteristics and requirements of sub-floor preparation
 - types, characteristics, uses and limitations of:
 - synthetic textile and other floor coverings used in indoor and outdoor spaces and sporting facilities:
 - needle punch carpet
 - PVC-backed carpet
 - rubber-backed carpet
 - synthetic turf:
 - unfilled
 - sand filled
 - rubber filled
 - installation adhesives and their uses:

- plasticised and rubber resin acrylic
- solvent-based outdoor / grass adhesive
- two-part polyurethane
- water, solvent-based and solvent-free adhesives
- underlay and/or shock pads:
 - bonded foam
 - latex foam
 - rubber
 - styrene-butadiene rubber (SBR)
- other materials, including finishing trims, angles and joining tapes
- types, characteristics, safe use, maintenance and limitations of tools and equipment used during installation
- quality indicators for completed work
- procedures for the recording, reporting and maintenance of workplace records and information.
-

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies.

The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - locations requiring synthetic floor covering installation
 - synthetic floor covering
 - equipment, tools and materials to complete tasks in the Performance Evidence, including safety and personal protective equipment
 - work orders
 - workplace procedures.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

MSL913004 Plan and conduct laboratory/field work

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL913002 Plan and conduct laboratory/field work. Range of conditions removed. Assessment requirements amended. Equivalent outcome.</p>

Application

This unit of competency describes the skills and knowledge to plan and complete tasks individually or in a team context. The tasks involve established routines and procedures using allocated resources with access to readily available guidelines and advice. Work plans may need to be modified with supervisor agreement to suit changing conditions and priorities.

This unit of competency applies to instrument operators, laboratory assistants and technical assistants working in all industry sectors.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

Nil

Competency Field

Communication/organisation

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|---|--------------------------------|-----|---|
| 1 | Plan and organise daily | 1.1 | Clarify allocated work activities and required resources if necessary |
|---|--------------------------------|-----|---|

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
work activities	<ul style="list-style-type: none"> 1.2 Prioritise work activities as directed 1.3 Break down work activities into small achievable components and efficient sequences 1.4 Review work plan in response to new information, urgent requests, changed situations or instructions from appropriate personnel
2 Complete allocated work	<ul style="list-style-type: none"> 2.1 Locate relevant workplace procedures for required tasks 2.2 Undertake tasks following prescribed and routine work-related sequences 2.3 Seek assistance from relevant personnel when difficulties cannot be handled 2.4 Record completion of activities to confirm outputs in accordance with plan
3 Identify and resolve work problems	<ul style="list-style-type: none"> 3.1 Recognise problems or opportunities for improved work performance 3.2 Apply agreed problem-solving strategies to consider possible causes and solutions 3.3 Identify and access appropriate sources of help 3.4 Consider available alternatives and keep them open before deciding on the most appropriate action
4 Work in a team environment	<ul style="list-style-type: none"> 4.1 Cooperate with team members to negotiate and achieve agreed outcomes, timelines and priorities 4.2 Recognise personal abilities and limitations when undertaking team tasks 4.3 Confirm personal role and responsibility within the team for particular outputs 4.4 Demonstrate sensitivity to the diversity of other team

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

members' backgrounds and beliefs

- | | | | |
|---|--|-----|---|
| 5 | Update knowledge and skills as required | 5.1 | Recognise own strengths and weaknesses |
| | | 5.2 | Take advantage of skill development opportunities |

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Equivalent to MSL913002 Plan and conduct laboratory/field work, Release 1.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL913004 Plan and conduct laboratory/field work

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL913002 Plan and conduct laboratory/field work. Range of conditions removed. Assessment requirements amended. Equivalent outcome.</p>

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- effectively planned, prioritised and completed 2 laboratory/field work tasks on 2 separate occasions, including:
 - working independently
 - working in a team context.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- workplace procedures/guidelines for work
- ethical and professional work performance
- problem-solving strategies
- effective interpersonal communication and conflict resolution techniques
- effective team operations for groups
- strategies to maintain work flow
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:

- workplace procedures
- equipment and materials for relevant technical tasks.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

MSL924003 Process and interpret data

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL924001 Process and interpret data. Changes to performance criteria. Range of conditions removed. Assessment requirements amended.</p>

Application

This unit of competency describes the skills and knowledge to retrieve data, evaluate formulae and perform scientific calculations, present and interpret information in tables and graphs and keep accurate records. The unit requires personnel to solve problems of limited complexity where the information may be less obvious, but not contradictory, and can be determined by direct reasoning.

This unit of competency applies to laboratory assistants, field/laboratory technicians and instrument operators in all industry sectors.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

Nil

Competency Field

Data

Elements and Performance Criteria

Elements describe the essential outcomes. Performance criteria describe the performance needed to demonstrate achievement of the element.

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Retrieve and check data	1.1 Store and retrieve data using appropriate files and/or application software
	1.2 Verify the quality of data using workplace procedures
	1.3 Rectify errors in data using workplace procedures
2 Calculate scientific quantities	2.1 Calculate statistical values for given data
	2.2 Calculate scientific quantities using given formulae and data and estimate uncertainties
	2.3 Ensure calculated quantities are consistent with estimations and expectations
	2.4 Report all calculated quantities using the appropriate units and correct number of significant figures
3 Present data	3.1 Present data in clearly labelled tables, charts and graphs
	3.2 Graph data using appropriate scales to span the range of data or display trends
	3.3 Report all data using the appropriate units and number of significant figures
4 Interpret data	4.1 Interpret significant features of tables, charts and graphs, including gradients, intercepts, maximum and minimum values, and limit lines
	4.2 Recognise and report trends in data
5 Keep accurate records	5.1 Transcribe information accurately
	5.2 Verify the accuracy of records following workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Equivalent to MSL924001 Process and interpret data, Release 1.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL924003 Process and interpret data

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL924001 Process and interpret data. Changes to performance criteria. Range of conditions removed. Assessment requirements amended.</p>

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- processed and interpreted different data sets
- calculated scientific and statistical quantities with or without a calculator or computer software, including the following items:
 - converting units involving multiples and submultiples
 - scientific notation, significant figures, round off, estimate and approximate
 - transposing and evaluating formulae
 - fractions, decimals, proportions and percentages
 - mean
 - median
 - mode
 - standard deviation
- performed at least 5 of the following calculations:
 - perimeters and angles
 - percentage and absolute uncertainties in measurements and test results
 - areas (m²) and volumes (mL, L, m³) of regular shapes, such as packaging
 - dose (mg), average mass, mass percentage, density, specific gravity, moisture, relative and absolute humidity, viscosity and permeability
 - ratios, such as mass to mass, mass to volume and volume to volume percentages
 - concentration, such as molarity, g/100mL, mg/L, mg/L, ppm, ppb, dilution mL/L
 - average count, colonies per swab surface and cell counts, such as live and dead/total
 - process variables, such as pressure, gauge pressure, velocity and flow rates

- food properties, such as % concentration (dry), friability, bitterness, brix, free amino nitrogen, diastatic power, calorific content and yeast viability, % content of moisture, ash, fat, protein, alcohol, sulphur dioxide and trace metals, such as calcium or zinc
- mechanical properties, such as stress, strain, moduli and force
- presenting accurate results in the required format (significant figures, uncertainty units)
- prepared and presented data in the at least 5 of the following formats:
 - tables
 - graphs
 - line graphs
 - histograms
 - pie charts, bar charts and control charts
 - semi-quantitative observations expressed on a scale: 1 to 4 or + to ++++
- recognised and interpreted significant points, anomalies and trends in data.

Knowledge Evidence

- There must be evidence the candidate has knowledge of:
- concepts of metrology, including:
 - that all measurements are estimates
 - repeatability, precision, accuracy and significant figures
 - sources of error, and uncertainty associated with measurement steps
 - traceability
- the international system of units (SI)
- scientific and technical terminology relevant to job role
- workplace procedures for:
 - coding, entering, storing, retrieving and communicating data
 - verifying data and rectifying mistakes
 - maintaining and filing records, and maintaining security of data
- legal, ethical and work health and safety (WHS) requirements specific to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - data sets and records
 - a calculator
 - spreadsheets, computer software, databases and statistical packages
 - computer and relevant software or laboratory information system
 - relevant workplace procedures.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

MSL933005 Maintain the laboratory/field workplace fit for purpose

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL933001 Maintain the laboratory/field workplace fit for purpose. Range of conditions removed. Assessment requirements amended.</p>

Application

This unit of competency describes the skills and knowledge to clean laboratory work surfaces, clean and store laboratory equipment and monitor laboratory stocks under direct supervision.

This unit of competency applies to laboratory assistants and instrument operators working in all industry sectors. It forms a major part of the work of laboratory assistants, who work in accordance with work instructions and standard operating procedures (SOPs) which incorporate all relevant aspects of work health and safety (WHS) legislation and the codes, guidelines, regulations and Australian Standards applying to environmental hazards and dangerous goods.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

Nil

Competency Field

Quality

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|---|--|-----|---|
| 1 | Clean work preparation areas | 1.1 | Clean preparation areas using appropriate cleaning agents and equipment according to workplace procedures |
| | | 1.2 | Remove spillages using appropriate agents, personal protective equipment (PPE) and workplace procedures |
| | | 1.3 | Collect and segregate wastes in accordance with workplace procedures, relevant codes and regulations |
| 2 | Clean and store equipment | 2.1 | Collect used equipment, inspect for faults and, where necessary, remove from service |
| | | 2.2 | Use appropriate agents, apparatus and techniques to clean equipment |
| | | 2.3 | Store clean equipment in the designated locations and manner |
| 3 | Monitor stocks of materials and equipment | 3.1 | Perform stock checks and maintain records of usage as directed |
| | | 3.2 | Store labelled stocks for safe and efficient retrieval |
| | | 3.3 | Inform appropriate personnel of impending stock shortages to maintain continuity of supply |
| 4 | Maintain a safe work environment | 4.1 | Use established safe work practices and PPE to ensure personal safety and that of other personnel |
| | | 4.2 | Report potential hazards and/or maintenance issues in own work area to designated personnel |
| | | 4.3 | Minimise the generation of waste and environmental impacts |
| | | 4.4 | Dispose of waste in accordance with workplace procedures, relevant codes and regulations |

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Equivalent to MSL933001 Maintain the laboratory/field workplace fit for purpose, Release 1.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL933005 Maintain the laboratory/field workplace fit for purpose

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL933001 Maintain the laboratory/field workplace fit for purpose. Range of conditions removed. Assessment requirements amended.</p>

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- appropriately cleaned laboratory work surfaces on 2 occasions
- cleaned 2 items of laboratory/field equipment
- monitored stocks of a workplace at least 2 separate occasions
- maintained a safe work environment.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- relevant hazards, work health and safety (WHS) requirements
- workplace procedures for:
 - the cleaning of work preparation areas, materials and equipment
 - minimisation and disposal of waste
 - monitoring of laboratory stocks
- typical equipment used in a laboratory
- typical materials used in a laboratory
- typical hazards and risks presented in a laboratory
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and WHS requirements specific to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - work preparation areas, stocks, materials and equipment, cleaning, decontamination and/or disinfection agents and equipment
 - personal protective equipment (PPE).

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

MSL973013 Perform basic tests

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL973001 Perform basic tests. Foundation skills information added. Range of conditions removed. Assessment requirements amended.</p>

Application

This unit of competency describes the skills and knowledge to prepare samples and perform tests and measurements using standard methods with access to readily available advice from supervisors.

This unit of competency applies to laboratory/field assistants working in all industry sectors. In general, they do not calibrate equipment and make only limited adjustments to the controls. They do not interpret or analyse results or troubleshoot equipment problems.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

Nil

Competency Field

Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Interpret test requirements	1.1 Review test request to identify samples to be tested, test method and equipment involved 1.2 Identify hazards and workplace controls associated with the sample, preparation methods, reagents and/or equipment
2 Prepare sample	2.1 Record sample description, compare with specification, record and report discrepancies 2.2 Prepare sample in accordance with appropriate standard methods
3 Check equipment before use	3.1 Set up test equipment in accordance with test method 3.2 Perform pre-use and safety checks in accordance with workplace procedures and manufacturer instructions 3.3 Identify faulty or unsafe equipment and report to appropriate personnel 3.4 Check calibration status of equipment and report any out-of-calibration items to appropriate personnel
4 Perform tests on samples	4.1 Identify, prepare and weigh or measure sample and standards to be tested 4.2 Conduct tests in accordance with workplace procedures 4.3 Record data in accordance with workplace procedures 4.4 Perform calculations on data as required 4.5 Identify and report out of specification or atypical results promptly to appropriate personnel 4.6 Shut down equipment in accordance with operating procedures
5 Maintain a safe work environment	5.1 Use established safe work practices and personal protective equipment (PPE) to ensure personal safety and that of other laboratory personnel 5.2 Minimise the generation of wastes and environmental impacts 5.3 Ensure safe disposal of laboratory and hazardous wastes

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

5.4 Clean, care for and store equipment and reagents as required

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Numeracy skills to calculate simple quantities using appropriate equations, units, uncertainties and precision

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes MSL973001 Perform basic tests.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL973013 Perform basic tests

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL973001 Perform basic tests. Foundation skills information added. Range of conditions removed. Assessment requirements amended.</p>

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- prepared samples using different processes
- performed at least 3 basic tests or measurements using standard methods and procedures.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- concepts of metrology, including:
 - all measurements are estimates
 - measurements belong to a population of measurements of the measured parameters
 - precision, accuracy and significant figures
 - sources of error, uncertainty and repeatability
 - traceability
- international system of units (SI)
- purpose of tests performed as part of job role and principles of the standard methods/specifications used
- sample preparation processes relevant to job role
- typical basic tests and methods relevant to job role
- measurements used for typical tests
- function of key components of the test equipment, pre-use equipment and safety checks
- sources of uncertainty in measurement and methods for control
- workplace and/or legal traceability requirements
- interpretation and recording of test result, including simple calculations
- procedures for recognising and reporting of unexpected or unusual results
- legal, ethical and work health and safety (WHS) requirements specific to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - a standard laboratory equipped with basic test equipment, common measuring instruments, materials, standard methods, workplace procedures, SDS and equipment manuals.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

MSL973016 Perform aseptic techniques

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL973004 Perform aseptic techniques. Changes to performance criteria. Range of conditions removed. Assessment requirements amended.</p>

Application

This unit of competency describes the skills and knowledge to perform aseptic techniques to maintain the integrity of both the sample source and the sample. It applies to sampling techniques in tissue culture and to generic microbiological procedures.

This unit of competency applies to laboratory assistants and technicians working in the field or laboratory in the biomedical, biological, food processing and environmental industry sectors.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

Nil

Competency Field

Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
<p>1 Prepare for aseptic sampling or transfer</p>	<p>1.1 Check the sampling procedure conforms with the required sampling plan</p> <p>1.2 Use specified personal protective equipment (PPE)</p> <p>1.3 Prepare the work area for safe and effective sample transfer</p> <p>1.4 Select equipment and materials specified by the procedure</p> <p>1.5 Organise equipment to minimise contamination during manipulations</p> <p>1.6 Label containers for clear identification</p> <p>1.7 Record details in relevant log or database</p> <p>1.8 Macroscopically assess media and/or reagents to confirm sterility before use</p>
<p>2 Transfer materials aseptically</p>	<p>2.1 Protect the integrity of the sample source</p> <p>2.2 Sterilise inoculating loops and/or pipette where used to prevent contamination</p> <p>2.3 Perform transfer while minimising opportunities for contamination and cross-infection</p> <p>2.4 Protect the integrity of the sample source and destination after transfer, and before sealing the transport or culture vessel</p> <p>2.5 Re-sterilise inoculating loops, minimising the generation of aerosols as required</p> <p>2.6 Perform quality control checks to confirm aseptic transfer was successful</p> <p>2.7 Label transport or culture vessels for clear identification</p>
<p>3 Maintain work area and equipment to prevent cross-infection and</p>	<p>3.1 Place disposable and reusable items into relevant receptacles</p> <p>3.2 Clean and disinfect work area and equipment after use</p> <p>3.3 Transport disposable and reusable contaminated</p>

Elements describe the essential outcomes.

contamination

Performance criteria describe the performance needed to demonstrate achievement of the element.

materials to relevant areas for disinfection, sterilisation and cleaning or disposal

3.4 Follow personal hygiene procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Equivalent to MSL973004 Perform aseptic techniques, Release 1.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL973016 Perform aseptic techniques

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL973004 Perform aseptic techniques. Changes to performance criteria. Range of conditions removed. Assessment requirements amended.</p>

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- safely and effectively performed aseptic techniques when performing at least 3 different types of sample transfers from the following list:
 - body fluids (or simulated body fluids)
 - sterile liquid culture media
 - water
 - soil
 - sterile pharmaceuticals
 - yeasts and moulds
 - milk and yoghurt
 - swabs and smears
 - propagation tissue
 - plant material
 - fermented foods
 - fermented beverages
 - bacterial cultures.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- growth requirements of microorganisms including bacteria and fungi in terms of their laboratory culture

- relationship between sterile practices, hygiene procedures and the ability to obtain growth free of contamination
- relationship between sterile practices and accurate test results
- importance of pure culture techniques and aseptic transfer to the successful microbiological investigation and correct interpretation of laboratory results
- cleaning and sanitising requirements of equipment and work area, and effects of physical and chemical agents on microbial growth and death
- sterilisation techniques:
 - flaming
 - high temperature, boiling and autoclaving
 - membrane filtration
 - radiation, gas and/or chemical treatments
- disinfection and sterilisation procedures used in the collection, processing and safe disposal of samples and materials
- principles of infection control related to work health and safety (WHS), and sampling and transfer of materials in microbiological investigations including how to minimise the generation of aerosols when flaming
- relevant hazards and how to deal with the risks presented:
 - injuries from sharps, burners, molten agar
 - ultraviolet (UV) light sources
 - exposure to hazardous substances and/or infectious agents
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and WHS requirements specific to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - a standard laboratory
 - test samples
 - appropriate equipment, including:
 - transfer equipment, such as inoculating loops, pipettes (quantitative and qualitative), flasks, tubes and spatulas
 - Sterilisation equipment such as bunsen burners, bench incinerators, autoclave and/or pressure cooker
 - Storage equipment such as incubators, water baths, refrigerators, freezers, anaerobic jars as required
 - laminar flow units or biohazard cabinets as required
 - swabs
 - appropriate materials, including:

- solid and/or liquid media
- disinfecting and sterilising agents
- consumables
- receptacles for safe disposal of wastes and for processing of reusable materials
- bar coding material and labels
- workplace schedules, procedures and standard methods, SDS and documented safe work practices.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

MSL974021 Perform biological procedures

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL974006 Perform biological procedures. Changes to elements and performance criteria. Range of conditions removed. Assessment requirements amended.</p>

Application

This unit of competency describes the skills and knowledge to interpret work requirements, prepare samples, and perform routine biological procedures. These procedures may involve several steps and are used to classify organisms and biologically active compounds by analysing their biological and/or chemical characteristics. This unit includes interpretation of results and troubleshooting obvious departures from standard procedures.

This unit of competency applies to technical assistants working in the biomedical, environmental, biotechnology and education industry sectors.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

Nil

Competency Field

Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Interpret and schedule work requirements	<p>1.1 Review work request to identify samples, required procedures and materials/equipment/instruments involved</p> <p>1.2 Identify hazards and workplace control measures associated with the sample, preparation methods, reagents and/or equipment</p> <p>1.3 Plan parallel work sequences to optimise throughput of multiple sets of samples</p>
2 Receive and prepare biological samples	<p>2.1 Log samples using standard operating procedures (SOPs)</p> <p>2.2 Record sample description, compare with specification and note and report discrepancies</p> <p>2.3 Prepare samples in accordance with testing requirements</p>
3 Perform techniques that assist in the classification of organisms	<p>3.1 Identify characteristics used to classify organisms</p> <p>3.2 Use dichotomous keys to identify organisms</p>
4 Perform biological procedures	<p>4.1 Set up and use equipment and reagents in accordance with the method</p> <p>4.2 Perform techniques in accordance with the standard operating procedures</p>
5 Maintain a safe work environment	<p>5.1 Use established safe work practices and personal protective equipment (PPE) to ensure personal safety and that of other laboratory personnel</p> <p>5.2 Minimise the generation of waste</p> <p>5.3 Safely dispose of biohazardous wastes</p>

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

5.4 Clean, care for and store equipment and reagents as required

6 Maintain laboratory records

6.1 Record entries on report forms or into a laboratory information management system, accurately calculating, recording or transcribing data as required

6.2 Ensure traceability of sample from receipt to reporting of results

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Equivalent to MSL974006 Perform biological procedures, Release 1.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL974021 Perform biological procedures

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL974006 Perform biological procedures. Changes to elements and performance criteria. Range of conditions removed. Assessment requirements amended.</p>

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- classify 2 organisms from 2 different kingdoms to species level using a dichotomous approach
- safely and accurately performed 3 multistep biological procedures, using a minimum of 2 different techniques from the following list:
 - multistep staining:
 - haematological
 - histological
 - microbiological
 - preparation and examination of samples to demonstrate mitosis microscopically
 - preparation and enumeration of microscopic samples
 - colorimetry
 - spectrophotometry
 - chromatography
 - electrophoresis
 - electrochemistry
 - multistep molecular technique
 - multistep immunological technique.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- biological principles and concepts underpinning tests and procedures associated with job role:
 - basic classification and taxonomy of organisms including prokaryotes and eukaryotes, bacteria, viruses, fungi, plants, animals, parasites and prions
 - interrelationships of biological systems including the carbon cycle and energy cycle
 - basic structure and function of a plant and animal cell and the respective organelles (plant and animal)
 - cell membrane activity, including diffusion (passive, facilitated and active), osmosis, tonicity and plasmolysis
 - plant and animal tissue types
 - phases of the cell cycle including phases of mitosis
 - mendelian genetics including inheritance, meiosis, karyotypes, dominant and recessive traits, genotypes, phenotypes, and pedigrees
 - basic structure and function of chromosomes, nucleic acids and proteins
 - chemical and physical characteristics of organic molecules
 - basic structure and function of including carbohydrates, fats and amino acids
 - basic role of biological significance of ions, including calcium, iron, magnesium, sodium, potassium, chloride and phosphate
- purpose of procedures implemented (why they are used and what they demonstrate)
- calculation steps to give results in appropriate units and precision
- importance and appropriate use of controls and certified reference materials
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task including traceability, confidentiality and security requirements of all clinical information, and laboratory data and records.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - a standard laboratory equipped with appropriate test equipment and instruments, safety equipment, reagents and materials
 - standard operating procedures (SOPs) and testing methods
 - records, including:
 - test calibration results
 - equipment use, maintenance and servicing history
 - faulty or unsafe equipment
 - batch number, catalogue number and use-by-date for analytical kits.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

MSL974025 Prepare tissue and cell cultures

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL974011 Prepare tissue and cell cultures. Foundation skill information added. Range of conditions removed. Assessment requirements amended.</p>

Application

This unit of competency describes the skills and knowledge to prepare primary tissue cultures for applications, such as maintenance of animal cell lines and propagation of plants by tissue culture, and basic subculture procedures. Personnel are required to manipulate equipment and materials and samples to prevent contamination at all preparation stages. They will have ready access to workplace procedures and will work under direct supervision.

This unit applies to technical assistants working in laboratories in the biomedical, environmental, biotechnology and education industry sectors.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

MSL973016 Perform aseptic techniques

Competency Field

Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|---|---|
| <p>1 Work safely according to the legal and regulatory framework</p> | <p>1.1 Identify hazards and workplace controls associated with the sample, preparation methods, reagents and equipment</p> <p>1.2 Select, fit and use personal protective equipment (PPE)</p> <p>1.3 Address hazards and incidents as they arise</p> <p>1.4 Maintain a chain of custody, traceable to the worker, for all cells and tissues</p> |
| <p>2 Prepare and test cell and tissue culture media</p> | <p>2.1 Select and confirm media specifications and processes/methods</p> <p>2.2 Prepare culture media to suit the application</p> <p>2.3 Sterilise culture media and check for sterility</p> <p>2.4 Perform quality control checks to ensure that culture media is fit for purpose</p> <p>2.5 Store culture media in accordance with specifications</p> |
| <p>3 Prepare tissue or cell cultures</p> | <p>3.1 Select tissue/cell sample to optimise growth and prepare it for culture</p> <p>3.2 Add specified growth agents and/or nutrients</p> <p>3.3 Inoculate culture medium using aseptic techniques</p> |
| <p>4 Monitor tissue or cell culture</p> | <p>4.1 Incubate culture in specified conditions</p> <p>4.2 Monitor growth of culture and record appearance and characteristics</p> <p>4.3 Report presence or absence of contamination</p> |

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	4.4 Subculture the culture to continue the cell line
	4.5 Dispose of biohazardous and other laboratory waste safely
5 Maintain records	5.1 Maintain records of batches of media
	5.2 Complete records of tissue cultures so that they are retrievable, legible and accurate
	5.3 Complete records in accordance with information management, records, quality system and legal requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Learning skills to:
 - monitor cell growth, check growth rates and recognise problems, such as contamination of media by bacteria (e.g. Mycoplasma), fungi and other plant or animal tissue
 - identify expected cell types and recognise normal and abnormal cells using an inverted microscope.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Equivalent to MSL974011 Prepare tissue and cell cultures, Release 1.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL974025 Prepare tissue and cell cultures

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL974011 Prepare tissue and cell cultures. Foundation skill information added. Range of conditions removed. Assessment requirements amended.</p>

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- safely preparing at least 3 different primary tissue/cell cultures that are free of contamination using tissue/cell culture and basic subculture procedures, including:
 - manipulating equipment and materials and samples to prevent contamination at all preparation stages
 - performing routine maintenance and checks on raw materials and consumables, including use-by-date, possible contamination and storage conditions
 - growing cell lines and tissue to specifications without contaminating the original sample and the environment.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- basic classes and classification of culturable material including microorganisms, plant/animal cells and tissue
- structure and function of plant/animal cells and organelles
- cell structure, physiology and processes, including simple and facilitated diffusion, plasmolysis, osmosis, tonicity, active transport, energy production, mitosis, motility, phagocytosis and pinocytosis
- concepts and principles of cell growth, including the need for nutrients, the role of growth regulators and the removal of wastes
- types and sources of contamination
- importance of strict aseptic techniques and cleaning procedures
- common applications of plant tissue/cell culture
- common applications of animal tissue/cell culture

- typical methods for sterilisation and disposal of biohazardous:
 - steam and high-pressure air or steam
 - boiling, microwaving and autoclaving
 - filtration
 - gas, chemical and radiation
- typical methods to preparing a primary culture
- suitable culture conditions
- subculture
- quality control checks and quality assurance procedures
- standard methods for preparing culture media, and operation and maintenance manuals for automated media preparation equipment
- workplace and/or legal traceability requirements
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - a laboratory equipped with appropriate equipment, samples, cell lines and reagents
 - tissue culture equipment and facilities, including:
 - growth cabinets
 - culture vessels, growth chambers, sterile containers, culture plates, flasks and bottles
 - autoclaves
 - positive filtration apparatus
 - auto pipettes and pipette pumps
 - cell counting chambers and a haemocytometer
 - incubators, including specialised atmosphere carbon dioxide
 - binocular light inverted microscopes
 - centrifuges
 - workplace procedures and standard methods.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

MSL975033 Perform tissue and cell culture techniques

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to <i>MSL975013 Perform tissue and cell culture techniques</i>. Changed prerequisites. Changes to performance criteria. Range of conditions removed. Assessment requirements amended.</p>

Application

This unit of competency describes the skills and knowledge to prepare, maintain and preserve cells and cell lines for a variety of applications, such as large scale culture, production of monoclonal antibodies, production of viral vaccines and amniocentesis studies. Personnel are required to optimise equipment set-up, media and growth techniques. They are required to detect and investigate contamination and take preventative and/or corrective actions under supervision.

This unit applies to laboratory technicians and technical officers working in laboratories in the biomedical, environmental, biotechnology and education industry sectors.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

MSL973016 Perform aseptic techniques

Competency Field

Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Interpret and schedule production requirements	<p>1.1 Review client request and confirm quantity and nature of cells, tissue or products</p> <p>1.2 Select appropriate media, materials, equipment and methods</p> <p>1.3 Plan parallel work sequences to optimise production</p> <p>1.4 Maintain a chain of custody, traceable to the worker, for all cells and tissues</p>
2	Work safely according to the legal and regulatory framework	<p>2.1 Identify hazards and workplace control measures associated with the sample, preparation methods, reagents and equipment</p> <p>2.2 Select, fit and use personal protective equipment (PPE)</p> <p>2.3 Address hazards and incidents as they arise</p> <p>2.4 Safely dispose of biohazardous materials and other laboratory waste</p>
3	Assemble and maintain tissue culture equipment	<p>3.1 Assemble, sterilise or decontaminate equipment according to workplace procedures</p> <p>3.2 Perform pre-use and safety checks in accordance with relevant workplace and operating procedures</p> <p>3.3 Identify faulty or unsafe components and equipment and report to appropriate personnel</p> <p>3.4 Decontaminate area and equipment after use</p>
4	Prepare and test cell and tissue culture media	<p>4.1 Confirm media specifications and processes/methods</p> <p>4.2 Prepare culture media to suit client request</p> <p>4.3 Sterilise culture media and check for sterility</p>

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.
	4.4	Perform quality control checks to ensure that culture media is fit for purpose
	4.5	Store culture media in accordance with specifications
5 Obtain, monitor and maintain tissue and cell lines	5.1	Retrieve/obtain the cell lines or tissue sample from fresh or preserved sources and prepare a culture
	5.2	Select specified culture media and add any necessary growth agents or nutrients
	5.3	Incubate cells/tissue in specified conditions
	5.4	Inoculate the media with the specified amount of sample
	5.5	Monitor growth of tissue and cell lines and products
	5.6	Detect contamination/abnormalities and troubleshoot materials, equipment and techniques
	5.7	Passage samples by subculturing to preserve or grow the line
	5.8	Harvest cells or cell products to optimise yields
6 Preserve cells and tissues	6.1	Select the appropriate preservation method
	6.2	Preserve the cell lines or tissue in accordance with the method
	6.3	Check preserved cell lines regularly to ensure viability is maintained
7 Maintain records	7.1	Maintain records of batches of media
	7.2	Maintain records of active and stored tissue and cell lines
	7.3	Complete records so that they are retrievable, legible and accurate

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 7.4 Ensure records conform to the information management, records, quality system and legal requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Equivalent to MSL975013 Perform tissue and cell culture techniques, Release 1.

Links

Training Package Companion Volumes -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL975033 Perform tissue and cell culture techniques

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to <i>MSL975013 Perform tissue and cell culture techniques</i>. Changed prerequisites. Changes to performance criteria. Range of conditions removed. Assessment requirements amended.</p>

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- safely prepared and maintained 3 different cell cultures to preserve cells and cell lines that are fit for purpose without contaminating the original sample, including:
 - passaging cell cultures by subculturing
 - preserving cell lines by freezing and cryopreservation
- confirmed the identity of the cell lines and identified abnormalities/contamination if present
- maintained accurate, traceable records of cell lines and tissues and logs of procedures and work completed.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- terminology, including cell lines, growth media, primary culture, passaging, passage number, subculture, anchorage dependent cells, suspension culture, monolayer, confluent, cell line, cell strain, contact inhibition, diploid and viability
- cell biology, including structure, physiology, function, physiological cell growth requirements, nutrient requirements, respiration, temperature and growth cycle
- general purpose of cell lines
- normal and abnormal cell morphology
- critical components of the cell environment and their effects on cell growth, including pH, temperature, buffering, atmosphere, osmotic pressure, osmolarity and viscosity
- types of tissue/cells used as source material

- techniques for characterising a cell line
- selection criteria for media, materials and equipment, including:
 - costs
 - ease of cleaning or sterilisation
 - maintenance of cell growth
- the differences between finite and continuous cell lines
- characteristics of cell culture media and substrates
- nature of substrates including solid, semi-solid, gel or sponge, glass, disposable plastics and three-dimensional matrices
- chemical treatment techniques for pre-treating substrates relevant to the job role
- role of common ingredients in media including salts, carbohydrates, amino acids, vitamins, growth factors, serum and antimicrobial
- contaminants, including endotoxins, bacteria, yeast, fungi and mycoplasma
- typical requirements, problems and procedures associated with the production of specific cell lines relevant to the job role
- tissue culture and continuous culture systems
- methods to prepare primary cultures
- principles and purpose of techniques implemented
- methods to monitor growth of tissue and cell lines
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task including traceability, confidentiality and security requirements of all client information, and laboratory data and records.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - laboratory equipped with appropriate tissue culture equipment and facilities, test equipment, instruments, standards and reagents
 - workplace procedures and standard methods, test results and records.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Training Package Companion Volumes -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

MSL975045 Perform laboratory-based ecological techniques

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL975017 Perform laboratory-based ecological techniques. Changes to elements and performance criteria. Foundation skills information added. Range of conditions removed. Assessment requirements amended.</p>

Application

This unit of competency describes the skills and knowledge to participate in laboratory investigations involving animals, plants and related environmental parameters. The animals or plants might be single specimens, parts of specimens or be in culture or under propagation. The investigations might also be part of experimental models that examine interactions of animals and/or plants and their environments. Investigations would generally relate to taxonomy, physiology and pathology, and would be oriented to scientific research, food production and manufacture, and to investigation of biological environments and ecosystems.

This unit applies to laboratory technicians and technical officers working in biological, biotechnology and environmental industry sectors. It is expected that all work would conform to statutory and work health and safety (WHS) codes of practice. This unit of competency assumes that personnel perform tests and procedures under the close supervision of scientific staff and that the workplace will equip its workers with relevant animal handling skills should they be required. The unit does not cover procedures related to the handling of vertebrates that are subject to national and state/territory animal care and ethics regulations.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

MSL974021 Perform biological procedures

Competency Field

Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Process specimens and documentation	<p>1.1 Identify specimens and request forms that do not comply with minimum industry requirements for labelling, identification and test requests</p> <p>1.2 Record any discrepancies and indicate what action is required</p> <p>1.3 Log samples, recording details that allow accurate tracking and chain of custody</p>
2	Participate in the identification and classification of species	<p>2.1 Record macroscopic and/or microscopic details of specimens to assist in their identification and classification</p> <p>2.2 Use taxonomic keys to assist in the identification and classification of species</p> <p>2.3 Perform laboratory analyses that can assist in identification and classification of species</p> <p>2.4 Preserve specimens for future reference</p> <p>2.5 Label preserved specimens for storage and reliable retrieval from collections</p>
3	Maintain viability and integrity of specimens during experimentation	<p>3.1 Provide nutrients and environments to maintain viability of individual specimens and organisms being cultured or propagated</p> <p>3.2 Perform procedures and analyses to monitor the experimental environment</p> <p>3.3 Perform procedures and analyses to monitor the physiology of organisms in the experimental environment</p>

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	<p>3.4 Adjust nutrient requirements and environmental conditions as indicated by monitoring data</p> <p>3.5 Report (to supervisors) data and phenomena that may risk viability of individual specimens or cultures</p> <p>3.6 Report (to supervisors) data and phenomena that are incompatible with the experimental design parameters</p>
4 Integrate laboratory and field data	<p>4.1 Locate field data relevant to the study or experiment</p> <p>4.2 Match field and laboratory data codes for tracking, reporting and chain of custody requirements</p> <p>4.3 Log field and laboratory data into information systems</p> <p>4.4 Assist with writing reports of experiments and related field studies</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Oral communication skills to interact effectively and use appropriate scientific terminology and technical concepts to report data and phenomena that may risk viability of individual specimens or cultures, or are incompatible with the experimental design parameters.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Equivalent to MSL975017 Perform laboratory-based ecological techniques, Release 1.

Links

Training Package Companion Volumes -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL975045 Perform laboratory-based ecological techniques

Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL975017 Perform laboratory-based ecological techniques. Changes to elements and performance criteria. Foundation skills information added. Range of conditions removed. Assessment requirements amended.</p>

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- effectively identified and classified at least 5 different animal and plant species for scientific and experimental purposes
- processed, labelled, preserved and stored at least 5 different kinds of specimens, taking care not to contaminate sterile environments or specimens
- performed procedures and analyses to monitor the physiology of 5 different organisms/specimens in the experimental environment and maintained their viability.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- growth requirements of organisms that are subjects of laboratory or greenhouse culture or propagation relevant to job role
- general anatomy of plants and animals that is useful as classification data
- processes that are essential for preservation of plant and animal material for use as reference material
- relationships between field and laboratory data that are useful in giving commentary on the integrity or distress in biological environments
- rationale for selection of techniques used to monitor the experimental environment and the effects of variables on organisms in the experimental environment
- uses of environmental impact statements that incorporate the results of field and laboratory analyses
- workplace and/or legal traceability requirements
- awareness of environmental sustainability issues as they relate to the work task

- legal, ethical and work health and safety (WHS) requirements specific to the work task including traceability, confidentiality and security requirements of all client information, and laboratory data and records.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - equipment and resources for investigating the physiology of plants and animals in the laboratory
 - workplace procedures, sampling plans, test methods and equipment manuals
 - computers and programs for simulated experiments or data analysis
 - items of equipment, reagents, specimens and systems for botanical and zoological techniques
 - laboratory information management systems (LIMS), databases, record and filing systems, including specimen accessioning.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Training Package Companion Volumes -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

MSMSUP280 Manage conflict at work

Modification History

Release 1. Supersedes and is equivalent to MSAPMSUP280A Manage conflict at work

Application

This unit of competency covers the skills and knowledge required to manage conflict in a range of personal conflict situations.

This unit of competency applies to personnel who are required to liaise and cooperate with other members of the team and to work towards finding common ground and opportunities for problem resolution. It applies to any interactions in the workplace, including interactions between co-workers, between staff and customer/client, and between staff and supervisor.

This unit of competency applies to an individual working alone or as part of a team/work group and working in liaison with other shift team members and the control room operator, as appropriate.

This unit of competency applies to all work environments and sectors within the industry.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Support

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element

- 1 **Identify potential sources of conflict**
 - 1.1 Identify actions which are likely to promote a reaction in others
 - 1.2 Assess the other person's needs and/or concerns
 - 1.3 Assess own ability to respond to the other person's needs
 - 1.4 Recognise possible causes of conflict
 - 1.5 Identify potential conflict situations

- 2 **Identify range of alternative approaches**
 - 2.1 Discuss with the other person their needs and concerns
 - 2.2 Identify own needs and concerns and discuss with other person
 - 2.3 Identify possible approaches through which the needs and concerns of both may be met
 - 2.4 Develop a range of alternative approaches for achieving goals

- 3 **Resolve conflicts**
 - 3.1 Identify areas of common ground or objectives that can be mutually supported
 - 3.2 Agree on an approach which will meet the majority of objectives for both parties
 - 3.3 Implement the approach
 - 3.4 Check that the agreed requirements are being met and that conflict has been resolved

- 4 **Respond to problems**
 - 4.1 Identify possible problems in the conflict management process
 - 4.2 Determine problems needing action
 - 4.3 Determine possible causes
 - 4.4 Rectify problem using appropriate solution within area

- of responsibility
- 4.5 Follow through items initiated until final resolution has occurred
 - 4.6 Report problems outside area of responsibility to designated person

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Conflict Conflict in the context of this unit refers to interpersonal conflict and may arise in any work-related context.

Potential sources of conflict Potential sources of conflict include conflicts arising from one or more of the following:

- different learning/problem solving styles
- different work or personal priorities
- different personality styles
- conflicting key performance indicators (KPIs), work goals or targets
- different social, cultural, religious or ethnic background or different gender or sexual preference
- different interpretation of requirements or 'the rules'

Approaches to resolving conflict

Approaches to resolving conflict will be based on direct communication and include one or more of the following:

- informal, face-to-face discussions
- formal/structured face-to-face discussions
- through the use of:
 - telephones and two-way radios
 - memos, faxes, letters or emails

Routine problems

Routine problems must be resolved by applying known solutions.

Routine problems are predictable and include one or more of the following:

- anger or aggression arising from industrial relations matters
- disagreements over processes or work practices
- variations in opinions about circumstances or events
- interpersonal disputes arising from changes in personal circumstances

Known solutions are drawn from one or more of the following:

- procedures
- training
- remembered experience

Non-routine problems must be reported according to according to relevant procedures.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSAPMSUP280A Manage conflict at work

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>

Assessment Requirements for MSMSUP280 Manage conflict at work

Modification History

Release 1. Supersedes and is equivalent to MSAPMSUP280A Manage conflict at work

Performance Evidence

- Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and demonstrate the ability to:
- recognise situations, actions and verbal and non-verbal communication that indicate potential or actual conflict
- communicate about needs and concerns of self and others and areas of common ground using:
 - appropriate verbal and non-verbal communication
 - statements that focus on issues and facts, not people and personalities
 - accurate reflection of people's needs and concerns
- implement conflict resolution approach and monitor its success
- apply known solutions to routine problems

manage conflict as it arises.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- likely sources of conflict in own job/workplace
- indicators of potential conflict
- communication approaches to resolving conflict
- conflict resolution skills relevant to own job/workplace.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence based on a holistic assessment of the evidence.
- The collection of performance evidence:
 - should occur over a range of situations which include typical disruptions to normal, smooth operations
 - will use one or a combination of:
 - totally off the job, in which case it will use case studies and role plays as well as questions
 - evidence drawn totally from performance in the workplace

- will typically include a supervisor/third-party report focusing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
- may use industry-based simulation for all or part of the unit particularly where safety, lack of opportunity or significant cost is an issue.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment in a simulated environment should use evidence collected from one or more of:
 - walk-throughs
 - pilot plant operation
 - demonstration of skills
 - industry based case studies/scenarios
 - ‘what ifs’.
- Knowledge evidence may be collected concurrently with performance evidence (provided a record is kept) or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept).
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- As a minimum, assessors must satisfy the Standards for Registered Training Organisations 2015 assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>

MSS024020 Recognise common geological landforms and samples

Modification History

Release 1. Updated unit code. Changes to performance criteria. Range of conditions removed. Assessment requirements amended. Equivalent outcome.

Application

This unit describes the skills and knowledge to recognise common geological landforms and relate these to basic geological processes and other ecosystem components. Personnel are also expected to obtain near surface samples of common rocks, minerals and soils and identify them using classification tables and charts.

This unit applies to environmental technicians working in a range of industry sectors, such as environmental services; environmental compliance, auditing and inspection; groundwater and clean water; solid and hazardous waste management; management of contaminated sites; site remediation or rehabilitation; geotechnical services and civil engineering; natural resource management.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil

Competency Field

Sampling and testing

Unit Sector

Environmental

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | |
|---------------------------------|-----|--|
| 1 Prepare for field work | 1.1 | Review job request to identify the equipment involved, samples to be collected and test methods |
| | 1.2 | Identify hazards and read workplace safe work procedures associated with the site, samples, test |

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. methods and equipment used
	1.3 Confirm site location, access, timing and any client requirements
	1.4 Assemble all required equipment and materials and check that they are fit for purpose
	1.5 Stow equipment and materials to ensure their safe transport
	1.6 Arrange transport to site
	1.7 Liaise with appropriate personnel on arrival at site to ensure safety and minimise disruption to others
2 Recognise geological structures and processes	2.1 Recognise common landforms and relate these to geological processes
	2.2 Read and interpret simple geological maps, diagrams and aerial photos
	2.3 Apply principles of geological processes and the geological timescale to explain the formation and occurrence of common rocks, minerals, soils and aquifers
3 Identify common rocks and minerals	3.1 Sort handheld specimens of common sedimentary, igneous and metamorphic rocks by observing their textural, structural and mineralogical properties
	3.2 Identify handheld specimens of common rocks and minerals by comparing their physical properties with classification charts and tables
4 Identify common soil types and their properties	4.1 Obtain soil samples using specified sampling equipment and methods
	4.2 Examine soil colour, texture and properties of soil components to classify common soils

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	4.3 Identify and describe simple soil profiles at field sites
	4.4 Recognise influences of rock type, drainage, age and climate on development of soil profiles
	4.5 Recognise common forms of soil degradation
5 Relate local geology to flora and fauna and land use	5.1 Apply the basic relationships between parent material, climate, topography, soils and living ecosystem components to interpret sites
	5.2 Recognise how local geology can influence the revegetation or rehabilitation of sites
6 Maintain a safe work environment	6.1 Use safe work procedures and protective equipment to ensure personal safety and that of others
	6.2 Minimise environmental impacts of sampling and/or testing and generation of waste
	6.3 Collect and/or dispose of all waste in accordance with environmental and quarantine requirements and workplace procedures
7 Report data and finalise documentation	7.1 Report field data in the required formats and expected timeframe
	7.2 Complete all required documentation
	7.3 Maintain the security and confidentiality of data and documentation in accordance with workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS024008 Recognise common geological landforms and samples.

Links

The MSS Sustainability Companion Volume implementation Guides are available from VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

Assessment Requirements for MSS024020 Recognise common geological landforms and samples

Modification History

Release 1. Updated unit code. Changes to performance criteria. Range of conditions removed. Assessment requirements amended. Equivalent outcome.

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- recognised and accurately described the geological landforms and associated geological processes for at least 2 different sites
- identified and accurately described the common rocks, minerals and soil types associated with at least 2 different sites.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- an overview of major fields of geology
- structure of the earth's core, crust and major components
- geomorphology and landforms, including agents of erosion and transportation, stability of rocks and minerals in different environments and depositional processes
- regolith, including physical and chemical weathering, climactic effects, stability of minerals, weathering processes, soil formation, common soil types and composition
- rock cycle
- fundamentals of:
 - igneous rocks, including origin of magma, movement of magma, volcanic, plutonic, types of volcanoes and simple tectonic setting
 - sedimentary rocks, including clastic, chemical, organic types, grain size and composition, sorting, roundness, lithification, sedimentary structures and environments of deposition
 - metamorphic rocks, including regional, contact, dynamic metamorphic zones, rock textures and fabrics
- structural geology concepts including: folds, faults, tilts and uplifts
- overview of geological time, including eras, periods, relative time, stratigraphic methods for establishing relative ages of strata, and radiometric dating
- fundamentals of palaeontology, including preservation of fossils and their role in dating strata
- links between local geology, climate, topography and living components of ecosystems
- equipment

- geological sampling and in-field test methods routinely used in job role, including:
 - pre-use checks and safe operating procedures for sampling and test equipment
 - sampling procedures
 - purpose, principles and measurement steps of test
 - calculation steps to give results
 - expected values for sample type
- hazards; health, safety and environment requirements for work role.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of facilities, equipment and resources, including:
 - access to sites and vehicle transport
 - suitable survey, sampling and testing equipment
 - documentation including: maps and aerial photos; classification charts and tables for rocks, minerals and soils; user manuals, workplace safety procedures, test or survey methods, workplace procedures governing geological sampling and in-field testing

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

The MSS Sustainability Companion Volume implementation Guides are available from VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

MSS025014 Perform sampling and testing of contaminated sites

Modification History

Release 1. Supersedes and is equivalent to MSS025014A Perform sampling and testing of contaminated sites.

Release 2. Prerequisite code updated. Equivalent outcome.

Application

This unit of competency covers the ability to collect samples and conduct field tests/measurements while working safely in a (potentially) hazardous environment. Personnel work under the close supervision of environmental scientists or engineers and use established site health and safety plans and sampling/field testing procedures. They are required to continually monitor levels of risk and use prescribed safe working procedures and safety equipment.

This unit of competency is applicable to environmental technicians in a range of industry sectors, such as environmental services (e.g. sampling and monitoring of air quality, water and soil); environmental compliance, auditing and inspection; management of pollution and contaminated sites; and site remediation or rehabilitation.

While no specific licensing or certification requirements apply to this unit at the time of publication, environmental monitoring and management activities are governed by relevant legislation, regulations and/or external accreditation requirements. Local requirements should be checked.

Pre-requisite Unit

MSS024020 Recognise common geological landforms and samples

Competency Field

Sampling and testing

Unit Sector

Environmental

Elements and Performance Criteria

Elements describe the Performance criteria describe the performance needed to

essential outcomes.	demonstrate achievement of the element.
1 Assist with preliminary site study	<p>1.1 Locate and review relevant legislative, regulatory and/or planning requirements and register for contaminated sites.</p> <p>1.2 Confirm the site location, scope and purpose of the investigation and assigned tasks with supervisor.</p> <p>1.3 Source and review available site data, including site history, geology, hydrogeology and meteorology data.</p> <p>1.4 Summarise information to assist with preparation of a site chronology and identification of gaps or inadequacies in data, potential contaminants and areas of possible contamination.</p>
2 Prepare for site activities	<p>2.1 Confirm the scope and purpose of sampling, testing and/or monitoring activities and data requirements with supervisor.</p> <p>2.2 Liaise with site controller to access site, identify locations of services and arrange for induction, clearances and/or permits, as necessary.</p> <p>2.3 Review risks posed by site contaminants and review the health and safety plan/safe work procedures specified for planned activities.</p> <p>2.4 Confirm the sampling/test methods, sampling/test points, numbers and types of samples and/or measurements with supervisor.</p> <p>2.5 Review specified sampling/test methods with close attention to the sequence of steps and details for each.</p> <p>2.6 Check the operation/calibration of required sampling equipment, test and/or monitoring instruments in accordance with relevant methods, standards and manufacturer instructions.</p> <p>2.7 Ensure all required reagents, solutions and/or calibration standards are obtained and ready for field use.</p> <p>2.8 Assemble and safely stow all sampling equipment, test instruments, materials, containers, safety equipment and personal protective equipment (PPE).</p>

- 2.9 Arrange suitable transport to, from and around site, as required.
- 3 **Assist with site inspection**
- 3.1 Sketch, map and/or photograph the site features.
- 3.2 Conduct a visual inspection to identify site features that may inform the need for and design of subsequent investigations.
- 3.3 Collect preliminary samples, as directed, to help characterise possible contamination hazards prior to detailed investigations.
- 4 **Conduct sampling as directed**
- 4.1 Locate sampling/test points and any services at the site.
- 4.2 Work effectively with other site personnel during drilling excavation and/or survey operations to collect reliable samples, logs and measurements, as necessary.
- 4.3 Follow specified procedures to minimise hazards and/or contamination of samples, self/others, equipment and environment.
- 4.4 Collect and preserve required samples in accordance with sampling plan, relevant methods and/or standards.
- 4.5 Record all information and label samples in accordance with traceability requirements.
- 4.6 Record environmental conditions and/or atypical observations made during sampling that may impact on validity or integrity of samples.
- 4.7 Store and transport all samples back to base in accordance with specified method, chain of custody requirements and relevant codes.
- 5 **Conduct field tests and/or monitoring as directed**
- 5.1 Obtain sample or sub-sample for designated field test.
- 5.2 Check that all equipment, instruments, reagents and calibration standards are fit for purpose.
- 5.3 Set up and calibrate instruments as necessary to ensure

- safe operation and valid results.
- 5.4 Operate equipment/instruments in accordance with test method requirements.
- 5.5 Follow specified procedures to minimise hazards and/or contamination of samples, self/others, equipment and environment.
- 5.6 Perform required measurements and tests on all samples and standards, if appropriate, in accordance with specified methods.
- 5.7 Keep accurate, complete and traceable records of all field observations and test results.
- 6 **Clean, decontaminate and/or dispose of contaminated equipment and materials**
- 6.1 Inspect equipment to assess the degree of contamination.
- 6.2 Use specified procedures to remove material from the exposed outer surfaces of sampling/test equipment and PPE.
- 6.3 Use specified procedures and reagents to neutralise, wash and/or rinse exposed surfaces.
- 6.4 Collect rinsate blanks for analysis and preserve/store in accordance with specified procedure or standard.
- 6.5 Stow items for transport only when thoroughly dry.
- 6.6 Safely collect all debris and sillage from decontamination in accordance with relevant regulations and codes.
- 7 **Finalise site activities**
- 7.1 Arrange for the safe disposal of all hazardous wastes in accordance with relevant regulations and codes.
- 7.2 Ensure all site observations, sampling/test data and results are accurately transferred to the workplace information management system.
- 7.3 Store samples in accordance with method, chain of custody requirements and relevant codes, as necessary.
- 7.4 Ensure samples are dispatched for analytical testing within recommended holding times.

- | | | | |
|---|---|-----|---|
| 8 | Process and interpret data | 8.1 | Review test/monitoring data noting atypical observations. |
| | | 8.2 | Calculate required quantities using relevant test method and ensure values are consistent with expectations. |
| | | 8.3 | Estimate and document uncertainty of measurement in accordance with workplace procedures, if required. |
| | | 8.4 | Record processed results in accordance with workplace procedures. |
| | | 8.5 | Interpret trends in data and/or results and report atypical results promptly to appropriate personnel. |
| | | 8.6 | Determine if obvious procedure or equipment problems have led to atypical data or results. |
| | | 8.7 | Compare results with established threshold levels or environmental quality concentration limits, if relevant. |
| | | 8.8 | Finalise reporting of results in accordance with workplace requirement. |
| | | | |
| 9 | Maintain a safe work environment | 9.1 | Clean all equipment, containers, work area and vehicles according to workplace procedures. |
| | | 9.2 | Check serviceability of all equipment before storage. |
| | | 9.3 | Use defined safe work practices and PPE to ensure personal safety and that of others. |
| | | 9.4 | Minimise the generation of wastes and environment impacts. |

Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Legislation, regulations, standards, codes, workplace procedures and requirements include the latest version of one or more of:

- federal legislation, such as the Environment Protection and Biodiversity Conservation Act
- state/territory government legislation and local government by-laws, policies, regulations and plans dealing with land use, acquisition, planning and protection; environmental protection and impact assessment; and pollution and contaminated sites
- legislation, standards and codes of practice for work health and safety (WHS)
- registration/licensing and/or accreditation requirements
- Australian and international standards covering environmental management (e.g. AS ISO 14050 Environmental management – Vocabulary and AS/NZS ISO 14000 Basic Set:2007 Environmental Management Basic Set); investigation and sampling of sites with potentially contaminated soil (e.g. AS 4482.1-2005 Guide to the investigation and sampling of sites with potentially contaminated soil - Non-volatile and semi-volatile compounds, and AS 4482.2-1999 Guide to the sampling and investigation of potentially contaminated soil - Volatile substances)
- industry guidelines such as: National Environment Protection Measure Assessment of Site Contamination - Schedule B (2) Guideline on data collection, sample design and reporting
- site plans, maps and specifications; methods and procedures for sampling and in-field testing to meet workplace, client and/or regulatory/certifying body requirements; client sampling schemes and sampling plans
- workplace documents, such as standard operating procedures (SOPs); work schedules; recording and reporting procedures; equipment manuals and warranties; supplier catalogue and handbooks; safety data sheets (SDS) and safety procedures; waste minimisation, containment, processing and safe disposal procedures.

Site information includes one or more of:

- location of site, property details, and current and proposed use
- site history details, such as:
 - site plans, zoning and adjacent land use
 - current and previous present owners, occupiers, users and contaminating uses/activities
 - current and previous buildings and structures

- site industrial processes, raw materials, products, wastes/discharges and waste disposal locations
- product spills/losses, incidents and accidents
- sewer and other utilities/services, plans and previous power sources
- chemical storage and transfer areas
- earth moving activities
- interviews, consultations and complaints.

Sources of information include one or more of:

- government departments, such as Environment, Environmental Protection, Conservation, Primary Industry, Water Resources, Lands and Survey, and Planning
- agencies, such as the Bureau of Meteorology and Geoscience Australia
- libraries and environmental data sets
- companies and employees, community representatives and historical societies.

Visual inspection of the site includes one or more of:

- current uses of site
- disturbed, coloured or stained soil, and bare soil patches
- disturbed or distressed vegetation
- unusual odour
- quality of surface water and surface water drainage
- condition of buildings, floors and roads
- presence of chemical containers and holding tanks
- presence of fill, containment areas, sumps, drains, landfill, and obvious surface hazards, such as asbestos
- underground structures that may be associated with sub-surface contamination
- condition of materials storage/handling facilities, and solid/liquid waste disposal areas
- evidence of off-site migration, on-site spillage of dangerous goods, and staining/sheens on surface water.

Scope and purpose of sampling, field tests and/or monitoring include one or more of:

- determining nature of contamination
- determining concentration and distribution of contamination
- identifying types and concentrations of contaminants for assessing potential exposure levels/risks
- monitoring site conditions to check licence compliance or determine need for remedial action
- rapid analysis of samples that may change between collection

and analysis

- rapid sample analysis during remediation activities
- determining if clean-up has been achieved
- screening of samples in the field.

Samples include one or more of:

- air, soil gases and dust
- soils
- surface water and groundwater
- radiation
- replicates, field and trip (transport) blanks, rinsate blanks and background samples.

Field tests and monitoring include one or more of:

- soil profile measurements and depth of fill
- measurement of bores and water depth
- screening of gas/vapours, soil and water samples using:
 - colour and texture
 - bioluminescence/toxicity test kits
 - colorimetric methods and dye shake tests
 - pH, electrical conductivity, redox potential, temperature, dissolved oxygen and ammonia concentration
 - photo ionisation detectors (PID)
 - flame ionisation detectors (FID)
 - gas detectors
 - portable infrared analysers for methane and carbon monoxide (CO)
 - portable X-ray fluorescence spectrum analyses
 - field gas chromatography
 - measurement of radiation.

Safety procedures include one or more of:

- preparation/approval of site health and safety plan for sampling/testing, and safe work permits/approvals
- use of safe work method statements, site safety induction, risk cards, 'step back' and safety checks, SDS, emergency procedures, and reporting procedures for safety problems
- use of (disposable) PPE such as boots, helmets, gloves, eye and ear protection, overalls, face masks and filters, respirators, encapsulated suits, safety harness and safety torches
- use of hazardous gas monitors/detectors, personal monitors, environmental monitors and radiation dosimeters, and communication equipment
- ensuring two persons are present

- working upwind of known contaminants
- prohibition of eating, drinking and smoking
- decontamination facilities, procedures and materials for plant, equipment and personnel
- safe collection and disposal of hazardous waste
- clear access for emergency vehicles
- regular medical checks.

WHS and environmental management requirements include:

- compliance with relevant federal/state/territory WHS legislation at all times
- assuming that samples are potentially hazardous and applying standard precautions
- accessing and applying current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and state/territory Departments of Health, where relevant.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS025014A Perform sampling and testing of contaminated sites

Links

The MSS Sustainability Companion Volume implementation Guides are available from VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

Assessment Requirements for MSS025014 Perform sampling and testing of contaminated sites

Modification History

Release 1. Supersedes and is equivalent to MSS025014A Perform sampling and testing of contaminated sites.

Release 2. Prerequisite code updated. Equivalent outcome.

Performance Evidence

Evidence of competence in this unit must satisfy all of the requirements of the elements and performance criteria, and include demonstration of:

- conducting at least **one (1)** visual site inspection to identify a site's key features and potential contamination hazards and to inform the design of subsequent investigation(s)
- safely collecting, preserving and labelling a set of samples from at least **one (1)** contaminated site in accordance with a given sampling plan
- safely preparing (sub)samples and conducting at least **two (2)** different tests/analyses in the field using given test methods
- interpreting and applying regulatory and planning requirements for contaminated sites, site sampling/monitoring plans, sampling/test methods, standards and workplace procedures
- recognising hazards and assessing risks; interpreting and applying health and safety plans and safe work methods, including use of designated safety equipment and personal protective equipment (PPE)
- planning for field activities, including researching and summarising site history and chronology, analysing existing data and/or reports, identifying potential contaminants and possible areas of contamination
- preparing for field activities, including arranging site access, induction, permits, conducting reconnaissance, reviewing safety requirements and securing the resources required
- selecting, checking, packaging and transporting supplies, equipment and instruments to and from the field
- collecting reliable samples in accordance with site sampling plan/methods and paying close attention to any pre-treatment, container, preservation, storage, labelling and traceability requirements
- demonstrating correct and safe use of test equipment and/or analysers including set-up, pre-use checks, calibration and performance checks to obtain reliable data
- recognising atypical results as out-of-normal range or an artefact; identifying and rectifying basic instrument faults
- accurately recording site features, environmental conditions and any observations that may impact on reliability of field data

- calculating required quantities using appropriate units, precision, uncertainties and/or calibration graphs
- interpreting gross features/trends in data, identifying atypical results and/or comparing results with established threshold levels or environmental quality concentration limits
- seeking advice when issues/problems are beyond scope of competence/responsibility
- writing/compiling concise and accurate reports in accordance with workplace procedures
- maintaining, cleaning and decontaminating equipment and PPE in accordance with workplace procedures
- working safely and following relevant legislative requirements for the disposal of waste and the preservation of the environment.

Knowledge Evidence

Must provide evidence that demonstrates knowledge of:

- scientific terminology covering the sampling/testing of air, water and soil at contaminated sites and relevant to job role
- overview of specific legislation, regulations, standards and codes of practice related to contaminated sites, and threshold levels or environmental quality concentration limits for contaminants
- common site hazard and risks, risk assessment techniques and use of risk cards
- properties and health risks associated with groups of contaminants, such as:
 - asbestos
 - heavy metals, such as lead, chromium and arsenic
 - chemical manufacture and industry wastes, such as acids/alkalis, resins, dyes, paints, solvents, fuels, oils, fertilisers, insecticides, herbicides, fungicides, aromatic hydrocarbons, phenols, chlorinated phenols, chlorinated benzenes and organochlorines
- overview of sampling plan design for contaminated sites, including preliminary sampling, non-targeted/grid sampling, targeted/judgemental sampling, and different sampling strategies for gas, water and soil
- sampling/test methods/standards relevant to site activities undertaken
- function of key instrument components and operating principles of common sampling/test equipment relevant to site activities undertaken
- common procedure/equipment problems leading to atypical data/results
- processes for labelling, ensuring chain of custody/traceability of samples and management of large volumes of data
- data processing, recording and reporting procedures
- hazards, health, safety and environment requirements relevant to site activities undertaken; use of safe work methods, safety equipment and PPE.

Assessment Conditions

- Judgement of competence must be based on holistic assessment of the evidence. Assessment methods must confirm consistency of performance over time, rather than a single assessment event.

- This unit of competency is to be assessed in the workplace, or a simulated workplace environment. A simulated workplace environment must reflect realistic operational workplace conditions that cover all aspects of workplace performance, including the environment, task skills, task management skills, contingency management skills and job role environment skills.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process such as workbooks, written assessments or interviews (provided a record is kept in each case).
- Holistic assessment methods include:
 - inspection of contaminated site samples collected by the candidate
 - review of observations, measurements, test results and calculations provided by the candidate
 - review of sampling/test records and site reports prepared by the candidate
 - feedback from supervisors about the candidate's ability to perform sampling and testing of contaminated sites in accordance with given methods and workplace procedures, work safely and produce reliable results within the agreed timeframe
 - oral and/or written questions to assess the candidate's understanding of the principles of sampling/testing of contaminated sites, risk and safety management at contaminated sites, operation of sampling equipment/test instruments/analysers, processing and analysis of data.
- Access is required to all instruments, equipment, materials, workplace documentation, procedures, and specifications associated with this unit including, but not limited to:
 - access to contaminated sites and vehicles
 - appropriate sampling containers, sampling/test equipment, analysers, reagents/consumables, digital camera, global positioning system (GPS), logbooks and data loggers, and/or computers and communication equipment
 - specified PPE, safety equipment and decontamination equipment
 - workplace procedures, work program, maps, site plans, site sampling plans and test methods, standards, environmental data sets, equipment manuals, safety procedures and safe work methods.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- The assessor must demonstrate both technical competency and currency.
- Technical competence can be demonstrated through:
 - relevant VET or other qualification/Statement of Attainment AND/OR
 - relevant workplace experience
- Currency can be demonstrated through:
 - performing the competency being assessed as part of current employment OR

- having consulted with an organisation providing environmental monitoring, management or technology related services about performing the competency being assessed within the last twelve months.

Links

The MSS Sustainability Companion Volume implementation Guides are available from VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

MSTGN3003 Estimate and cost job

Modification History

Release 1. Supersedes and is equivalent to LMTGN3003B Estimate and cost job

Application

This unit of competency covers skills and knowledge required to estimate materials, labour and time requirements, and establish costs for products and services.

The unit of competency applies to estimating and costing products and services for an identified project, activity or operation.

Discretion, initiative and judgement must be demonstrated on the job, either individually or in a team environment. Work may involve referral of matters to other workplace personnel. Work is undertaken according to established procedures involving a range of products, services and equipment.

This unit of competency is applicable to all sectors of the textiles, clothing and footwear (TCF) industry.

Work may be conducted in small to large scale enterprises and may involve individual and team activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Generic

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|---|--|-----|---|
| 1 | Gather relevant information about job | 1.1 | Obtain details of customer requirements through discussion with customer or from information supplied |
| | | 1.2 | Develop details of products and services to be provided and any special provisions |
| | | 1.3 | Determine delivery details and methods of transportation, where necessary |
| | | 1.4 | Record details and document specifications |
| 2 | Estimate materials, labour and time | 2.1 | Research, locate and interpret technical information about materials, equipment, products and services required for the job |
| | | 2.2 | Estimate types, quality and quantities of materials required for work |
| | | 2.3 | Estimate acceptable price range for required products |
| | | 2.4 | Estimate labour requirements to perform required services |
| | | 2.5 | Estimate time requirements to perform required services |
| 3 | Calculate costs | 3.1 | Calculate total materials costs and labour costs |
| | | 3.2 | Calculate transport and delivery costs for products, as required |
| | | 3.3 | Determine allowances for overheads and mark-up percentages |
| | | 3.4 | Calculate total job cost |
| | | 3.5 | Calculate final cost to customer |
| 4 | Document and | 4.1 | Use calculators, computers with appropriate software or other aids to estimate, calculate and verify costings |

- verify details** according to workplace procedures
- 4.2 Document details of costs and charges
 - 4.3 Obtain verification of costs, calculations and other details by other enterprise personnel, as required
 - 4.4 Prepare customer quotation in appropriate format to meet required enterprise or industry standards
 - 4.5 Document and record details for future reference

Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Workplace procedures include one or more of the following:

- requirements prescribed by legislation, awards, agreements and conditions of employment
- SOPs
- work instructions
- oral, written and visual communication
- quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control and recycling
- WHS practices

Australian Standards include:

- the relevant industry or Australian Standards that are current at the time this unit is being undertaken

Unit Mapping Information

Release 1. Supersedes and is equivalent to LMTGN3003B Estimate and cost job

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a203ec5c-de7d-406b-b3e1-8f1a9b76e92e>

Assessment Requirements for MSTGN3003 Estimate and cost job

Modification History

Release 1. Supersedes and is equivalent to LMTGN3003B Estimate and cost job

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria, and include:

- reading and following work instructions, standard operating procedures (SOPs), safe work practices
- applying relevant standards
- interpreting work orders, customer requirements, specifications and instructions for products and materials to be used
- locating and interpreting technical information about products, materials, equipment and operating procedures
- estimating and costing materials and equipment, labour, time, transport and overheads, on at least two (2) occasions
- calculating total costs of products or services
- calculating costs to customer and preparing quotation
- using calculators, computer programs and other aids to estimate, calculate and communicate costs
- documenting and communicating job-related information, including customer requirements; products, materials and labour required; costing calculations for products, materials and labour and special conditions in required format
- maintaining accurate records.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- relevant Australian Standards
- products and services offered by the enterprise
- details of materials, products and equipment
- workplace costing procedures
- components of overheads costs
- components of direct labour costs
- work flow and manufacturing processes
- basic mathematical processes and formulas
- labour rates and approximate costs of products and materials
- use of calculators, computers and other technology

- industry standards for customer service and providing quotations
- workplace procedures
- recording and reporting practices.

Assessment Conditions

- Assessors must:
 - satisfy National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) assessor requirements
 - have vocational competency in estimating and costing jobs, at least to the level being assessed, with relevant industry knowledge and experience.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The unit is applicable to all TCF sectors and assessment must ensure it is delivered to suit the industry it is being applied to.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a203ec5c-de7d-406b-b3e1-8f1a9b76e92e>

NWPIRR002 Operate basic flow control and regulating devices in irrigation systems

Modification History

Release	Comments
1	<p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to NWP222A Operate basic flow control and regulating devices in irrigation systems.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • Elements 1 and 2 merged • PC 2.2 removed • PC 4.2 and 4.3 reworded

Application

This unit describes the skills required to operate basic flow control and regulating devices in irrigation systems.

This unit applies to those working as field and operational staff with responsibility for using flow control and metering devices according to organisational procedures.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently or in a team, under direct supervision using own familiar resources as required, while performing routine tasks in range of familiar contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Irrigation

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Monitor and regulate required flows in irrigation systems	1.1 Access and apply operating requirements for flows in irrigation systems. 1.2 Use equipment to assist operational activities. 1.3 Monitor, measure and record flows at designated locations and systems according to schedule. 1.4 Identify potential operational problems and provide proactive advice. 1.5 Adjust flow regulation and control mechanisms to increase and decrease flow.
2. Record and report system adjustments	2.1 Produce information relating to flow adjustments. 2.2 Collect, record and report information on flows and abnormalities.
3. Respond to contingencies	3.1 Identify and assess potential risks and contingencies in the operation of flow control and regulating devices. 3.2 Respond to potential and actual risks and contingencies. 3.3 Inform relevant personnel within organisation of potential risks.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website..

Unit Mapping Information

This unit supersedes and is equivalent to NWP222A Operate basic flow control and regulating devices in irrigation systems.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIRR002 Operate basic flow control and regulating devices in irrigation systems

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none">• Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- collecting and reporting system performance information
- interpreting data
- producing information, including at least one of:
 - meter reading reports
 - daily running sheets
- adjusting and maintaining flow system control mechanisms
- securing flow regulation devices
- identifying flow requirements
- preparing for and conducting flow monitoring
- identifying and reporting operational problems
- completing records and reports

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- impact of the principles of hydraulics on the operation of flows
- system layout
- risk factors and potential hazards
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of system and site

- system flow control mechanisms
- relevant lock-out procedures for mechanical and electrical installations

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIRR005 Develop and review a surface water plan

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to develop and review a surface water plan. It includes ensuring environmental considerations are met and source of supply is maintained. It also includes applying and adhering to relevant legislation, industry regulations and workplace procedures.

This unit applies to leaders working in water organisations with responsibility for the development and review of surface water resources including but not limited to rivers and streams, dam catchments, flood retarding, overland flow controls and related drainage. It does not include flood routing through storages.

Those undertaking this unit would work autonomously and lead personnel whilst performing sophisticated tasks in a range of contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Irrigation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1 Prepare for surface water flow and quality management**
 - 1.1** Identify hazards, assess risks and implement control measures associated with surface water flow requirements
 - 1.2** Identify, interpret and synthesise relevant data to monitor and test water flow, quality and quantity requirements, including release figures
 - 1.3** Identify, interpret and analyse historic source water flow and system capacity information
 - 1.4** Identify and interpret environmental factors impacting surface water flows and quality
 - 1.5** Identify, interpret and review resource and operational protocols
 - 1.6** Complete complex calculations and incorporate analysed results into the surface water plan
- 2 Develop the surface water plan**
 - 2.1** Identify and interpret surface water management requirements
 - 2.2** Identify, interpret and validate stakeholder requirements impacting surface water
 - 2.3** Develop a surface water plan according to relevant legislation, industry standards and workplace procedures
 - 2.4** Identify, investigate and report breaches of surface water management controls
- 3 Review the surface water plan**
 - 3.1** Analyse and report deviations from planned performance measures
 - 3.2** Review objectives of the management and implementation plans
 - 3.3** Review parameters for water usage and quality through monitoring and testing programs
 - 3.4** Report and recommend changes to plan objectives, workplace procedures and usage and quality parameters
 - 3.5** Provide advice and guidance to water users and stakeholders

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR063 Develop and review surface water management plan.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIRR005 Develop and review a surface water plan

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- developing and reviewing a surface water plan to ensure environmental considerations are met and source of supply is maintained
- developing effective surface water plans addressing the water organisation's objectives and requirements
- gathering, interpreting and synthesising information including:
 - historical data
 - monitoring and testing results
 - relevant legislation, industry standards and workplace procedures
 - stakeholder requirements
- identifying and interpreting environmental factors
- identifying hazards, assessing risks and implementing control measures associated with surface water flow requirements
- preparing reports and recommendations for changes to the objectives of the surface water plan and its implementation
- reviewing the implementation and development plan
- reading and interpreting complex data and performing complex calculations to track and manage performance of surface water
- using data from testing and other monitoring arrangements to track the performance of the surface water plan and inform the review of the plan

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- climatic and weather characteristics and impacts
- changes to water flow and levels over time
- complex calculations
- hydraulic analysis
- physical assets associated with surface water management

- public and government reporting requirements
- relevant legislation, regulations, industry standards and workplace procedures relating to surface water
- relevant water data including:
 - flow
 - quality and quantity requirements
 - release figures
- rights of water authority control and management procedures
- risk management principles
- stakeholder requirements and rights associated with managing surface water
- surface water sources

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations. Where this is not appropriate, assessment must occur in suitable simulated workplace operational situations reflecting actual workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment currently used in industry
- applicable relevant documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIRR006 Develop and review an irrigation system plan

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to develop and review an irrigation system plan.

It includes analysing total irrigation system performance, liaising with customers and stakeholders and reviewing and refining the irrigation system plan. It also includes applying and adhering to relevant legislation, industry regulations and workplace procedures.

This unit applies to leaders with responsibility for the development and review of plans for the management of irrigation systems. Those undertaking this unit would work autonomously and lead personnel whilst performing sophisticated tasks in a range of contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Irrigation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for irrigation system management

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Determine, interpret and analyse water quantity and quality requirements including release and flow rates

- 1.2 Access, interpret and synthesise historical irrigation system capacity and delivery performance information
 - 1.3 Identify and interpret legislative, organisational and environmental requirements and determine system constraints impacting the delivery of irrigation water
- 2 Develop an irrigation system plan**
 - 2.1 Identify and interpret irrigation system management requirements
 - 2.2 Identify and validate customer requirements for irrigated culture
 - 2.3 Consult and communicate with stakeholders and obtain input for the irrigation system plan
 - 2.4 Develop and document an irrigation system plan and an implementation strategy
 - 2.5 Identify, investigate and report breaches of customer entitlements and other usage provisions
- 3 Review and refine the irrigation system plan**
 - 3.1 Evaluate operations and maintenance activities and system performance and incorporate into the irrigation system plan review
 - 3.2 Review objectives of the irrigation system plan and implementation strategy
 - 3.3 Recommend changes to plan objectives and operational and maintenance procedures
 - 3.4 Provide advice and guidance to stakeholders

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR062 Develop and review irrigation system management plan.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIRR006 Develop and review an irrigation system plan

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- assessing environmental impacts
- conducting investigations
- consulting and communicating with stakeholders and customers
- determining and interpreting water quantity and quality requirements
- developing and reviewing the operation and maintenance of irrigation systems
- developing effective irrigation system plans addressing the organisation's objectives and requirements
- gathering, interpreting and synthesising information for incorporating into the irrigation system plan including:
 - customer flow rates and usage
 - delivery performance
 - historical system capacity data
 - key indicators
 - stakeholder requirements
- interpreting and applying legislation, standards and policies
- preparing reports and recommendations for changes to the objectives of the plan
- reviewing the implementation and development plan
- using data from monitoring arrangements to track performance of the irrigation system plan

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- customer and stakeholder expectations and requirements
- irrigation operations and maintenance activities
- legislation and regulations including:
 - channel, pipe and pump
 - customer entitlements

- flow rates
- relevant workplace policies and procedures associated with irrigation system plans
- water quantity and quality requirements including release and flow rates
- water requirements for irrigated cultures within the system

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations. Where this is not appropriate, assessment must occur in suitable simulated workplace operational situations reflecting actual workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment currently used in industry
- applicable relevant documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIRR007 Implement and coordinate a surface water plan

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to implement and coordinate a surface water plan.

It includes ensuring environmental and sustainability considerations are met, where appropriate source of supply is maintained and controls for surface water management including catchment land use, flow controls and retardation, release flows and managed usage are implemented and effectiveness monitored.

This unit applies to those working as leaders with responsibility for the management of surface water resources. Those undertaking this unit would work autonomously, leading staff, while performing sophisticated tasks in a range of familiar contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Irrigation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Develop and implement monitoring and testing

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Develop an implementation strategy for the surface water plan according to workplace procedures

programs

- 1.2 Coordinate management plan activities relating to the surface water plan and determine responsibilities and timelines for implementation
 - 1.3 Plan, design and implement monitoring and testing programs
 - 1.4 Identify hazards, assess risks and implement control measures for monitoring and testing programs
 - 1.5 Gather historical surface water collection information and evaluate as input to the planning process
 - 1.6 Monitor water usage, water flow and water quality according to the plan
 - 1.7 Record and analyse test results and education programs
- 2 **Monitor and evaluate performance of surface water plans**
 - 2.1 Review objectives of the surface water and implementation plans
 - 2.2 Identify, investigate and report deviations of surface water flows and controls from management objectives
 - 2.3 Monitor and review environmental factors impacting the collection of surface water
 - 2.4 Make recommendations for changes to plan objectives and procedures and usage and quality parameters
 - 2.5 Provide advice and guidance to water stakeholders
- 3 **Report on monitoring and implementation activities**
 - 3.1 Identify and report deviations from the surface water plan
 - 3.2 Review and report operational problems of controls and regulations from the surface water and implementation plans
 - 3.3 Make recommendations for changes to plan objectives

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR072 Implement and coordinate surface water management plan.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIRR007 Implement and coordinate a surface water plan

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- designing and implementing testing processes and programs
- gathering, interpreting and synthesising information to underpin the implementation of a surface water plan including:
 - current legislation and standards
 - effectiveness of plan controls
 - historical data
 - stakeholder requirements
 - water quantity and quality test results
- implementing management plans for surface water to ensure environmental considerations are met and source of supply is maintained
- monitoring and evaluating the outcomes of the surface water plan
- preparing reports and recommendations for future action
- providing advice about water usage and communicating with stakeholders
- reading and interpreting numerical data related to surface water and environmental factors

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- climatic and weather characteristics and impacts
- environmental and sustainability considerations
- hydraulic analysis
- monitoring and performance procedures
- operation and interrelationships of surface water flows and controls
- operational and maintenance problems
- physical and regulatory control limitations
- relevant legislation, industry standards, regulations and workplace procedures
- risk management principles

- surface water system objectives

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations. Where this is not appropriate, assessment must occur in suitable simulated workplace operational situations reflecting actual workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment currently used in industry
- applicable relevant documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIRR012 Construct open earthen channels or drains

Modification History

Release	Comments
1	<p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to NWP251B Construct open earthen channels or drains.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • PC 1.5 revised

Application

This unit of competency describes the skills required to plan and prepare for the construction of open channels or drains and to complete construction operations and subsequent site restoration.

This unit applies to those working as field and operational staff involved in the construction of earthen channels and drains for stormwater or irrigation systems or the remodelling or reconstruction of unserviceable systems.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to, particularly those related to WHS and manufacturers' guidelines.

Those undertaking this unit would work under direct supervision, while performing routine tasks and ensuring minimal damage to the environment, in a familiar context.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Irrigation

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Plan and prepare for construction work	1.1 Determine work requirements from design plans, specifications, instructions and work orders. 1.2 Check site and identify hazards. 1.3 Make appropriate drainage and diversion arrangements without damage to environment. 1.4 Check equipment and open-cut excavation methods to ensure that safety requirements of task and site are met. 1.5 Select suitable soil material.
2. Construct channels or drains	2.1 Construct earthen channels, drains and batters to planned width, depth and gradient. 2.2 Compact soil, apply additives and take earth samples. 2.3 Check construction works to ensure that specifications are met.
3. Restore work site and equipment	3.1 Check, maintain and store equipment, tools and materials. 3.2 Restore work site and add environmental improvements or controls to complete work, according to plans.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5					
Learning NA					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to NWP251B Construct open earthen channels and drains.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIRR012 Construct open earthen channels or drains

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none"> Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- identifying and responding to operational problems
- producing reports and logs
- using safety and personal protective equipment
- using tools and machinery
- interpreting plans, charts and instructions
- applying procedures and standards
- applying channel, drain and batter construction techniques
- identifying soil types, mechanics and compaction rates
- selecting and operating appropriate compaction plant, including tamping foot and smooth drum roller
- operating communication systems
- performing work related calculations
- constructing open earthen channels and drains
- planning work and preparing work site according to given specifications and instructions
- cutting channels to specification
- compacting soil
- taking soil samples
- checking that work meets specifications
- cleaning and storing equipment
- restoring work site

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- channel and drain system design basics
- channel and drain system layout
- environmental aspects of construction
- channel, drain and batter construction processes
- measures to reduce channel deterioration, infestation of weeds, pests and seepage
- relevant utilities and service providers
- safe use of lasers
- use of automatic levels
- basic levelling techniques
- profiles and boning rods
- survey principles
- soil types, mechanics and compaction rates
- capabilities of plant used for construction, including equipment operation, capacity and limitations
- communication systems
- work related calculations
- hazardous materials handling
- landscape and ground structure of work area
- risk factors and potential hazards of construction processes
- effects of weather and conditions on construction site or plant
- control systems

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIRR013 Construct and install irrigation delivery and stormwater drainage assets

Modification History

Release	Comments
1	<p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to NWP252B Construct and install irrigation delivery and stormwater drainage assets.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • Element 2 reworded • PC 2.2 and 2.3 merged

Application

This unit of competency describes the skills required to construct irrigation delivery or stormwater drainage assets on site and to install both constructed assets and prefabricated components.

This unit applies to those working as field staff with specific responsibility for ensuring that the construction and installation of irrigation or stormwater drainage assets is completed in a safe and timely manner.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to, particularly those related to WHS.

Those undertaking this unit would work under indirect supervision, while performing routine tasks and ensuring minimum damage to the environment, in a familiar context.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Irrigation

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Plan and prepare for work	1.1 Determine work requirements from specifications and instructions. 1.2 Select, fit and use personal protective equipment. 1.3 Perform site check to identify hazards and prevent damage to other utilities. 1.4 Provide appropriate drainage and diversion from work site. 1.5 Check equipment and excavation methods to meet safety requirements of task and site.
2. Construct and install drains, channels and associated fittings	2.1 Provide bedding and foundations according to structure type, location and specification. 2.2 Select, place and install prefabricated components and fittings. 2.3 Check installed fittings and prefabricated components to ensure that specifications are met. 2.4 Construct components on-site.
3. Finalise work	3.1 Check constructions and installations to ensure that specifications are met. 3.2 Check, maintain and store equipment, tools and materials. 3.3 Backfill, compact and restore work site. 3.4 Maintain workplace records.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning NA					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to NWP252B Construct and install irrigation delivery and stormwater drainage assets.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIRR013 Construct and install irrigation delivery and stormwater drainage assets

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none">• Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- identifying and responding to operational problems
- producing reports and logs
- using safety and personal protective equipment
- using tools and machinery
- interpreting plans, charts and instructions
- performing work related calculations
- applying procedures and standards
- using communication equipment
- constructing and installing irrigation delivery or stormwater drainage assets
- planning work and preparing work site
- constructing assets
- installing assets
- checking that work meets specifications
- cleaning and storing equipment
- restoring work site
- completing documentation

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- system layout
- environmental aspects of construction
- construction processes
- relevant utilities and service providers
- communication systems
- hazardous materials handling
- landscape and ground structure of work area
- risk factors and potential hazards of construction processes
- equipment operation, capacity and limitations
- effects of weather and conditions on construction site or plant
- control systems
- pre-cast components
- pipes and fittings

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIRR014 Install meters for rural water supplies

Modification History

Release	Comments
1	<p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to NWP302A Install meters for non-potable, non-urban water supplies.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • Unit title changed to better reflect unit outcomes • Element 2 removed • One new PC added to Element 1 • PC 1.4 removed • PC 2.4 renumbered • Element 2 and 4 merged • All PC revised

Application

This unit describes the skills required to install water meters for rural water supplies.

This unit applies to those working as field or operational staff installing meters.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently under direct supervision, while performing routine tasks ensuring minimum damage to the environment, in a familiar context.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Irrigation

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Confirm conditions of the site for meter installation	1.1 Identify the location of the site and establish client information from work plans and job specifications. 1.2 Identify access to the site and any conditions of access. 1.3 Assess the conditions of the site. 1.4 Set out the site. 1.5 Carry out a job safety analysis and identify and control hazards.
2. Install meter facilities	2.1 Ensure that excavations provide sufficient width for movements of installation. 2.2 Install meter as set out in design and specifications. 2.3 Check fittings, seals and operation. 2.4 Install ancillary equipment and check for operation and seal. 2.5 Check meter installation for compliance with manufacturer specifications.
3. Restore site	3.1 Backfill with suitable material, moisture content and compaction to maximise compaction efficiency. 3.2 Restore the site to original site conditions.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing NA					Oral communication NA					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to NWP302A Install meters for non-potable, non-urban water supplies.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIRR014 Install meters for rural water supplies

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none"> Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- planning meter installation and construction
- undertaking calculation of head, flow and measurements of pipes and pressure
- undertaking locational assessment and risk analysis for meter installation
- sampling and testing soil for backfill and installation structures
- analysing the impact of water infiltration on the stability of structures
- measuring the head of water to judge sufficiency for meter's accuracy
- checking power supply and links
- installing ancillary equipment
- positioning solar panels to maximise power collection
- undertaking a job safety analysis and checking hazards and safety requirements
- using and storing equipment on site
- determining excavation requirements
- calculating sump and headwall elevation and orientation
- calculating pipe and meter pit elevation, fall and presentation
- installing transducers and cabling safely
- interpreting manufacturer requirements for fitting meters in meter pits
- using techniques to protect meters from disturbance
- assessing the effectiveness of backfill
- undertaking site restoration
- identifying and analysing client requirements, site conditions and their impact on the types of meter required, and the design of the installation

- identifying and analysing environmental conditions and limitations and the impact of work to be undertaken
- identifying and analysing safety risks and hazards and responding to remove risks and hazards
- preparing sites and equipment for installation
- identifying faults, changes and failure indicators

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- the purpose and standards for non-urban water metering
- community expectations for water measurement and use
- standards for the installation of non-urban meters in open and closed conduit systems
- the social, environmental, economic and political responsibilities of water authorities in relation to meter installation
- requirements for checking the pattern approval of meters and compliance with meter installation standards
- meter manufacturers' guidelines and installation manual for specific meters
- the organisation's policies and procedures for water meter installation
- conditions for meter location and suitable installation assets and meters for the conditions
- causes of flow disturbance
- potential environmental causes of meter failure
- the organisation's environmental impact guidelines
- maintenance requirements for meter facility within and open channel
- relevant safety requirements including confined space

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIRR022 Maintain meters for rural water supplies

Modification History

Release	Comments
1	<p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to NWP304A Maintain meter for non-potable, non-urban water supplies.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • Unit title changed to better reflect unit outcomes • PC 4.3 removed • PC 1.3 and 1.4 merged • PC 2.1, 2.3, 2.4 and 2.5 merged and revised

Application

This unit describes the skills required to maintain the operational integrity of already installed meters, metering systems and their components. This unit covers corrective, predictive and preventative maintenance.

This unit applies to those working in the water industry as field or operational staff maintaining meters for rural water supply.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work under independently under direct supervision, while performing routine tasks in familiar context.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Irrigation

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Confirm meter type and location within asset management system	1.1 Obtain organisational maintenance plan and manufacturer guidelines. 1.2 Locate meter emplacement on a map, or by GPS, or according to organisational procedures. 1.3 Confirm that meter type and number match maintenance plan or manufacturer guidelines.
2. Check condition of meters and metering system	2.1 Check components and identify faults using an asset condition checklist. 2.2 Establish maintenance requirements.
3. Maintain meter and meter facilities	3.1 Repair or replace faulty components. 3.2 Identify faults which need to be rectified by a third party.
4. Test and recommission	4.1 Ensure meter complies with standards. 4.2 Perform on-site re-test of meter. 4.3 Record faults and meter performance, maintenance and repairs.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning NA					Reading					Writing					Oral communication NA					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to NWP304A Maintain meter for non-potable, non-urban water supplies.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIRR022 Maintain meters for rural water supplies

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none"> Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. The candidate must be assessed in at least two of the different fault types listed in the Range of Conditions. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- reading and analysing electronic display
- inputting data into electronic controller
- working with low voltage wiring
- reading manufacturers' instructions, plans, exploded drawings and parts catalogues
- reading verification marks
- using tags and seals
- confirming the site and the meter
- checking meter condition
- replacing components
- documenting the maintenance

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- relevant organisational policies and procedures for water meter maintenance
- organisational rights and responsibilities
- manufacturers' maintenance procedures for specific meter types
- knowledge of checking pattern approval requirements
- standards for non-urban metering

- GPS coordinates
- meter types and accuracy limits
- roles and responsibilities of maintenance personnel
- WHS guidelines
- environmental, cultural and heritage guidelines

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIRR033 Coordinate and monitor the operation of irrigation delivery systems

Modification History

Release	Comments
1	<p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to NWP425B Coordinate and monitor the operation of irrigation delivery systems.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • PC 2.1 removed • PC 2.2 reworded • PC 2.4 revised

Application

This unit describes the skills required to coordinate and monitor irrigation delivery systems to meet performance standards and including system maintenance and customer liaison.

This unit applies to those working as field and operational staff with a specific responsibility for ensuring that the operation of irrigation systems complies with organisational and statutory requirements.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently or in a team, while performing complex tasks ensuring minimum damage to the environment in a familiar context. However, the level of responsibility may vary according to the size, scope, location, and technical complexity of process.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Irrigation

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Confirm performance measures in irrigation system's management plan	1.1 Identify customer requirements for irrigated culture. 1.2 Identify environmental factors that impact on the irrigation system. 1.3 Consult historic system information and stakeholders as appropriate. 1.4 Confirm performance requirements for an irrigation system management plan.
2. Monitor and coordinate processes and resource targets	2.1 Monitor and test programs and identify, investigate and report any deviations from water quantity, quality, release or flow. 2.2 Evaluate the duration, volume and flow rates of water deliveries and identify, investigate and report deviations from agreed service levels. 2.3 Evaluate maintenance activities and report deviations from targets. 2.4 Identify and record links between operational problems and maintenance activities.
3. Report outcomes of coordination and monitoring	3.1 Analyse, record and report coordination and monitoring data. 3.2 Identify and report current and potential problems. 3.3 Make recommendations for improvements in system performance and/or customer service.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning NA					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to NWP425B Coordinate and monitor the operation of irrigation delivery systems.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIRR033 Coordinate and monitor the operation of irrigation delivery systems

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none">• Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- assessing environmental impact
- operating irrigation and/or domestic stock supply system
- checking channel flow
- identifying customer requirements for irrigated culture and environmental factors that impact on the irrigation system
- consulting historic system information and stakeholders as appropriate
- confirming performance requirements for an irrigation system management plan
- implementing monitoring and testing programs and investigating and reporting deviations from planned parameters
- evaluating performance of water deliveries and investigating and reporting deviations from agreed service levels
- evaluating performance targets
- analysing and reporting data
- identifying and reporting problems
- making recommendations for system performance or customer service improvements

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- relevant legislation, policies and procedures

- customer expectations and requirements
- impact of the principles of hydraulics on the operation of flows
- coordination processes
- principles of scheduling
- system layout and operations
- environmental aspects of irrigation and/or stock and domestic supply system asset infrastructure
- environment, landscape and ground structure of work area
- risk factors and potential hazards of irrigation and/or domestic and stock supply systems
- equipment operation, capacity and limitations
- water flow calculations
- gravity systems
- control systems

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIWS002 Operate regulating devices in rural irrigation systems

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to operate regulating devices in rural irrigation systems.

It includes monitoring flows in irrigation systems, recording and reporting system adjustments and responding to contingencies.

This unit applies to those working as field or operational staff with responsibility for using flow control and metering devices according to workplace procedures. Those undertaking this unit would work in a team or under appropriate supervision using own familiar resources as required, while performing routine tasks in range of familiar contexts.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Irrigation Water Supply

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Monitor and regulate required flows in

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Access and apply operating requirements for flows in

irrigation systems	irrigation systems
	<ul style="list-style-type: none"> 1.2 Use and secure equipment to assist operational activities according to workplace procedures 1.3 Monitor, measure and record flows at designated locations according to work schedule 1.4 Identify potential operational problems and provide solutions 1.5 Adjust and maintain flow regulation and control mechanisms to increase and decrease flow according to workplace procedures
2 Record and report system adjustments	<ul style="list-style-type: none"> 2.1 Produce trend information relating to flow adjustments 2.2 Collect, record and report information on flows and abnormalities
3 Respond to contingencies	<ul style="list-style-type: none"> 3.1 Identify and assess potential risks and contingencies in the operation of regulating devices 3.2 Respond to potential and actual risks and contingencies 3.3 Inform relevant personnel of potential risks according to workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR002 Operate basic flow control and regulating devices in irrigation systems.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIWS002 Operate regulating devices in rural irrigation systems

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

- adjusting and maintaining flow system control mechanisms
- completing records and reports
- collecting and reporting system performance information
- identifying and reporting operational problems
- identifying flow requirements
- interpreting data
- producing information
- securing flow regulation devices
- using equipment relevant for controlling and regulating water flow for irrigation

Knowledge Evidence

- effects of weather conditions on system operation and worksite
- equipment operation, capacity and limitations
- methods for data collection and reporting
- irrigation system layout
- principles of hydraulics impacting on the operation of flows
- relevant legislation, regulations and workplace procedures
- relevant lock-out procedures for mechanical and electrical installations
- risk factors and potential hazards
- system flow control mechanisms

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the

time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIWS004 Install meters for rural water supplies

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to install meters for rural water supplies.

It includes confirming conditions of the site for meter installation, installing meter facilities and restoring site.

This unit applies to those working as field or operational staff installing meters. Those undertaking this unit would work independently under appropriate supervision, while performing routine tasks ensuring minimum damage to the environment, in a familiar context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Irrigation Water Supply

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Confirm conditions of the site for meter installation

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Identify the location of the site and establish client information from work plans and job specifications

- 1.2 Identify access to the site and any conditions of access
 - 1.3 Assess the conditions of the site
 - 1.4 Set out the site for installation of meter according to workplace procedures
 - 1.5 Complete risk assessment and identify and control hazards
- 2 **Install meter facilities**
 - 2.1 Calculate installation elevations according to design
 - 2.2 Install meter as set out according to design and manufacturer specifications
 - 2.3 Check fittings, seals and operation according to workplace procedures
 - 2.4 Install ancillary equipment and check for operation and seal
 - 2.5 Check meter installation for compliance with manufacturer specifications
- 3 **Restore site**
 - 3.1 Backfill with suitable material, moisture content and compact
 - 3.2 Restore the site according to workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR014 Install meters for rural water supplies.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIWS004 Install meters for rural water supplies

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- calculating pipe and meter pit elevation, fall and presentation
- checking power supply and links
- compacting backfill
- identifying faults, changes and failure indicators
- identifying risks
- installing ancillary equipment
- planning meter installation and construction
- restoring site
- undertaking a risk assessment and checking hazards and safety requirements

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- causes of flow disturbance
- different types of meters
- environmental impact guidelines
- meter manufacturer guidelines and installation manual for specific meters
- potential causes of meter failure
- relevant legislation, regulations and workplace procedures
- relevant meter standards
- relevant safety requirements
- requirements for checking the pattern approval of meters and compliance with meter installation standards
- workplace policies and procedures for water meter installation

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training

Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIWS006 Maintain meters for rural water supplies

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to maintain meters for rural water supplies. It includes maintaining operational integrity of already installed meters, metering systems and components. It also includes corrective, predictive and preventative maintenance.

This unit applies to those working in the water industry as field or operational staff, maintaining meters for rural water supply. Those undertaking this unit would work under appropriate supervision, while performing routine tasks in familiar context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Irrigation Water Supply

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Confirm meter type and location

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Obtain organisational maintenance plan and manufacturer guidelines
- 1.2 Locate meter facility according to workplace procedures

- | | | |
|----------|------------|---|
| | 1.3 | Confirm meter type and number match to maintenance plan |
| 2 | 2.1 | Conduct a risk assessment of a meter site according to workplace procedures |
| | 2.2 | Check metering components and identify faults according to workplace procedures |
| | 2.3 | Establish maintenance requirements according to workplace procedures |
| 3 | 3.1 | Repair or replace faulty components according to workplace procedures |
| | 3.2 | Identify faults which need to be rectified by a third party to relevant personnel |
| 4 | 4.1 | Ensure meter complies with standards |
| | 4.2 | Perform on-site re-test of meter according to workplace procedures |
| | 4.3 | Record faults and meter performance, maintenance and repairs |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR022 Maintain meters for rural water supplies.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIWS006 Maintain meters for rural water supplies

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- applying seals
- checking and reporting meter condition
- confirming location of worksite and meter
- identifying manufacturer instructions, plans, exploded drawings and parts catalogues
- identifying verification marks
- reading and analysing meter display
- replacing components
- reporting maintenance requirements
- working with low voltage wiring

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- checking pattern approval requirements
- location methods including:
 - GPS
 - maps
- manufacturer maintenance procedures for specific meter types
- meter types and accuracy limits
- relevant legislation, regulations and workplace procedures
- relevant workplace policies and procedures for water meter maintenance
- standards for non-urban metering
- work, health and safety (WHS) risk assessments

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training

Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIWS008 Monitor and conduct maintenance on rural irrigation assets

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to monitor and conduct maintenance on rural irrigation assets.

This includes monitoring asset and equipment performance, conducting maintenance on assets and equipment and compiling process records and reports. It also includes pipelines and associated fittings.

This unit applies to those working as field staff with the responsibility for monitoring the operation of flow control, measuring and regulating devices, conducting maintenance and ensuring problems and anomalies are rectified by specialist technicians. Those undertaking this unit would work under appropriate supervision, performing routine tasks and ensuring minimum damage to the environment, in a familiar context.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Irrigation Water Supply

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|--|---|
| 1 Prepare for work | 1.1 Interpret work requirements for monitoring rural irrigation assets from plans, drawing specifications and instructions |
| | 1.2 Select and check equipment and tools to meet the safety requirements of the task and site |
| | 1.3 Select, fit and use required safety equipment, including personal protective equipment |
| | 1.4 Undertake risk assessment at worksite according to workplace procedures |
| 2 Monitor asset and equipment performance | 2.1 Identify rural irrigation assets and equipment |
| | 2.2 Check and interpret information and specifications on assets and equipment performance |
| | 2.3 Report on assets and equipment performance |
| 3 Conduct maintenance on assets and equipment | 3.1 Undertake routine maintenance according to maintenance schedule |
| | 3.2 Secure assets and equipment according to workplace procedures |
| | 3.3 Identify and report problems to relevant personnel for correction |
| | 3.4 Identify, select, place and join components and associated fittings |
| 4 Monitor asset and equipment performance | 4.1 Schedule and monitor routine inspections of system assets |
| | 4.2 Collect, analyse and report data on system asset performance and usage |
| 5 Compile process records and reports | 5.1 Identify process faults and monitor the operational condition of assets and equipment |
| | 5.2 Report on adjustment requirements according to workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of

competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR024 Monitor and conduct maintenance on flow control and metering devices.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIWS008 Monitor and conduct maintenance on rural irrigation assets

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- collecting and recording data on asset performance
- collecting and recording information on equipment performance
- conducting a risk assessment and identifying control measures
- conducting routine maintenance tasks and securing assets and equipment
- identifying and reporting on asset performance
- identifying and reporting operational problems
- inspecting rural irrigation assets and equipment
- interpreting plans and instructions
- interpreting policies, procedures and standards
- producing reports
- selecting appropriate equipment and tools, including personal protective equipment

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- data collection and recording
- effects of weather and conditions on maintenance and assets
- equipment operation, capacity and limitations
- flow measurement procedures
- ground structure
- irrigation asset and equipment performance parameters
- lock out procedures
- relevant utilities and service bodies
- relevant legislation, regulations and workplace procedures
- risk factors, and potential hazards and control measures
- system hydraulics
- system layout

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPIWS012 Monitor and schedule water deliveries

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to monitor and schedule water deliveries.

It includes scheduling water deliveries for irrigation and domestic or supply systems, including monitoring flows, analysing data, coordinating hydraulic processes and compiling operational reports.

This unit applies to those working as field staff and operators with a specific responsibility for ensuring water deliveries meet customer requirements. Those undertaking this unit would work under appropriate supervision, while performing routine tasks and ensuring minimum damage to the environment, in a familiar.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Irrigation Water Supply

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|----------|----------------------------------|------------|---|
| 1 | Schedule water deliveries | 1.1 | Identify and record customer water orders according to workplace procedures |
|----------|----------------------------------|------------|---|

- | | | |
|----------|--|---|
| | 1.2 | Analyse water orders to determine water delivery and flow rate requirements |
| | 1.3 | Schedule water deliveries to meet flow rate requirements and organisational standards for channel balance and capacity restraints |
| 2 | Monitor water delivery | |
| | 2.1 | Monitor channel flow rate, regulation and delivery according to customer requirements |
| | 2.2 | Maintain delivery performance records according to workplace procedures |
| | 2.3 | Analyse system performance using system data and records to determine actual and planned performance |
| 3 | Coordinate and control water delivery | |
| | 3.1 | Calculate system adjustments according to demand and organisational requirements |
| | 3.2 | Coordinate flow regulation, channel levels, security of flow devices and settings according to demand and organisational requirements |
| 4 | Compile records of water delivery | |
| | 4.1 | Compile reports from systems performance data |
| | 4.2 | Maintain appropriate measurement and delivery records according to workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR042 Monitor and schedule water deliveries.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPIWS012 Monitor and schedule water deliveries

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- adjusting system according to demand
- analysing volumes and flow rates required for water deliveries
- completing relevant documentation
- coordinating flow regulating devices
- identifying and responding to operational problems
- identifying control system faults
- monitoring and regulating system performance
- monitoring channel flow
- performing work related calculations
- preparing schedules for water deliveries for customer orders for irrigation and domestic stock supply systems
- producing reports

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- control systems
- coordination processes
- effects of weather and conditions on operation of site plant
- environmental aspects of irrigation and/or stock and domestic supply system
- equipment operation, capacity and limitations
- flow measurement procedures
- gravity systems
- impact of the principles of hydraulics on the operation of flows
- policies and standard operating procedures
- principles of scheduling
- relevant legislation, regulations and workplace procedures

- system hydraulics
- system layout and operations
- water flow calculations

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPNET002 Prepare and restore work site

Modification History

Release	Comments
1	<p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to NWP226B Prepare and restore work site.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • PC 3.1 removed • PC 2.3 and 2.4 merged

Application

This unit describes the skills required to prepare work sites. The ability to follow work instructions, use a range of equipment and tools to prepare a safe work site and subsequently to restore the site to the required condition is essential to satisfactory performance.

This unit applies to those working as field and operational staff performing a wide range of functions that support construction, maintenance and operations processes.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to, particularly those related to WHS and manufacturer specifications.

Those undertaking this unit would work under supervision, performing routine tasks, in mostly familiar contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Networks

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Plan and prepare for work	1.1 Determine site preparation requirements from specifications, instructions and pre-work inspections. 1.2 Identify and report potential hazards to public and environment and assess risks. 1.3 Perform a site check according to legislative and organisational requirements to identify risks and prevent damage to other utilities. 1.4 Select and check work site equipment, tools and materials as appropriate to meet task and safety specifications. 1.5 Select, fit and use personal protective equipment.
2. Prepare work site	2.1 Position safety equipment and materials to prevent potential risks to public and environment. 2.2 Store and secure equipment and materials. 2.3 Use work site equipment, manual or mechanical excavation equipment, tools and materials. 2.4 Provide appropriate drainage and diversion of site inflows from work site without damage to environment.
3. Restore work site	3.1 Backfill and compact excavations according to specifications. 3.2 Remove excess soil, debris and unwanted materials from site. 3.3 Restore work site to meet environmental and organisational requirements using equipment, tools and materials.
4. Review, record and report activities	4.1 Check, maintain and store equipment, tools and materials. 4.2 Maintain workplace records.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to NWP226B Prepare and restore work site.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPNET002 Prepare and restore work site

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none"> Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- setting up compacting and reinstating a site
- interpreting and applying numerical data in specifications and plans
- excavating backfill
- preparing site for planting and plant vegetation
- interpreting plans, instructions, standard operating procedures and work requirements
- using tools and equipment
- identifying and responding to operational problems
- planning work site layout
- selecting, using, maintaining, cleaning, storing and securing materials and equipment
- clearing and preparing work site according to specifications
- restoring work site
- cleaning, maintaining and storing equipment

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- WHS
- risk factors and potential hazards of site preparation and restoration
- environmental aspects of site preparation and restoration

- trenching, shoring and excavation management
- excavation procedures and site restoration
- relevant utilities and service bodies
- communication systems
- landscape and ground structure of work area
- equipment operation, capacity and limitations
- effects of weather and conditions on construction site or plant

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPNET011 Locate, identify and protect utilities

Modification History

Release	Comments
1	<p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to NWP234B Locate, identify and protect utility services.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • Unit title changed to better reflect unit outcomes • PC 1.3 and 1.6 removed • PC 1.1 and 1.2 reordered • PC 2.1 reworded • PC 3.1 revised

Application

This unit describes the skills required to work near utility services during the construction, repair or installation of utilities' infrastructure. Work activities may involve trench excavation or the application of trenchless technologies for installation or repair.

This unit applies to those involved in the construction, repair or installation of underground utility infrastructure and locating, identifying and protecting existing utilities' infrastructure to prevent damage, injury, death or loss of service.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to, particularly those related to WHS.

Those undertaking this unit would work under supervision, performing routine tasks, in mostly familiar context ensuring minimum damage to the environment.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Networks

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Plan and prepare to locate utility services at work site	1.1 Obtain plans and relevant information from specific utility service owners using appropriate information source. 1.2 Determine work site boundaries and requirements from plans, specifications and instructions. 1.3 Determine type, size and likely configuration of all underground and overhead services from plans and typical or local installation practices. 1.4 Identify hazards and precautions associated with excavating or working near utilities' apparatus.
2. Locate utility apparatus by excavation	2.1 Select tools and equipment for location of all apparatus. 2.2 Locate and identify apparatus and indicators of apparatus presence using tools and equipment. 2.3 Determine full extent of apparatus in the ground.
3. Operate plant in close proximity to underground or overhead utility apparatus	3.1 Monitor plant during work activities. 3.2 Identify potential or actual encroaches of plant on minimum clearances to apparatus. 3.3 Give instructions to plant operator using agreed signals.
4. Protect and support utility apparatus during excavation and backfilling	4.1 Protect apparatus according to utility owner requirements to prevent damage. 4.2 Support apparatus along or across excavation according to utility owner requirements or engineering advice to prevent damage. 4.3 Report damage to apparatus to utility owner according to agreed protocols. 4.4 Reinstate apparatus during backfill according to utility owner's requirements.
5. Initiate emergency	5.1 Recognise emergency situations or events. 5.2 Implement emergency response for particular infrastructure

procedures	involved.
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Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to NWP234B Locate, identify and protect utility services.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPNET011 Locate, identify and protect utilities

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none"> Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- locating and identifying utilities
- assessing and identifying risk of potential hazards associated with each utility
- responding to all types of emergencies relating to utility services
- using basic mathematics for calculations and measurement
- communicating with employees, other service providers and customers
- gathering information regarding location of utilities at a particular site
- applying safe work methods for locating and protecting utilities at or near a work site
- selecting and using tools and equipment
- monitoring use of equipment
- using agreed procedures and signals to ensure timely warnings of proximity to utilities' apparatus
- protecting and supporting apparatus during performance of work tasks and during site restoration
- applying emergency procedures in response to a range of specific incidents

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- published guidelines for working near utility services in the state or territory in which work is being undertaken
- system layout
- environmental aspects of excavation
- relevant utilities and service bodies
- communication systems
- landscape and ground structure of work area
- risk assessment and identification of potential hazards associated with each utility
- emergency response procedures for all types of utility services
- equipment operation, capacity and limitations
- effects of weather and conditions on site or plant

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPNET019 Prepare and restore worksite

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to prepare and restore worksite.

It includes following work instructions, using a range of equipment and tools to prepare a safe worksite and restoring worksite to the required condition.

This unit applies to those working as field and operational staff performing a wide range of functions and supporting construction, maintenance and operations processes. Those undertaking this unit would work under appropriate supervision, performing routine tasks, in mostly familiar contexts.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Networks

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for work

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Identify and report potential hazards to public and environment and assess risks

1.2 Determine worksite preparation requirements from

- specifications, instructions and pre-work inspections
- 1.3** Perform a worksite check according to legislative and organisational requirements to identify risks and prevent damage to other utilities
 - 1.4** Source and check worksite equipment, tools and materials as appropriate to meet task and safety specifications
 - 1.5** Select, fit and use personal protective equipment
 - 1.6** Identify, notify and communicate with customers and stakeholders according to workplace procedures
- 2 Prepare worksite**
- 2.1** Position safety equipment and materials to prevent potential risks to public and environment
 - 2.2** Store and secure equipment and materials according to workplace procedures
 - 2.3** Use worksite equipment, excavation equipment, tools and materials according to manufacturer instructions and workplace procedures
 - 2.4** Drain and divert water flows from worksite to prevent damage to environment
- 3 Restore worksite**
- 3.1** Backfill and compact excavations according to specifications
 - 3.2** Restore worksite by landscaping, planting and materials
 - 3.3** Remove excess soil, debris and unwanted materials from worksite according to workplace procedures
 - 3.4** Restore worksite using equipment, tools and materials to meet environmental and workplace procedures
- 4 Review and report activities**
- 4.1** Tag and report faulty equipment, tools and advise appropriate personnel
 - 4.2** Store equipment, tools and materials according to manufacturer and workplace instructions
 - 4.3** Complete and process workplace records according to workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPNET002 Prepare and restore work site.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPNET019 Prepare and restore worksite

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- cleaning, maintaining and storing equipment
- clearing and preparing worksite according to specifications
- communicating with appropriate environmental controls
- compacting and reinstating worksite
- excavating backfill
- identifying and responding to worksite issues
- interpreting and applying numerical data in specifications and plans
- interpreting plans, instructions, workplace procedures and work requirements
- planning worksite layout
- preparing worksite for planting and plant vegetation
- selecting, using, maintaining, cleaning, storing and securing materials and equipment
- using tools and equipment

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- communication systems
- effects of weather and conditions on construction worksite or plant
- environmental aspects of worksite preparation and restoration
- equipment operation, capacity and limitations
- excavation procedures and worksite restoration
- landscape and ground structure of work area
- relevant legislation, industry standards and guidelines
- relevant utilities and service bodies
- relevant workplace procedures
- risk factors and potential hazards of worksite preparation and restoration

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPNET029 Locate, identify and protect utilities

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to locate, identify and protect utilities.

It includes preparing to locate utility services at the worksite, locating utility assets by excavation, operating plant near underground or overhead utility assets. It also includes protecting and supporting utility assets during excavation and backfilling and initiating emergency procedures.

This unit applies to those involved in locating, constructing, repairing or installing underground utility infrastructure to prevent damage, injury, death or loss of service. Those undertaking this unit would work under appropriate supervision, performing routine tasks, in mostly familiar context ensuring minimum damage to the environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Networks

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to locate utility services at worksite

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Identify utility assets or services by communicating with relevant authorities

- 1.2 Determine and mark worksite boundaries and requirements from plans, specifications and workplace instructions
 - 1.3 Determine type, size and likely configuration of all underground and overhead services from plans and typical or local installation practices
 - 1.4 Conduct risk assessment for environmental and safety factors including personal and protective equipment to ensure it is safe to commence work
 - 1.5 Identify yourself to your customers and determine customer needs
- 2 Operate pipe and cable locating equipment**
- 2.1 Identify and select appropriate locating equipment
 - 2.2 Operate pipe and cable locating equipment according to manufacturer instructions
 - 2.3 Interpret false signals or interference with pipe and cable locating equipment and make appropriate adjustments
 - 2.4 Mark the approximate location of services on the surface of the worksite according to workplace procedures
 - 2.5 Conduct test excavation to visually confirm service location according to workplace procedures
- 3 Operate plant near underground or overhead utility assets**
- 3.1 Monitor plant during work activities according to workplace procedures
 - 3.2 Identify potential or actual encroaches of plant on minimum clearances to assets
 - 3.3 Give instructions to plant operator using agreed signals
- 4 Protect and support utility assets during excavation and backfilling**
- 4.1 Protect and support assets according to utility owner requirements to prevent damage
 - 4.2 Report damage to assets to utility owner according to workplace procedures
 - 4.3 Restore worksite using equipment, tools and materials to meet environmental and workplace procedures

- | | |
|--------------------------------------|--|
| 5 Maintain locating equipment | 5.1 Perform daily maintenance of equipment according to manufacturer instructions |
| | 5.2 Record maintenance details according to workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPNET011 Locate, identify and protect utilities.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPNET029 Locate, identify and protect utilities

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- applying safe work methods for locating and protecting utilities at or near a worksite
- assessing and identifying risk of potential hazards associated with each utility
- communicating with stakeholders
- contacting relevant authorities for the correct location of utilities or services
- monitoring use of equipment
- protecting and supporting utility assets during performance of work tasks and during worksite restoration
- selecting and using tools and equipment

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- communication systems for locating utilities
- plans of underground and overhead services
- effects of weather and conditions on worksite or plant
- emergency response procedures
- environmental aspects of excavation
- equipment operation, capacity and limitations
- landscape and ground structure of work area
- relevant legislation, regulations and workplace procedures
- relevant utilities and service bodies to contact for the correct location of utilities or services including Dial Before You Dig
- risk assessment and identification of potential hazards associated with each utility

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training

Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPSOU006 Develop and manage a flood plan

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to develop and manage a flood plan.

It includes analysing and modelling data relating to flooding, developing effective management and warning systems and communicating outcomes concisely. It also includes applying and adhering to relevant legislation, industry regulations and workplace procedures.

This unit applies to those working as leaders with responsibility for the preparation of flood management strategies and flood warning systems. Those undertaking this unit would work autonomously with leadership responsibilities, while performing complex tasks in familiar contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Source

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan and prepare for flood operations

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Access and interpret historical rainfall run-off and flooding regimes of specific catchments

- 1.2 Collate and analyse simulated, hypothetical and estimated rainfall intensity data and model catchment
 - 1.3 Estimate and record flood levels, extents and flow rates
 - 1.4 Identify and interpret storage asset specifications including regulatory requirements, industry standards and workplace procedures
 - 1.5 Identify resources, environment and stakeholders at risk during a flood event
- 2 Develop a flood plan**
 - 2.1 Consult with stakeholders to obtain input for flood planning
 - 2.2 Develop and document a plan for managing the flood impact on a storage asset
 - 2.3 Confirm performance measures for flood operations
 - 2.4 Develop plan components and activities for implementation
 - 2.5 Develop a flood plan according to relevant legislation, industry standards, workplace procedures and environmental requirements
- 3 Monitor and evaluate flood plan**
 - 3.1 Assess and record a flood event according to industry standards and workplace procedures
 - 3.2 Evaluate the roles of storage and retarding basins safety and flood attenuation strategies
 - 3.3 Evaluate current flood classifications and impacts according to flood plan
 - 3.4 Formulate planning controls for flood plain and waterway management
 - 3.5 Evaluate current flood warning systems according to flood plan
 - 3.6 Recommend and develop changes to existing flood plain and waterway management controls and warning systems
- 4 Report on implementation of the plan**
 - 4.1 Collate, analyse and record information according to workplace procedures

- 4.2 Prepare and present reports to relevant persons
- 4.3 Communicate findings and recommendations to stakeholders according to workplace procedures and relevant regulations

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces but is not equivalent to NWPSOU028 Prepare and report on data related to flood operations.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPSOU006 Develop and manage a flood plan

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- analysing and developing flood mitigation warning systems and strategies
- analysing, interpreting and modelling flood data
- assessing and recording a flood event
- communicating flood planning findings with stakeholders and relevant persons
- developing a flood plan including:
 - documenting an implementation plan
 - identifying plan components and activities for completion
 - specifying environmental requirements
- developing critical flood warning systems
- developing strategies to mitigate the impact of potential future floods
- identifying and interpreting storage asset specifications

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- catchment hydrology principles including the roles of:
 - retarding basins
 - safety and flood attenuation strategies
 - water storage
- current flood classifications and flood warning systems
- performance measures for flood operations
- relevant documentation associated with developing and managing a flood plan including:
 - industry standards
 - workplace procedures
- relevant legislation and regulatory requirements associated with developing and managing a flood plan including:
 - by-laws

- environmental legislation
- work health and safety (WHS) legislation
- planning schemes
- storage asset specifications
- water flow measurement and flow routing models

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations. Where this is not appropriate, assessment must occur in suitable simulated workplace operational situations reflecting actual workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment currently used in industry
- applicable relevant documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPSOU007 Implement and coordinate a catchment plan

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to implement and coordinate a catchment plan.

It includes coordinating, monitoring and extending the development of the catchment plan to ensure all aspects are implemented and performance measures and objectives are met. It also includes applying and adhering to relevant legislation, industry regulations and workplace procedures.

This unit applies to those working as leaders with responsibility for management of water catchments. Those undertaking this unit work autonomously, leading staff, while performing sophisticated tasks in a range of familiar contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Source

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan for catchment management

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Confirm performance measures for catchment plan

- 1.2 Identify and interpret legislative requirements and organisational policies for the management of water catchment
- 1.3 Identify and interpret catchment plan requirements
- 1.4 Identify stakeholder requirements impacting the catchment area
- 1.5 Gather historical catchment data and evaluate as input to the planning process
- 1.6 Identify, interpret and assess water quality and quantity requirements
- 1.7 Identify and interpret environmental and developmental factors impacting water catchment
- 2 **Develop the catchment plan**
 - 2.1 Develop catchment plan components and activities for implementation
 - 2.2 Coordinate catchment plan activities and determine responsibilities and timelines for implementation activities
 - 2.3 Communicate the catchment plan with relevant personnel and stakeholders according to regulations and workplace procedures
- 3 **Monitor and review catchment plan**
 - 3.1 Design and implement monitoring and testing programs and check for compliance against the catchment plan
 - 3.2 Analyse, interpret and record testing results according to workplace procedures
 - 3.3 Identify and investigate current and potential problems for catchment management
 - 3.4 Evaluate objectives and performance of the water catchment plan and report deviations
 - 3.5 Report investigation results and make recommendations according to workplace procedures
 - 3.6 Identify, investigate and report deviations from plan objectives
 - 3.7 Review objectives of the catchment and implementation plans

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR073 Implement and coordinate catchment management plan.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPSOU007 Implement and coordinate a catchment plan

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- analysing, interpreting and recording test results
- communicating responsibilities of the catchment plan with personnel and stakeholders
- confirming performance measures for the catchment plan
- designing and implementing monitoring and testing activities
- developing implementation plans including objectives and requirements specified in the catchment plan
- evaluating objectives and performance measures of the catchment plan and reporting deviations
- identifying and reporting investigation results
- gathering, interpreting and synthesising information for the water catchment plan including:
 - environmental impacts
 - historical data
 - plan components
 - relevant legislation and industry standards
 - stakeholder requirements
 - water quality test results
- implementing and managing activities in water catchments that impact on water yield and quality
- performing activities associated with implementing and managing catchment plan components
- preparing reports and recommendations for future action

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- environmental impacts of water catchment
- catchment plan development and components

- problem identification and investigation
- relevant information associated with implementing and coordinating a water catchment plan including:
 - historical records and data
 - water industry standards
 - water industry legislation and regulations
 - workplace policies and procedures
- risk management principles
- water quality determinants

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations. Where this is not appropriate, assessment must occur in suitable simulated workplace operational situations reflecting actual workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment currently used in industry
- applicable relevant documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

NWPTRT028 Operate and control reclaimed water irrigation

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to operate and control reclaimed water irrigation.

It includes assessing sites for reclaimed water irrigation and quality of reclaimed water for irrigation. It also includes implementing reclaimed water irrigation, responding to water or soil quality issues and compiling reclaimed water irrigation records.

This unit applies to staff members with a specific responsibility for analysing the critical aspects of reclaimed water reuse management relating to a project or site and implementing reclaimed water reuse irrigation. Those undertaking this unit would work under appropriate supervision, performing routine tasks in a familiar context, and ensuring minimum damage to the environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Treatment

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Assess sites for reclaimed

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Identify soil and water interactions and soil properties

- water irrigation** important for plant growth
- 1.2** Identify soil sampling sites, collect samples and conduct soil testing according to workplace procedures
 - 1.3** Classify soils using field texture, pH and structure analysis
 - 1.4** Monitor and determine the water holding capacity of soil
- 2 Assess quality of reclaimed water for irrigation**
 - 2.1** Sample and test reclaimed water and interpret quality parameters
 - 2.2** Determine crops suitable for the quality of reclaimed water and worksite conditions
- 3 Implement reclaimed water irrigation**
 - 3.1** Identify features of irrigation systems
 - 3.2** Operate and maintain irrigation equipment according to manufacturer instructions
 - 3.3** Identify and apply irrigation scheduling options for reclaimed water
 - 3.4** Produce water budgets using crop factors and climate data
 - 3.5** Apply irrigation water and collect and monitor tail water or runoff
- 4 Respond to water or soil quality issues**
 - 4.1** Develop irrigation management options to respond to water quality issues
 - 4.2** Identify and apply requirements and options for soil ameliorants
 - 4.3** Monitor infiltration and drainage
- 5 Compile reclaimed water irrigation records**
 - 5.1** Compile reports from system data according to workplace procedures
 - 5.2** Report observations outside defined parameters for further action to relevant personnel

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPTRT062 Operate and control reclaimed water irrigation.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Assessment Requirements for NWPTRT028 Operate and control reclaimed water irrigation

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- analysing critical aspects of reclaimed water reuse management relating to the project or site
- applying environmental policies, plans and procedures
- assessing environmental risks at the worksite
- identifying environment, health and safety risks and impact on soil, stock and operators
- identifying soil groups
- implementing reclaimed water reuse irrigation
- monitoring and managing soil
- monitoring, operating and controlling reclaimed water irrigation
- participating in and contributing to reviews of reclaimed water reuse procedures
- sampling and testing soil and water
- solving operational problems
- using safety and personal protective equipment (PPE)

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- best management practices for the use of reclaimed water for irrigation purposes
- community and agency roles and responsibilities in monitoring water quality
- effects of weather and conditions on operation of site or plant
- environmental, landscape and ground structure of work area
- equipment operation, capacity and limitations
- interpretation and use of safety data sheets
- key characteristics of reclaimed water
- key principles of irrigation practices, including irrigation scheduling
- primary agencies involved in drinking water quality management
- reclaimed water usage licensing procedures and requirements
- relevant legislative requirements

- soil groups
- water hazardous agents and preventative strategies
- water quality performance indicators
- water supply system
- workplace procedures

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

PMBWELD301 Butt weld polyethylene plastic pipelines

Modification History

Release 1. Supersedes and is equivalent to PMBWELD301B Butt weld polyethylene plastic pipelines

Application

This unit of competency covers the skills and knowledge required to butt weld polyethylene (PE) plastic pipelines. It applies to welding undertaken in the field and in factory conditions. Pipelines may be for transmission of gas or liquids.

This unit of competency applies to experienced operators who are required to calculate appropriate welding parameters to be used, set up equipment, perform butt weld, assess joints against specifications and solve problems within area of responsibility.

This unit of competency applies to an experienced operator demonstrating theoretical and technical knowledge and well developed skills in situations that require some discretion and judgement. The operator may work alone or as a member of a team or group and will work in liaison with other shift team members, team leader and supervisor, as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Welding

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|---|---|-----|---|
| 1 | Identify materials as being compatible for welding | 1.1 | Identify materials as polyethylene (PE) from specifications and work site instructions |
| | | 1.2 | Identify PE materials and pipes supplied as being compatible for welding from specifications |
| 2 | Calculate appropriate pipe welding parameters | 2.1 | Identify welding machine type and operating data |
| | | 2.2 | Identify pipe materials and dimensions |
| | | 2.3 | Perform welding parameter calculations for individual welding machines and pipe details |
| | | 2.4 | Prepare field operational sheets as per enterprise requirements |
| 3 | Maintain and calibrate welding equipment | 3.1 | Set up welding equipment and work area |
| | | 3.2 | Ensure safety equipment is available and operational |
| | | 3.3 | Identify non-conformance, report and rectify |
| | | 3.4 | Check operation and calibrate where required, heating, trimming, and pressure systems |
| 4 | Perform welding to required standard | 4.1 | Assemble pipeline components in welding machine |
| | | 4.2 | Clean, align and trim pipe ends |
| | | 4.3 | Perform heating, welding, and cooling phases using calculated welding parameters |
| | | 4.4 | Monitor and record achieved weld parameters for each joint according to enterprise requirements |
| | | 4.5 | Clean up equipment when completed according to enterprise procedures |
| | | 4.6 | Clean up work site, dispose of scrap materials according to enterprise procedures |
| | | 4.7 | Use personal protective equipment (PPE) according to enterprise requirements |

- | | | | |
|---|---|-----|---|
| 5 | Assess quality of completed joints | 5.1 | Identify quality requirements for joints |
| | | 5.2 | Assess joints against specification requirements, and report results |
| | | 5.3 | Identify and report non-conformances according to enterprise requirements |

Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used.

Applicable legislation, regulations, standards and codes of practice include:

- health, safety and environmental (HSE) legislation, regulations and codes of practice relevant to the workplace, manual handling and hazardous materials
- Australian/international standards relevant to the materials being used and products being made, including one or more of:
 - AS/NZS 4130:2009 Polyethylene (PE) pipes for pressure applications, or its replacement
 - AS/NZS 4131:2010 Polyethylene (PE) compounds for pressure pipes and fittings, or its replacement
 - AS/NZS 4401:2006 Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings - Polyethylene (PE), or its replacement
 - AS/NZS 5065:2005 Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications, or its replacement

- ISO 21307:2011 Plastics pipes and fittings -- Butt fusion jointing procedures for polyethylene (PE) pipes and fittings used in the construction of gas and water distribution systems or its replacement
- any relevant licence and certification requirements.

All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and such requirements the legislative requirements take precedence.

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or any combination of:

- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant.

Tools and equipment

Tools and equipment include:

- hydraulic activated butt welding machines
- pipe supports
- measurement devices, including one or more of:
 - pressure gauges
 - timers
 - temperature probes
 - callipers
 - computer-based pressure/temperature monitors
- cleaning equipment
- spray equipment.

Additional tools and equipment will be selected as required from:

- hand tools used in this process

- hoists/lifting equipment not requiring any special permits or licences
- manual handling, aids such as hand carts and trolleys
- relevant PPE.

Hazards

Hazards must be identified and controlled. Identifying hazards requires consideration of:

- power tools, leads and power supplies
- hazardous products and materials
- cutting equipment
- sharp edges, swarf and scrap
- protrusions or obstructions
- slippery surfaces, spills or leaks
- rotational equipment or vibration
- smoke, dust, vapours or other atmospheric hazards
- high temperatures
- electricity
- gas
- gases and liquids under pressure
- structural hazards
- equipment failures
- machinery, equipment and product mass
- other hazards that might arise.

Problems

Routine and non-routine problems must be resolved.

Non-routine problems must be resolved by applying operational knowledge to develop new solutions, either individually or in collaboration with relevant experts, to:

- determine problems needing action
- determine possible fault causes
- develop solutions to problems which do not have a known solution
- follow through items initiated until final resolution has occurred
- report problems outside area of responsibility to designated person.

Non-routine problems are unexpected problems or variations of previous problems and include one or more of:

- variations in quality
- emergency situations
- intermittent faults.

Operational knowledge includes one or more of:

- procedures
- training
- technical information, such as journals and engineering specifications
- remembered experience
- relevant knowledge obtained from appropriate people.

Routine problems are predictable and have known solutions and include one or more of:

- variable PE materials and pipes as supplied
- equipment malfunction or wear and tear
- variable field site conditions.

Unit Mapping Information

Release 1. Supersedes and is equivalent to PMBWELD301B Butt weld polyethylene plastic pipelines

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=932aacef-7947-4c80-acc6-593719fe4090>

Assessment Requirements for PMBWELD301 Butt weld polyethylene plastic pipelines

Modification History

Release 1. Supersedes and is equivalent to PMBWELD301B Butt weld polyethylene plastic pipelines

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and demonstrate the ability to:

- read and interpret designs, plans, patterns, procedures, job specifications, instruments/control panels, material labels and safety data sheets (SDS)
- plan the welding process and sequence tasks
- use mathematics to calculate welding parameters
- set up butt welding equipment and materials/components to meet specifications
- operate the equipment to weld the materials
- monitor key variables, including:
 - temperature
 - pressure
 - alignment
 - colour and uniformity
 - surface finish/appearance
 - tolerance for weld/joint
 - consistency of weld
 - product output rate
 - mechanical strength of weld (e.g. tensile strength results)
 - product integrity and general conformance to specification
- make adjustments to remedy faults and nonconformity
- maintain output and product quality using appropriate instruments, controls, test information and readings
- calibrate equipment according to procedures
- identify hazards and apply relevant hazard controls
- apply safety procedures
- apply housekeeping procedures
- apply waste management procedures
- recognise early warning signs of equipment/processes needing attention or with potential problems
- distinguish between causes of problems, including:
 - operational problems

- instrument failure/malfunction
- electrical failure/malfunction
- mechanical failure/malfunction
- wrong readings
- equipment design deficiencies
- materials properties
- process variables
- raw material variations/contamination
- process abnormalities
- procedural errors
- recognise and prioritise problems requiring action
- resolve routine and non-routine problems
- communicate effectively with team/work group and supervisors
- complete workplace records.

Knowledge Evidence

Must provide evidence that demonstrates knowledge relevant to their job sufficient to operate independently and to solve routine and non-routine problems, including knowledge of:

- function and operating principles of butt welding equipment, components and ancillary equipment
- types and application of butt welding processes and their effect on the welded product
- impact of variations in welding process variables and raw materials on product quality and production output
- factors which may affect product quality or production output and appropriate remedies
- characteristics of materials and their behaviour in relation to welding process variables and stages of production
- quality requirements at each production stage
- common adjustments in process variables and their impact on product quality and production output
- impact of variations in raw materials and equipment operation in relation to final product
- possible changes to materials properties to better suit specific process requirements
- routine and non-routine problems that may arise, the range of possible causes and appropriate actions
- organisation procedures relevant to the work environment/job role
- hierarchy of control
- hazards that may arise in the job/work environment and:
 - their possible causes
 - potential consequences
 - appropriate risk controls.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence shall be based on a holistic assessment of the evidence.
- In all plants it may be appropriate to assess this unit concurrently with units such as:
 - teamwork
 - communication.
- Where the assessee does not currently possess evidence of competency in *PMBPROD287 Weld plastics materials*, it may be co-assessed with this unit.
- The collection of performance evidence:
 - should occur over a range of situations which include typical disruptions to normal, smooth operation of an operating plant
 - will typically include a supervisor/third-party report or other evidence, focusing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
 - must include the use of an appropriate industrial item of equipment requiring demonstration of operation, start and stop procedures and responding to problems
 - may use industry-based simulation for all or part of the unit particularly where safety, lack of opportunity or significant cost is an issue.
- Assessment should occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment in a simulated environment should use evidence collected from demonstration of skills and one or more of:
 - walk-throughs
 - pilot plant operation
 - industry-based case studies/scenarios
 - ‘what ifs’.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process, such as workbooks, written assessments or interviews.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.

- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition the assessor or anyone acting in subject matter expert role in assessment shall demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they shall assess with a subject matter expert who does meet these requirements.
- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment
 - appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
 - appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions
- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed
 - being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
 - having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
 - conducting on the job training/assessments of the type of work being assessed
 - being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=932aacef-7947-4c80-acc6-593719fe4090>

PMBWELD302 Electrofusion weld polyethylene pipelines

Modification History

Release 1. Supersedes and is equivalent to PMBWELD302B Electrofusion weld polyethylene pipelines

Application

This unit of competency covers the skills and knowledge required to weld polyethylene (PE) plastic pipes using electrofusion. It applies to welding of pipes and pipelines undertaken in the field and in factory conditions. Pipelines may be for transmission of gas or liquids.

This unit of competency applies to experienced operators who are required to select welding parameters to be used, set up equipment, perform electrofusion weld, assess joints against specifications and solve problems within area of responsibility.

This unit of competency applies to an experienced operator demonstrating theoretical and technical knowledge and well developed skills in situations that require some discretion and judgement. The operator may work alone or as a member of a team or group and will work in liaison with other shift team members, team leader and supervisor, as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Welding

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1 **Identify compatibility of commercial electrofusion control systems**
 - 1.1 Identify electrofusion welding control unit type and operating data
 - 1.2 Identify pipe material and dimension compatibility with electrofusion fittings
 - 1.3 Identify control unit compatibility with electrofusion fitting control

- 2 **Maintain and calibrate electrofusion control unit equipment**
 - 2.1 Set up electrofusion welding equipment and work area according to enterprise procedures
 - 2.2 Ensure safety equipment is available and operational according to enterprise procedures
 - 2.3 Identify non-conformance, report and rectify according to enterprise procedures
 - 2.4 Determine equipment is operational according to specifications

- 3 **Perform electrofusion welding to required standard**
 - 3.1 Prepare pipe and fitting according to specification
 - 3.2 Perform heating, welding and cooling phases using selected electrofusion welding parameters
 - 3.3 Monitor and record achieved electrofusion weld parameters for each joint according to enterprise procedures
 - 3.4 Clean up equipment when completed according to enterprise procedures
 - 3.5 Clean up work site, dispose of scrap materials according to operational procedures

- 4 **Assess quality of completed electrofusion joints**
 - 4.1 Identify quality requirements for electrofusion joints according to specifications
 - 4.2 Assess joints against specification requirements and report results
 - 4.3 Identify and report non-conformances according to enterprise requirements

5	Identify compatibility of commercial electrofusion control systems	5.1	Identify electrofusion welding control unit type and operating data
		5.2	Identify pipe material and dimension compatibility with electrofusion fittings
		5.3	Identify control unit compatibility with electrofusion fitting control

Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used.

Applicable legislation, regulations, standards and codes of practice include:

- health, safety and environmental (HSE) legislation, regulations and codes of practice relevant to the workplace, manual handling and hazardous materials
- Australian/international standards relevant to the materials being used and products being made, including one or more of:
 - AS/NZS 4129:2000 Fittings for polyethylene (PE) pipes for pressure applications, or its replacement
 - AS/NZS 4130:2009 Polyethylene (PE) pipes for pressure applications, or its replacement
 - AS/NZS 4131:2010 Polyethylene (PE) compounds for pressure pipes and fittings, or its replacement
 - AS/NZS 4401:2006 Plastics piping systems for soil and waste

- discharge (low and high temperature) inside buildings - Polyethylene (PE), or its replacement
- ISO 21307:2011 Plastics pipes and fittings -- Butt fusion jointing procedures for polyethylene (PE) pipes and fittings used in the construction of gas and water distribution systems, or its replacement
- any relevant licence and certification requirements.

All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and such requirements the legislative requirements take precedence.

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or any combination of:

- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant.

Tools and equipment

Tools and equipment include:

- calibrated output electrofusion control units
- pipe clamp supports
- measurement devices, including one or more of:
 - timers
 - temperature probes
 - callipers
 - computer-based output monitors
- cleaning equipment
- spray equipment.

Additional tools and equipment will be selected as required from:

- hand tools used in this process

- hoists/lifting equipment not requiring any special permits or licences
- manual handling aids, such as hand carts and trolleys
- relevant personal protective equipment (PPE).

Hazards

Hazards must be identified and controlled. Identifying hazards requires consideration of:

- power tools, leads and power supplies
- hazardous products and materials
- cutting equipment
- sharp edges, swarf and scrap
- protrusions or obstructions
- slippery surfaces, spills or leaks
- rotational equipment or vibration
- smoke, dust, vapours or other atmospheric hazards
- high temperatures
- electricity
- gas
- gases and liquids under pressure
- structural hazards
- equipment failures
- machinery, equipment and product mass
- other hazards that might arise.

Problems

Routine and non-routine problems must be resolved.

Non-routine problems must be resolved by applying operational knowledge to develop new solutions, either individually or in collaboration with relevant experts, to:

- determine problems needing action
- determine possible fault causes
- develop solutions to problems which do not have a known solution
- follow through items initiated until final resolution has occurred
- report problems outside area of responsibility to designated person.

Non-routine problems are unexpected problems or variations of previous problems and include one or more of:

- variations in quality
- emergency situations
- intermittent faults.

Operational knowledge includes one or more of:

- procedures
- training
- technical information, such as journals and engineering specifications
- remembered experience
- relevant knowledge obtained from appropriate people.

Routine problems are predictable and have known solutions and include one or more of:

- variable PE materials and pipes as supplied
- equipment malfunction or wear and tear
- variable field site conditions.

Unit Mapping Information

Release 1. Supersedes and is equivalent to PMBWELD302B Electrofusion weld polyethylene pipelines

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=932aacef-7947-4c80-acc6-593719fe4090>

Assessment Requirements for PMBWELD302 Electrofusion weld polyethylene pipelines

Modification History

Release 1. Supersedes and is equivalent to PMBWELD302B Electrofusion weld polyethylene pipelines

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and demonstrate the ability to:

- read and interpret designs, plans, patterns, procedures, job specifications, instruments/control panels, material labels and safety data sheets (SDS)
- plan the welding process and sequence tasks
- set up electrofusion welding equipment and materials/components to meet specifications
- prepare electrofusion joint assemblies
- operate the electrofusion control unit to weld the materials/components
- monitor key variables, including:
 - voltage
 - fusion time
 - cooling time
 - alignment
 - product output rate
 - product integrity and general conformance to specification
- maintain and calibrate equipment according to procedures
- identify hazards and apply relevant hazard controls
- apply safety procedures
- apply housekeeping procedures
- apply waste management procedures
- recognise early warning signs of equipment/processes needing attention or with potential problems
- distinguish between causes of problems, including:
 - operational problems
 - instrument failure/malfunction
 - electrical failure/malfunction
 - mechanical failure/malfunction
 - wrong readings
 - materials properties
 - process variables
 - raw material variations/contamination

- procedural errors
- recognise and prioritise problems requiring action
- resolve routine and non-routine problems
- communicate effectively with team/work group and supervisors
- complete workplace records
- do basic arithmetical manipulations, including additions, subtractions, divisions, fractions and percentages.

Knowledge Evidence

Must provide evidence that demonstrates knowledge relevant to their job sufficient to operate independently and to solve routine and non-routine problems, including knowledge of:

- function and operating principles of electrofusion welding equipment, components and ancillary equipment
- impact of variations in welding process variables and raw materials on product quality and production output
- factors which may affect product quality or production output and appropriate remedies
- characteristics of materials and their behaviour in relation to welding process variables and stages of production
- quality requirements at each production stage
- common adjustments in process variables and their impact on product quality and production output
- routine and non-routine problems that may arise, the range of possible causes and appropriate actions
- organisation procedures relevant to the work environment/job role
- hierarchy of control
- hazards that may arise in the job/work environment and:
 - their possible causes
 - potential consequences
 - appropriate risk controls.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence shall be based on a holistic assessment of the evidence.
- In all plants it may be appropriate to assess this unit concurrently with units such as:
 - teamwork
 - communication.
- The collection of performance evidence:
 - should occur over a range of situations which include typical disruptions to normal, smooth operation of an operating plant

- will typically include a supervisor/third-party report or other evidence, focusing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
- must include the use of an appropriate industrial item of equipment requiring demonstration of operation, start and stop procedures and responding to problems
- may use industry-based simulation for all or part of the unit particularly where safety, lack of opportunity or significant cost is an issue.
- Assessment should occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment in a simulated environment should use evidence collected from demonstration of skills and one or more of:
 - walk-throughs
 - pilot plant operation
 - industry-based case studies/scenarios
 - 'what ifs'.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process, such as workbooks, written assessments or interviews.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition the assessor or anyone acting in subject matter expert role in assessment shall demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they shall assess with a subject matter expert who does meet these requirements.
- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment
 - appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
 - appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions

- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed
 - being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
 - having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
 - conducting on the job training/assessments of the type of work being assessed
 - being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=932aacef-7947-4c80-acc6-593719fe4090>

PSPPCY004 Support policy implementation

Modification History

Release	Comments
1	<p>This unit was released in PSP Public Sector Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to PSPPOL404A Support policy implementation.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with new standards • All PC transitioned from passive to active voice

Application

This unit describes the skills required to identify, implement and monitor relevant policy and report on implementation.

This unit applies to public sector staff and other stakeholders working in a role where they are required to support policy implementation.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently. They would perform routine tasks in a range of familiar contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Policy

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Identify relevant policy	1.1 Identify work situations that are shaped by government or organisation policy. 1.2 Identify and locate policy relating to particular work situations.
2. Implement policy	2.1 Interpret policy to be implemented to identify and plan for change in work practices. 2.2 Identify the implications of policy for individual work practices, confirm and adjust practices to reflect policy requirements. 2.3 Support others affected by policy requirements to accommodate those requirements.
3. Monitor and report on policy implementation	3.1 Gather, record and report information that will assist with the evaluation of the effectiveness of policy implementation. 3.2 Gather, record and report information that will assist with evaluation of policy impact on organisational outcomes.

Foundation Skills

Foundation skills are embedded within the elements and performance criteria of this unit.

Unit Mapping Information

This unit supersedes and is equivalent to PSPPOL404A Support policy implementation.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Assessment Requirements for PSPPCY004 Support policy implementation

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in PSP Public Sector Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none"> Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion:

- reading complex and formal documents and providing information on their application
- preparing accurate written reports with language and structures suited to the intended audience
- working with legislation drafters and legal advisers
- consulting on and preparing policy guidelines
- adjusting communication to suit different audiences
- gathering and analysing policy feedback

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- practices and procedures for developing policy guidelines
- policy feedback mechanisms
- current organisation policies
- government policies and international policy obligations that impact on organisation policy
- organisation and government procedures and protocols
- public sector codes of ethics and code/s of conduct

Assessment Conditions

This unit contains no specific industry-mandated assessment conditions. Guidance on suggested and recommended conditions and methods can be found in the Implementation Guide.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

PSPPCY010 Manage policy implementation

Modification History

Release	Comments
1	<p>This unit was released in PSP Public Sector Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to PSPPOL603A Manage policy implementation.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with new standards • All PC transitioned from passive to active voice

Application

This unit describes the skills required to interpret policy and manage policy implementation process. It includes interpreting and communicating the requirements of policy, and policy implementation.

This unit applies to those working as public sector staff required to manage policy implementation.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently, with staff supervision responsibilities, while performing complex tasks in familiar context.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Policy

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Interpret and communicate requirements of policy	<p>1.1 Identify the expected outcomes of policy implementation and communicate to staff.</p> <p>1.2 Interpret policy relative to workplace responsibilities and accountabilities.</p> <p>1.3 Communicate the impact on work activities of policy implementation to staff and other stakeholders.</p> <p>1.4 Assist staff with the interpretation of policy and its application to their work.</p>
2. Implement policy	<p>2.1 Identify potential or impending policy changes and prepare strategies to accommodate and communicate those changes.</p> <p>2.2 Prepare work plans consultation with staff and management to ensure that policy is implemented as intended.</p> <p>2.3 Monitor staff performance to ensure that it complies with policy.</p> <p>2.4 Assist staff in adjusting to changes.</p>

Foundation Skills

Foundation skills are embedded within the elements and performance criteria of this unit.

Unit Mapping Information

This unit supersedes and is equivalent to PSPPOL603A Manage policy implementation.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Assessment Requirements for PSPPCY010 Manage policy implementation

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in PSP Public Sector Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none"> Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- interpreting complex and formal documents
- providing leadership to the workgroup in the interpretation and implementation of policy
- managing policy implementation on 2 or more occasions or in 2 or more contexts

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- range and type of policies relating to the public sector
- public sector code/s of ethics and code/s of conduct
- organisation and government procedures

Assessment Conditions

This unit contains no specific industry-mandated assessment conditions. Guidance on suggested and recommended conditions and methods can be found in the Implementation Guide.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

PSPREG003 Apply regulatory powers

Modification History

Release	Comments
1	<p>This unit was released in PSP Public Sector Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to PSPREG401C Exercise regulatory powers.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with new standards • All PC transitioned from passive to active voice

Application

This unit describes the skills required to cover the exercise of powers under the organisation's enabling legislation and other relevant legislation for regulation, monitoring, inspection and investigation.

This unit applies to those working in public sector roles conducting regulatory activities.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently as part of a team, performing routine tasks involving a range of familiar and unfamiliar contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Regulatory

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Establish regulatory powers	<p>1.1 Access and use current information relating to enabling legislation and regulations to maintain up-to-date knowledge of requirements.</p> <p>1.2 Confirm powers provided under the legislation and the boundaries of those powers.</p> <p>1.3 Identify and confirm compliance requirements of the legislation, related regulations, standards, codes of practice and policy.</p> <p>1.4 Identify and confirm acts and omissions that comprise non-compliance or offences under the legislation.</p>
2. Apply enabling legislation	<p>2.1 Identify and analyse circumstances where regulatory powers will be exercised to determine response or measures to apply.</p> <p>2.2 Identify circumstances requiring the exercise of regulatory powers that are outside own limits and refer to others.</p> <p>2.3 Identify risks associated with the exercise of regulatory powers and strategies to manage risks.</p> <p>2.4 Apply enabling legislation consistent with the boundaries and powers contained therein.</p>
3. Utilise other legislation and standards	<p>3.1 Identify other legislation and standards which impact on powers and confirm their requirements.</p> <p>3.2 Resolve or refer apparently conflicting legislative directions.</p>
4. Work with other organisations	<p>4.1 Identify organisations that have jurisdictions which may overlap and establish and maintain relationships.</p> <p>4.2 Identify organisations available to provide assistance and advice or take referrals and establish relationships for mutual benefit.</p> <p>4.3 Follow organisational protocols and procedures when working with other organisations.</p> <p>4.4 Refer compliance matters to other organisations for action when required.</p> <p>4.5 Follow lead agency protocols and/or lines of authority during operations involving more than one organisation.</p>

Foundation Skills

Foundation skills are embedded within the elements and performance criteria of this unit.

Unit Mapping Information

This unit supersedes and is equivalent to PSPREG401C Exercise regulatory powers.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

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Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Assessment Requirements for PSPREG003 Apply regulatory powers

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in PSP Public Sector Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none"> Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- undertaking research and analysis
- using information technology to access relevant legislation and procedures
- reading complex written materials and applying them to work practices
- using scanning techniques
- engaging in discussion involving exchanges of often complex oral information
- choosing regulatory responses and/or measures to fit the circumstances and justifying those responses against legislation, guidelines, policy and regulations

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- full range of regulatory powers and the limits to those powers
- enabling legislation
- offences under the legislation
- aspects of criminal law, administrative law, industrial law, contract law
- statutory time limits
- terminology used in legislation and procedures
- organisational policies, guidelines and regulations
- public sector legislation including, health and safety and environment relating to the exercise of regulatory powers

Assessment Conditions

This unit contains no specific industry-mandated assessment conditions. Guidance on suggested and recommended conditions and methods can be found in the Implementation Guide.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

PSPREG008 Act on non-compliance

Modification History

Release	Comments
1	<p>This unit was released in PSP Public Sector Training Package release 1.0 and meets the Standards for Training Packages.</p> <p>This unit supersedes and is equivalent to PSPREG405B Act on non-compliance.</p> <ul style="list-style-type: none"> • Unit code updated • Content and formatting updated to comply with new standards • All PC transitioned from passive to active voice

Application

This unit describes the skills required to issue advice, instructions, warnings, notices, fines and other actions in response to non-compliance situations. It includes attending situations where non-compliance is suspected or alleged, and taking action on non-compliance.

This unit applies to those working in public sector roles conducting regulatory activities.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work in as part of a team under routine guidance, performing routine tasks in a range of mostly familiar contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Regulatory

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Attend situations where non-compliance is suspected/alleged	1.1 Follow procedure. 1.2 Maintain personal conduct. 1.3 Protect the safety of self and others. 1.4 Make prompt requests for assistance. 1.5 Carry out activities and actions in accordance with rules of evidence.
2. Take action on non-compliance	2.1 Consider mitigating circumstances. 2.2 Select action on non-compliance to match the seriousness of the offence. 2.3 Inform clients of the action, justification for it and their rights of appeal. 2.4 Take action in accordance with legal requirements. 2.5 Carry out personal actions and/or conduct in accordance with protocols and protect the rights and responsibilities of clients.

Foundation Skills

Foundation skills are embedded within the elements and performance criteria of this unit.

Unit Mapping Information

This unit supersedes and is equivalent to PSPREG405B Act on non-compliance.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

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Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

Assessment Requirements for PSPREG008 Act on non-compliance

Modification History

Release	Comments
1	<p>These Assessment Requirements were released in PSP Public Sector Training Package release 1.0 and meet the Standards for Training Packages.</p> <ul style="list-style-type: none"> Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- undertaking negotiation and conflict resolution
- applying risk management and self-preservation techniques
- using judgment and decision making
- exchanging often complex oral information in a form to suit diverse audiences
- writing requiring accuracy of expression and formality in structure and format

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- public sector legislation
- organisational parameters for decision-making
- range of appropriate actions possible for different offences
- negotiation in the context of achieving compliance
- awareness of social and cultural issues

Assessment Conditions

This unit contains no specific industry-mandated assessment conditions. Guidance on suggested and recommended conditions and methods can be found in the Implementation Guide.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

PUACOM012 Liaise with media at a local level

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to liaise with media at an incident and for providing information about local events. It includes determining media requirements for providing information to publicise an event.

The unit is applicable to personnel of local public safety groups who are delegated the responsibility to liaise with media in both emergency and non-emergency situations.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Communication

Unit Sector

Public Safety

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Determine media requirements

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Organisational procedures are followed when liaising with the media
- 1.2 Media's potential interest is assessed and arrangements are made to meet their needs

- | | | |
|---------------------------------------|------------|---|
| | 1.3 | Operational responsibilities are balanced against provision of information to the media |
| 2 Provide information to media | 2.1 | A positive image of the organisation is maintained when liaising with the media |
| | 2.2 | Every opportunity is used to promote the organisation, its services and personnel, in accordance with organisational requirements |
| | 2.3 | Information is supplied to the media when operational situation permits |
| 3 Publicise an event | 3.1 | Relationship is established with media contacts, in accordance with organisational requirements |
| | 3.2 | Event details and support materials are gathered and presented in a logical and concise manner to the media |
| | 3.3 | Information provided to media is recorded and maintained, in accordance with organisational requirements |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUACOM012B Liaise with media at a local level.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUACOM012 Liaise with media at a local level

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- communicating facts
- determining media requirements
- following organisational policies and procedures including Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- liaising with media and other organisations
- maintaining positive image of the organisation to the media
- prioritising between operational responsibilities and provision of information to media
- providing information to the media
- publicising an event

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- communication techniques and skills
- media relationships
- media requirements
- operational responsibilities
- opportunities for media interest and events
- organisational documentation, policies and procedures including Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements and procedures relating to media liaison
- presentation of information in a newsworthy and informative manner
- provision of relevant and succinct information
- requirements of different media
- role of media in disseminating information

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAEMR005 Treat operational risk

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to identify, plan and implement treatment options to reduce risk. It includes making risk decisions by identifying, assessing and implementing risk control measures, treatment options and monitoring and reviewing risk mitigation processes.

The unit applies to personnel working in a relatively simple and routine workplace in which organisational policy and procedures are used. They would normally have local supervisory and/or management responsibility and will apply appropriate solutions to a variety of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

PUAEMR027 Assess operational risk

Competency Field

Emergency Management

Unit Sector

Not applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Make risk decisions

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Hazards are identified and risks are assessed, in accordance with operational policies and procedures

- | | | |
|--|------------|--|
| | 1.2 | Risk that is determined as unacceptable is documented and noted for treatment |
| 2 Identify and select treatment options | 2.1 | Treatment options of known risks are identified and confirmed, in accordance with organisational standards, guidelines and supervisor's guidance |
| | 2.2 | Treatment options under consideration are evaluated for effectiveness within the given context |
| | 2.3 | Selected treatment options are documented and communicated, in accordance with organisational policies and procedures |
| 3 Implement treatment options | 3.1 | Treatment plans incorporating selected options are implemented, in accordance with organisational policies and procedures |
| | 3.2 | Treatment plans are communicated within the workplace, in accordance with organisational policies and procedures |
| 4 Monitor and review risks and process | 4.1 | Effectiveness and efficiency of the treatment plan is monitored, reviewed and recorded, in accordance with organisational policies and procedures, to ensure compliance and validity |
| | 4.2 | Residual risk is calculated and communicated to supervisors, so that a decision can be made whether to accept the risk or re-establish the risk management process |
| | 4.3 | Treatments are adjusted and communicated following the review process |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAEMR026 Treat operational risk.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAEMR005 Treat operational risk

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least three separate occasions and includes

- communicating with personnel at all levels of organisation and risk management specialists
- following organisational policies and procedures including Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- implementing and monitoring designated actions
- implementing treatment options including identifying and selecting treatment options
- interpreting information and data to identify areas for improvement
- making observations and recording outcomes accurately
- managing simple project implementation
- monitoring and reviewing risks mitigation processes
- undertaking basic research to access relevant information and data
- using consultation and negotiation skills in relation to developing plans

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- duty of care
- communication techniques
- legislation including regulations, codes of practice, associated standards and guidance material
- organisational documentation, policies, procedures including Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- guidelines relevant to risk
- risk assessment including
 - benefits to individual and organisation
 - cost benefits from implementation of treatment
 - cost of implementing treatment option
- risk management terminology and language relevant to industry standards including

- acceptable risk
- residual risk
- unacceptable risk
- specified methods or tools for use in the identification and analysis of risk
- team work principles and strategies
- techniques and methods used to identify or analyse risk management information
- techniques for giving and receiving feedback in a constructive manner
- treatment options for risks including
 - avoidance of risk
 - changing consequences of an identified hazard impact
 - changing likelihood of an initiating event or source of risk occurring
 - hazard impacting on elements at risk
 - removing a risk source
 - retaining risk based on an informed decision
 - risk mitigation
 - sharing risk
 - treatment options may
- treatment plans including
 - budgeting
 - expected outcome of treatments
 - performance measures
 - responsibilities
 - review process to be used
 - schedules

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment must confirm the ability to define and identify risk language, definitions and terminology. Evidence must also be provided of stakeholder involvement throughout the treatment process and that an informed analysis and selection of treatment options has been

undertaken using the methodology and procedures approved by the organisation.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operational manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAEMR006 Assess operational risk

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit involves the skills and knowledge required to identify and assess risk in an operational environment. It includes establishing the risk context by identify, analysing and evaluating risk.

The unit of competency applies to personnel at a relatively simple and routine level, in which they are using established organisational policy and procedures. Personnel would normally have local supervisory or management responsibility and apply appropriate solutions to a variety of predictable problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Emergency Management

Unit Sector

Not applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Establish the risk context

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Risk assessment objectives and scope are identified using organisational risk management procedures, industry standards and guidelines
- 1.2** Risk criteria are identified and confirmed, in accordance with organisational policies, procedures or with

supervisor's guidance

- 1.3 Structure for planning required to conduct a risk assessment is determined
 - 1.4 Stakeholder aims and objectives are identified and recorded, in accordance with organisational procedures and guidelines
- 2 Identify risk**
 - 2.1 Sources of risk which affect the situation or objectives are identified and recorded, in consultation with stakeholders
 - 2.2 Risks are identified using a specified methodology or tool, in accordance with organisational procedures and guidelines
 - 2.3 Risk statements describing consequences are generated, in accordance with organisational procedures
- 3 Analyse risk**
 - 3.1 Risks are analysed by estimating the likelihood of consequences, in accordance with organisational procedures
 - 3.2 Levels of risk are determined, documented and communicated, in accordance with organisational policies and procedures
- 4 Evaluate risk**
 - 4.1 Levels of risks are prioritised for control, in consultation with stakeholders
 - 4.2 Risk assessment rating is compared to established risk evaluation criteria and is communicated to the supervisor
 - 4.3 Risks are monitored and reviewed until appropriate treatment measures have been implemented

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAEMR027 Assess operational risk.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAEMR006 Assess operational risk

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least three separate occasions and includes

- analysing organisational information and data
- communicating with stakeholders
- contributing to the assessment of resources
- establishing risk context and identifying, analysing and evaluating risk
- following organisational policies and procedures including Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- interpreting information and data to identify areas for improvement
- making observations including interactions between personnel, their activities, equipment, environment and systems
- preparing detailed reports for a range of target groups including WHS/OHS or risk committee, WHS/OHS representatives, managers and supervisors
- undertaking basic research including accessing information and data
- using consultation and negotiation skills in relation to developing plans and implementing and monitoring designated actions

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of

- communication techniques including language style and active listening
- concept of duty of care in emergency risk management
- organisational documentation, policies, procedures and guidelines including Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- principles of operational risk assessment
- risk management terminology and language
- risk profiles or criteria including
 - how likelihood will be defined
 - level at which risk becomes acceptable or tolerable

- nature and types of causes and consequences that can occur and how they will be measured
- risk mitigation and how level of risk is determined
- roles and responsibilities in assessing risk
- timeframes of likelihood or consequences
- views of stakeholders
- whether combinations of multiple risks should be considered and if so how and which combinations should be considered
- specified methods and tools used in the identification and analysis of risk
- structure and forms of legislation including regulations, codes of practice, industry standards and guidance material
- techniques and methods used to identify and analyse information

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment must confirm the ability to define and identify risk language, definitions and terminology. Evidence must also be provided of stakeholder involvement throughout the process and that an informed analysis of the risks has been undertaken using tools and methodology approved by the organisation.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operational manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFER008 Confine small emergencies in a facility

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to confine small emergencies in a facility and it applies to occupants who are required to have first attack firefighting skills. It includes preparing for emergency situations, identifying and assessing an emergency, safely confining emergencies, using initial response equipment and reporting on the facility's emergency response.

Small emergencies in a facility include incidents such as small fires that can be controlled using a fire extinguisher; chemical spills that can be controlled using facility personal protective clothing and equipment and a spill kit; or a vehicle accident where there is no significant injury or damage.

The unit has been developed to cover the facilities as specified in Australian Standard (AS) 3745 and AS4083. For this unit, as covered by AS3745 and/or AS4083, occupants are people attending a facility on a permanent or temporary basis such as an employee, contractor, student or resident, but not a visitor or patient and a facility is a building, structure or workplace that is, or may be, occupied by people (occupants).

All aspects of the unit must be undertaken in line with legislative requirements, organisational policies and procedures, and accepted safe work practices.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable

Competency Field

Facility Emergency Response

Unit Sector

Public Safety

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare for emergency situations

1.1 Possible facility emergency situations and responses are identified by the occupant

1.2 Emergency resources are identified and their location is ascertained

1.3 Problems with emergency resources are identified and reported to relevant personnel, in accordance with the facility emergency plan

2 Identify and assess emergency

2.1 Hazards are identified and effectiveness of initial response actions are assessed

2.2 Advice in relation to the emergency is sought, in accordance with the facility emergency plan

2.3 Where initial response actions are considered unsafe or inappropriate action is taken to discontinue, in accordance with the facility emergency plan

3 Safely confine emergencies

3.1 Facility emergency is confined to the immediate area, in accordance with facility emergency response procedures

3.2 Emergency resources are used, in accordance with facility emergency response procedures and safe work practices

3.3 Emergency resources are used, in accordance with facility emergency response procedures

4 Use initial response equipment

4.1 Initial response equipment is checked to ensure its serviceability prior to use

4.2 Equipment is selected and used in response to the facility emergency

4.3 Use of equipment is coordinated with other emergency actions, in accordance with the facility emergency plan

5 Report facility emergency response

5.1 Emergency and response is documented and reported, in accordance with the facility emergency plan

5.2 Use of initial response equipment is documented and

reported, in accordance with the facility emergency plan

- 5.3 Initial response equipment is marked or positioned after use, in accordance with the facility emergency plan and a report to relevant personnel is completed to indicate if any equipment requires servicing and/or replacing

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAWER008B Confine small facility emergencies.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFER008 Confine small emergencies in a facility

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- communicating with occupants, emergency personnel and stakeholders
- complying with facility policies and procedures
- confining emergencies safely
- giving and following instructions
- identifying and acting to avoid or control any associated hazards
- identifying and assessing an emergency
- implementing facility emergency response procedures
- preparing for emergency situations
- reporting facility emergency response
- restowing initial response equipment
- using initial response equipment
- utilising risk management processes

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- actions to be followed when initial response action is not safe
- facilities and equipment that may be used safely to confine emergencies
- facility emergency plan and emergency response procedures
- initial response actions including activation of response team, activation of suppression systems, use of alerts, containment of emergency, evacuation of area, removal of occupants from danger, removal of emergency, basic aid, shut down procedures, use of containment systems and use of portable fire extinguishers, fire blankets and/or hose reels
- kinds of emergency resources
- legislation, industry standards, codes of practice and regulations
- limitations of initial response equipment, emergency control equipment or facilities

- methods of extinguishment
- organisational/facility documentation, policies and procedures
- possible hazards types of emergencies
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) including risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant activities, exercises, case studies and/or simulations
 - reflective of a range of emergency situations that may be expected in a facility
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational policies, facility emergency plan and emergency response procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR008 Operate aerial ignition equipment in an aircraft

Modification History

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to prepare, operate and maintain aerial ignition equipment in an aircraft. It includes preparing aerial ignition equipment, conducting aerial ignition operations and servicing, maintaining and storing ignition equipment.

Equipment may comprise automated incendiary machines and handheld manual incendiary injection. The ignition equipment is used to drop consumables such as incendiaries from a fixed wing aircraft, helicopter or a remotely piloted aircraft as part of aerial ignition operations.

Aerial ignition equipment introduces fire into the landscape in order to ignite either prescribed burn or burning as part of a fire suppression strategy. Because of the risks involved aerial ignition must be conducted in accordance with an approved burn plan or incident action plan with the ignition sequence and intervals planned and monitored.

The unit is applicable to a person required to operate ignition equipment in a helicopter in order to ignite either a prescribed burn or burning as part of a fire suppression strategy. An incendiary operations supervisor is responsible for supervising the aerial ignition.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR017 Work safely around aircraft

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare aerial ignition equipment

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Personal protection clothing and equipment and other safety equipment is checked and worn in accordance with organisational procedures
- 1.2 Requirements for aerial ignition operations are identified and confirmed with relevant personnel
- 1.3 Activities are undertaken in accordance with standards, legislation, organisational procedures and Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- 1.4 Ignition equipment and consumables to be used are confirmed
- 1.5 Ignition equipment and consumables are stored and transported in accordance with organisational procedures and regulatory requirements
- 1.6 Ignition equipment is installed in aircraft in accordance with organisational procedures and aircraft operator requirements
- 1.7 Ignition equipment is inspected and tested to ensure correct operation, where required
- 1.8 Consumables are loaded into ignition equipment in accordance with organisational procedures

2 Conduct aerial ignition operations

- 2.1 Principles of team resources management are established and maintained for aerial ignition operations
- 2.2 Briefing is received from pilot on aircraft safety including aircraft emergency procedures
- 2.3 Response procedures for emergency situations involving ignition equipment or aircraft are confirmed with pilot

and incendiary operations supervisor

- 2.4 Communication with pilot and incendiary operations supervisor is maintained to ensure aerial ignition operations achieves burn prescription
 - 2.5 Ignition equipment is operated in accordance with organisational procedures and manufacturers' specifications
 - 2.6 Adjustments to ignition equipment are undertaken, as required or requested
 - 2.7 Ignition operations are conducted in accordance with burn plan
- 3 Service, maintain and store ignition equipment**
- 3.1 Ignition equipment is isolated or shut down in accordance with organisational procedures and manufacturers' guidelines prior to departure of aircraft from ignition site
 - 3.2 Excess incendiary devices are stored or disposed of in accordance with organisational procedures
 - 3.3 Ignition equipment is serviced, maintained and repaired within scope of authority
 - 3.4 Ignition equipment faults are documented and forwarded to appropriate personnel for action
 - 3.5 Ignition equipment is stored and forwarded to appropriate personnel for maintenance

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR312 Operate aerial ignition equipment in an aircraft.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUA FIR008 Operate aerial ignition equipment in an aircraft

Modification History

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- adhering to safe working practices if machine or ignition equipment malfunctions
- applying organisation procedures for aerial ignition
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including aircraft or other emergency procedures
- checking and wearing of personal protective clothing and equipment
- conducting aerial ignition operations using approved ignition equipment and consumables
- demonstrating pre-flight testing and installation, where required, of aerial ignition equipment
- operating for extended periods in an aircraft
- operating ignition equipment from an airborne aircraft
- preparing and maintaining ignition equipment
- receiving briefing from pilot on aircraft safety
- reporting equipment malfunctions, accidents and incidents
- servicing, maintaining, repairing and storing equipment and consumables
- shutting down or isolating ignition equipment
- using communications equipment
- using ignition equipment
- working as a member of a team.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- aircraft operator's policy and procedures for aerial ignition
- aircraft safety and emergency procedures
- characteristics and limitations of ignition equipment and consumables
- consumables such as capsules containing potassium permanganate and ethylene glycol (antifreeze)
- emergency procedures for equipment malfunction
- guidelines relating to safe use of ignition equipment used by organisation

- mechanical knowledge sufficient to service, maintain and repair aerial ignition equipment
- methods for disposal of excess consumables
- organisational policies and procedures for aerial ignition
- personal protection clothing and equipment for operating the aerial ignition equipment
- requirements for packing and transporting aerial ignition equipment and consumables
- risk mitigation and hazard identification
- roles and responsibilities of team involved in aerial ignition operations
- Team Resources Management (TRM) principles
- types and applications of aerial ignition equipment
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in operational situations or in simulated operational training situations that reflect workplace conditions. Assessment will take place in a simulated environment followed by an assessment by an accredited operator on the job.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to

- a range of exercises, case studies and/or simulations
- appropriate materials, equipment and tools currently used in industry including
 - aerial ignition equipment and consumables
 - an aircraft
 - an area to conduct operations
 - personal protective clothing and equipment and relevant safety equipment
 - safe disposal facilities
 - suitable tools for testing, maintenance and inspection of equipment
 - transport of consumables and ignition equipment
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR017 Work safely around aircraft

Modification History

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to apply safe work practices when working around aircraft for organisational operations. It includes working safely in or around aircraft and facilitating safe ground support.

The unit is applicable to the provision of introductory training for personnel providing support services for aerial operations, noting that personnel undertaking specialist functions such as aircraft marshalling, aircraft refuelling, fire suppressant mixing and loading and ground-to-air radio communications will require further training. It also applies to the provision of safety training for operational personnel who may be required to utilise aircraft or work in the vicinity of aircraft in the performance of their work tasks and/or the provision of foundation training for all aviation related roles for fire, land management and emergency management.

Work is performed independently or under limited supervision as a single operator or within a team environment.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Work safely in and around aircraft

- 1.1 Site and job hazards are identified, risks are assessed and control measures are implemented
- 1.2 Personal protective clothing and equipment is worn and used correctly in accordance with organisational procedures
- 1.3 Appropriate clearances and permissions, where required, are obtained and procedures are adhered to whilst operating in aircraft movement areas
- 1.4 Any approach to an operating aircraft is made from an angle visible to the pilot or air crew and with approval of the pilot or air crew
- 1.5 Adequate clearance is maintained from propellers, rotors, engines, exhaust gases and engine intakes
- 1.6 Typical manoeuvring patterns of aircraft are anticipated and a safe distance is maintained
- 1.7 Instructions or signals from pilots or staff controlling aircraft are complied with in accordance with organisational procedures

2 Facilitate safe ground support

- 2.1 Briefing on safety and tasks are received and acknowledged from task supervisor
- 2.2 Appropriate approvals and precautions are observed when positioning vehicles or equipment close to aircraft
- 2.3 Instructions from pilots and/or authorised air crew coordinating aircraft operations are followed
- 2.4 Aircraft loading and other activities relating to the aircraft, where required, are conducted under pilot or authorised air crew supervision
- 2.5 Aircraft hazards and equipment defects are reported to pilot or approved task supervisor
- 2.6 Compliance is maintained around aircraft in accordance with air base regulations

- 2.7 Accidents are identified and reported to pilot and/or task supervisor
- 2.8 Directions from pilot or air crew are followed during an emergency

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR209 Work safely around aircraft.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR017 Work safely around aircraft

Modification History

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- complying with regulatory requirements and organisational procedures
- ensuring safety and quality procedures are applied
- following directions from pilot or air crew during an emergency
- identifying hazards and risks and acting to minimise, mitigate, control or eliminate
- implementing precautions and aviation emergency procedures, as required
- participating in briefings
- reporting accidents
- using personal protective clothing and equipment
- working safely around aircraft.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- actions to be taken in the event of an emergency
- air base site hazards
- airbase access and security requirements
- airbase layout, facilities and services including working zones and lighting facilities
- aircraft design features including 'no step' places
- aircraft features and movement characteristics
- aircraft operations including loading and refuelling precautions
- content of briefings
- correct selection, fitting and wearing of personal protective clothing and equipment for tasks to be performed
- hazards of working around aircraft
- organisational policies and procedures including safe work practices around aircraft
- risk identification and mitigation processes

- roles and responsibilities of personnel supervising, managing and supporting aircraft operations
- safety equipment including fire extinguisher and first aid kit
- types of aircraft which may include but is not limited to aeroplanes, helicopters, remotely piloted aircraft and their movement characteristics
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in operational situations or in simulated operational training situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to

- a range of exercises, case studies and/or simulations
- appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, standards, equipment specifications, regulations, codes of practice and operational manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR203 Respond to urban fire

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to respond to an urban fire where offensive and defensive strategies are used. It includes proceeding to a fire, preparing extinguishing media and/or equipment for use, entering a structure, conducting search and rescues and combatting fires.

The unit applies to firefighting personnel who work as a member of a team, under direct supervision. Work at this level is undertaken under direct supervision, and with instruction.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR207 Operate breathing apparatus open circuit

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Proceed to fire

- 1.1** Information received about the location and type of fire is confirmed
- 1.2** Appropriate personal protective clothing and equipment is donned, in accordance with organisational procedures
- 1.3** Most effective route to the fire is identified and navigated safely

2 Prepare extinguishing media and/or equipment for use

- 2.1** Water supplies at the incident to support firefighting are located
- 2.2** Equipment to access and supply water to firefighting operations are identified and assembled, in accordance with organisational procedures
- 2.3** Nominated extinguishing media and/or equipment is identified, obtained and accessed
- 2.4** Extinguishing media and equipment are used, in accordance with manufacturers' specifications and organisational procedures

3 Enter the structure

- 3.1** Hazards are identified, monitored and controlled, in accordance with organisational procedures
- 3.2** Personal protective clothing and equipment selected is appropriate to the hazards
- 3.3** Organisational breathing apparatus procedures and safe work practices are followed
- 3.4** Structure is entered, in accordance with organisational procedures and safety practices
- 3.5** Safe paths of access and egress are identified and maintained throughout the incident
- 3.6** Life is protected and damage to property and the environment is minimised, in accordance with organisational procedures

4 Conduct search and rescue

- 4.1** Systematic primary and secondary searches are conducted
- 4.2** Rooms are searched and marked, in accordance with organisational procedures

- 4.3 Casualties are located, assisted and rescued, in accordance with organisational procedures
 - 4.4 Fatalities are located and protected, in accordance with organisational procedures and relevant legislation
 - 4.5 All persons are accounted for and information is reported utilising the organisations chain of command.
- 5 Combat fires**
 - 5.1 Personal safety is maintained, in accordance with organisational procedures and workplace health and safety guidelines
 - 5.2 Organisational firefighting objectives, strategies and tactics are received, confirmed and implemented as directed
 - 5.3 Firefighting considerations are taken into account when implementing firefighting tactics
 - 5.4 Equipment and extinguishing media used to combat the fire are appropriate to the class of fire and support firefighting requirements
 - 5.5 Firefighting equipment is positioned to achieve maximum effect in suppressing the fire, protecting exposures and preserving evidence of fire cause
 - 5.6 Extinguishing media is applied using appropriate application techniques
 - 5.7 Fire suppression techniques are applied to minimise hazards to occupants trapped or lost within the structure
 - 5.8 Communication with team members and the supervisor are maintained throughout the incident
- 6 Observe and react to changes in conditions and fire behaviour**
 - 6.1 Changing conditions at the fire are observed and their effects on fire behaviour are noted and reported
 - 6.2 Evidence of changing conditions at the fire are reported
 - 6.3 Firefighting tactics are adapted to meet changing conditions and fire behaviour
- 7 Participate in ancillary operations**
 - 7.1 Ancillary activities to complement firefighting operations and prevent further damage to the structure and its contents are undertaken

- | | |
|---|---|
| 8 Conclude firefighting operations | <p>7.2 Water runoff from the fire is monitored and conditions are reported</p> <p>7.3 Damage to the environment at the incident is minimised through appropriate firefighting and ancillary activities</p> <p>8.1 Firefighting equipment is collected and stowed at the incident</p> <p>8.2 Incident scene is made safe for the public</p> <p>8.3 Defective or missing equipment is identified and reported</p> <p>8.4 Incident information is record and completed, in accordance with organisational procedures</p> |
|---|---|

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

types of fire must include

- fires involving dangerous goods and/or hazardous substances
- mobile property
- non-structures
- structures

personal protective clothing and equipment must include

- breathing apparatus
- eye protection
- hearing protection
- turnout uniform and gloves

water supplies must include

- open
- reticulated
- static

equipment must include

- and may also include other extinguishing substances
- BA and control equipment
- branches, nozzles and monitors

- extinguishing media must include:
- fire extinguishers
 - forcible entry tools
 - hoses and hose fittings
 - ladders and rope lines
 - portable lights
 - radios
 - salvage gear
 - small gear and ancillary equipment
 - standpipes, hydrants and booster connections
- extinguishing media must include:
- extinguishing powder
 - foam
 - gaseous extinguishing agents
 - water
- hazards must include three or more of the following:
- electricity, including photovoltaic generation
 - gas
 - hazardous products and materials
 - industrial (machinery, equipment and products)
 - smoke, darkness and heat
 - structural collapse
 - structural hazards
 - unauthorised personnel
- assisted must include
- first aid
 - handing over to ambulance, medical or other organisational care
 - protecting from the elements
 - providing refreshments
- firefighting objectives must include
- confining the spread of fire
 - extinguishment
 - protecting exposures
 - rescuing occupants
 - salvage and overhaul
 - ventilation
- fire strategies must include
- defensive mode
 - direct attack
 - indirect attack
 - offensive mode
- firefighting tactics must include
- cooling the fuels
 - excluding oxygen
 - interrupting the chemical chain reaction
 - removing fuels

firefighting considerations must include

- ventilation
- available firefighting resources
- extinguishing media
- fire exposures
- indications of extreme fire behaviour
- signs of structural collapse
- size of fire
- stage of fire development
- topography
- type of fire
- weather

firefighting activities must include

- anticipating fire behaviour
- applying extinguishing media
- applying techniques to maximise effect and minimise damage
- ensuring safety
- hose stream techniques
- locating and accessing fire
- protecting and notifying supervisor of evidence of fire cause
- search and rescue

changing conditions at the fire must include

- fire spread
- flame colour and size
- impending structural collapse
- increase in heat
- increase or decrease in fuel available to fire
- increase or decrease in heat of fire
- increase or decrease in oxygen available to fire
- other materials becoming involved in fire
- signs of structural collapse
- smoke colour
- weather conditions

evidence of changing conditions at the fire must include

- fire spread
- flame colour and size
- impending structural collapse
- increase in heat
- smoke colour
- weather conditions

ancillary activities must include

- damming water run off
- guarding against hazards
- making up equipment

recording appropriate incident information must include

- overhaul
- salvage
- securing the area
- attendance records
- completing personal notebooks logs and/or report forms
- equipment used
- objectives set
- obtain relevant details
- owner or occupant details
- problems encountered

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR203B Respond to urban fire.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR203 Respond to urban fire

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including maintaining the health and safety of self and others
- combating fires through implementing firefighting objectives, strategies and tactics
- concluding firefighting operations
- conducting search and rescue
- controlling fire environment by cooling fire gases
- entering structures affected by fire
- identifying hazardous materials
- instigating actions to avoid risk of injury
- moving in smoke and darkness
- observing and reacting to changes in conditions and fire behaviour
- obtaining water from reticulated or static water supplies
- operating a firefighting branch
- operating fire extinguishers
- participating in ancillary operations
- preparing extinguishing media and equipment for use
- proceeding to a fire
- recording incident information
- selecting and using firefighting equipment
- using extinguishing media on a fire
- using personal protective clothing and equipment
- using structural entry techniques
- utilising breathing apparatus, associated equipment and operational procedures

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- ancillary activities
- basic signs of fire cause and activities for protecting evidence
- behaviour of a building or structure in a fire
- chain of command
- change in conditions at a fire caused by increase or decrease in
 - fuel available to fire
 - increase or decrease of oxygen available to fire
- different construction types and their behaviour in a fire
- equipment and tools used in fire suppression activities extinguishing media
- fire behaviour
- fire ground signals including audible and visual
- fire tetrahedron
- firefighting foams
- firefighting tasks, tactics and techniques
- hazardous materials identification
- hazards and actions to minimise, mitigate, control or eliminate
- identification of various building types including structural elements and materials, causes and signs of structural failure
- methods of heat transfer
- natural ventilation procedures
- navigation and map reading
- organisational documentation, policies and procedures including procedures for working with ladders, ropes, lines and tying knots
- portable fire extinguishers
- principles and methods of extinguishment
- salvage and overhaul
- signs of structural collapse
- water supplies
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including safety assessments and/or risk mitigation processes, safe work practices and personal protective clothing and equipment

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situation that reflects workplace conditions.

Competency should be assessed on the job and/or in a range of simulated fire environments.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- a relevant appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - range of controlled or simulated fires, firefighting equipment, extinguishing media and breathing apparatus and associated equipment
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR204 Respond to wildfire

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to respond to a wildfire, work as a safe and situationally aware member of a crew to attack and extinguish a fire, participate in mop ups and patrol operations and prepare equipment for the next crew.

The unit applies to firefighting personnel who work as a member of a team. It includes preparing to respond to fire; proceeding to fire; obtaining and using firefighting equipment and extinguishing media; combating wildfire; observing and reacting to wildfire and weather conditions; participating in mop up and patrol activities; supporting operations and recovering and storing equipment. Work at this level is undertaken under direct supervision, and with instruction.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR210 Prevent injury

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|--|---|
| 1 Prepare to respond to fire | <p>1.1 Information received about the location and type of wildfire is confirmed</p> <p>1.2 Most effective route to the fire is identified and navigated safely</p> <p>1.3 Appropriate personal protective clothing and equipment is donned, in accordance with organisational procedures</p> |
| 2 Proceed to fire | <p>2.1 Location of the fire and type of fuel is confirmed on approach</p> <p>2.2 Life is protected and damage to property and the environment is minimised, in accordance with organisational procedures</p> <p>2.3 Evidence relevant to fire cause is noted and reported utilising the organisations chain of command, in accordance with organisational procedures</p> <p>2.4 Indicators of fire behaviour are observed and reported</p> |
| 3 Obtain and use firefighting equipment and extinguishing media | <p>3.1 Nominated extinguishing media and/or firefighting equipment are located and obtained</p> <p>3.2 Extinguishing media and equipment are used, in accordance with manufacturers' specifications and organisational procedures</p> |
| 4 Combat wildfire | <p>4.1 Instructions are received, firefighting strategies and tactics are confirmed and implemented</p> <p>4.2 Suppression techniques, equipment and extinguishing media appropriate to wildfire conditions are used</p> <p>4.3 Control lines are prepared as directed</p> <p>4.4 Equipment is positioned, made ready for use and protected from damage</p> <p>4.5 Fire is attacked taking into account wildfire hazards as directed</p> |

- | | | |
|---|------------|---|
| | 4.6 | Evidence of fire cause and area of fire origin are protected |
| | 4.7 | Communication is maintained at all times with all personnel |
| 5 Observe and react to wildfire and weather conditions | 5.1 | Changing conditions at the fire are observed and their effects on fire behaviour are noted and reported |
| | 5.2 | Weather conditions and changes to fire behaviour are observed and reported |
| | 5.3 | Variations in topography, fuel features and fuel arrangements are observed and reported |
| | 5.4 | Escape routes and safety zones are confirmed and maintained throughout the incident |
| | 5.5 | Communication is maintained with other firefighting personnel throughout operational activities |
| 6 Participate in mop up and patrol activities and support operations | 6.1 | Mopping up activities are carried out, as directed |
| | 6.2 | Patrol of the perimeter or sector of the fire is maintained, as directed |
| | 6.3 | Activities to support firefighting operations are carried out, as directed |
| 7 Recover and store equipment | 7.1 | Equipment and consumables are recovered, as directed |
| | 7.2 | Firefighting equipment is collected and stored at the incident |
| | 7.3 | Cleaning and maintenance are carried out in accordance with organisational procedures |
| | 7.4 | Damaged or lost equipment is identified and reported |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

extinguishing media must include two of the following

- class A foam
- retardants
- soil
- water
- wetting agents

personal protective clothing and equipment must include

- eye and head protection
- turnout uniform and gloves

types of wildfire must include

- surface

types of fuel must include one of the following

- forest
- grass
- scrub

firefighting equipment must include

- hand tools
- hose and small gear
- pump
- tanker

firefighting tactics must include

- control line construction
- mopping up
- patrol
- use of extinguishing media

suppression techniques must include

- dry and wet firefighting

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR204B Respond to wildfire.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR204 Respond to wildfire

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- combating wildfires
- communicating on the fire ground using a range of tools
- detecting hot spots, hazardous trees, unsecured wildfire perimeter
- maintaining situational awareness
- maintaining health and safety of self and others in work area
- observing and reacting to wildfire and weather conditions
- obtaining and using firefighting equipment and extinguishing media
- participating in mop ups, patrol activities and support operations
- participating in entrapment safety procedures
- preparing to respond to a fire
- proceeding to a fire
- reacting to changing wildfire behaviour due to changes in weather, topography and fuel conditions
- recovering, reinstating and storing equipment
- undertaking dry and wet wildfire attack
- undertaking operational activities safely, in accordance with organisational procedures
- using extinguishing media in wildfire control
- using wildfire control tools and equipment
- working with firefighting equipment
- working as a member of a team

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- communication on the fire ground using radio and telephone

- consumables including flagging tape, fuel, rubbish and signs
- extinguishing media, water, foam and suppressants
- escape routes including prepared tracks, roads, trails and waterways
- earth moving equipment such as bulldozers, graders and tractors with blades
- equipment for firefighting including chainsaw, ropes and lines, drip torch and knap sack
- evidence related to fire cause including fresh vehicle tracks, items or objects at scene, nature and behaviour of fire at the scene upon arrival, nature and colour of smoke and number of columns, people and vehicles leaving the scene and whether gates on access routes to the fire were closed, opened or locked
- fire behaviour
- fuel features including arrangement and distribution, moisture content, quantity, size and type
- indicators of fire behaviour including flame height and length, noise, rate of spread, smoke colour and density, spotting and extreme fire behaviour
- organisational documentation, policies and operating procedures
- safety zones including bare ground, burnt areas, clearings, rivers and site of recent wildfire or prescribed burn, static water bodies and defensible space
- support operations including providing and transporting food, water and equipment
- tactics for firefighting including backburning, burning out and patrol
- types of wildfire including crown and ground
- types of fuel including crop, heath, peat, coal, combustible soils and plantation
- strategies for firefighting including defensive, direct and indirect attack, offensive and parallel attack
- variations in topography including aspect, elevation, landscape features and slope
- weather conditions including atmospheric stability, relative humidity, temperature and variations to wind speed and direction
- wildfire control tactics and techniques
- wildfire hazards
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including health and fitness requirements, hygiene and wellbeing, safe work practices, safety assessments and risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that

reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR204B Respond to wildfire

Modification History

Release	TP Version	Comments
2	PUA12 V2	Content reviewed Application of the Unit added Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to respond to a wildfire, work as a safe and situationally-aware member of a crew to attack and extinguish a fire, participate in mop-up and patrol operations, and prepare equipment for the next crew.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Application of the Unit

This unit applies to personnel who work as a member of a team. Work at this level is undertaken under direct supervision and instruction.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR215 Prevent injury

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

- | | |
|--|---|
| <p>1. Prepare to respond to fire</p> | <p>1.1 Information about location of fire, <i>type of wildfire</i> and most effective route to the fire is obtained, taking into account local conditions.</p> <p>1.2 Personal protective clothing and equipment, and food and fluid requirements are identified and relevant preparations undertaken prior to departure as per organisational standards.</p> |
| <p>2. Proceed to fire</p> | <p>2.1 Location of the fire and <i>type of fuel</i> is confirmed on approach.</p> <p>2.2 Access to the area is gained safely without damage to vehicles and equipment, and minimum damage to the environment.</p> <p>2.3 <i>Evidence relevant to fire cause</i> is noted and brought to the attention of the supervisor.</p> <p>2.4 <i>Indicators of fire behaviour</i> are observed and communicated to supervisor.</p> |
| <p>3. Obtain and use firefighting equipment and extinguishing media</p> | <p>3.1 Nominated <i>extinguishing media</i> and <i>firefighting equipment</i> are located and obtained.</p> <p>3.2 Equipment is used in accordance with organisational and manufacturer's procedures.</p> |
| <p>4. Combat wildfire</p> | <p>4.1 Instructions are received, <i>firefighting strategies and tactics</i> are confirmed and implemented in accordance with organisational safe work practices and procedures.</p> <p>4.2 <i>Suppression techniques</i>, equipment and extinguishing media appropriate to wildfire conditions are used.</p> <p>4.3 Control lines are prepared in accordance with supervisor's instructions.</p> <p>4.4 Equipment is positioned, made ready for use and protected from damage in accordance with</p> |

- organisational procedures.
- 4.5 Fire is attacked taking into account *wildfire hazards* as directed and in accordance with organisational procedures.
 - 4.6 Evidence of fire cause and area of fire origin are protected.
 - 4.7 *Communication* is maintained at all times in accordance with organisational procedures.
- 5. Observe and react to wildfire and weather conditions**
- 5.1 Conditions at the fire are observed and their effect on fire behaviour and development are noted and reported to supervisor.
 - 5.2 *Weather conditions* and changes to fire behaviour are observed and reported to supervisor.
 - 5.3 *Variations in topography, fuel features* and fuel arrangements are observed and effect on fire behaviour is reported to supervisor as required.
 - 5.4 *Escape routes* and *safety zones* are identified and maintained at all times.
 - 5.5 Communication is maintained with other firefighting personnel and supervisor throughout operational activities.
- 6. Participate in mop-up and patrol activities and support operations**
- 6.1 Mopping-up activities are carried out in accordance with organisational procedures.
 - 6.2 Patrol of the perimeter or sector of the fire is maintained in accordance with organisational procedures.
 - 6.3 Activities to *support firefighting operations* are carried out in accordance with organisational procedures.
- 7. Recover and store equipment**
- 7.1 Equipment and *consumables* are recovered as directed.
 - 7.2 Equipment is stored in accordance with organisational procedures.
 - 7.3 Cleaning and maintenance are carried out in accordance with organisational procedures.
 - 7.4 Damaged or lost equipment is reported in accordance with organisational procedures.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- detect hot spots, hazardous trees, unsecured wildfire perimeter
- undertake dry and wet wildfire attack
- use wildfire control tools and equipment
- work as a member of a team

Required Knowledge

- communication on the fireground
- extinguishing media, water, foam, suppressants
- fire behaviour (fuel, weather and topography)
- health and fitness requirements
- hygiene and wellbeing
- organisational operating procedures
- safe work practices
- wildfire control tactics and techniques
- wildfire hazards, safety techniques

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- react to changing wildfire behaviour due to changes in weather, topography and fuel conditions
- use firefighting equipment
- participate in dry wildfire control
- use extinguishing media in wildfire control
- maintain health and safety of self, other workers and people in the immediate work area
- participate in mop-up and patrol
- undertake operational activities safely

Consistency in performance

Competency should be demonstrated over time in a range of actual and/or simulated field-based workplace environments.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in an agency approved simulated and/or field-based workplace environment.

Specific resources for assessment

Access is required to:

- controlled or contained fires and/or simulated workplace environment
- firefighting equipment and extinguishing media

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an industry-approved simulated work environment. Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. <i>Bold italicised</i> wording in the Performance Criteria is detailed below.	
<i>Type of wildfire</i> must include:	<ul style="list-style-type: none"> • crown • ground • surface
<i>Type of fuel</i> may include:	<ul style="list-style-type: none"> • crop • forest • grass • heath • peat, coal and combustible soils • plantation • scrub
<i>Evidence relevant to fire cause</i> may include:	<ul style="list-style-type: none"> • fresh vehicles tracks • items or objects at scene • nature and behaviour of fire at the scene upon arrival

	<ul style="list-style-type: none"> • nature and colour of smoke and number of columns • people and vehicles leaving the scene • whether gates on access routes to the fire are closed, opened or locked
Indicators of fire behaviour may include:	<ul style="list-style-type: none"> • flame height and length • noise • rate of spread • smoke colour and density • spotting
Extinguishing media must include:	<ul style="list-style-type: none"> • water
and may also include:	<ul style="list-style-type: none"> • Class A foam • retardants • soil • wetting agents
Firefighting equipment must include:	<ul style="list-style-type: none"> • drip torch • hand tools • hose and small gear • knap sack • pump • tanker
and may also include:	<ul style="list-style-type: none"> • chainsaw • ropes and lines
Firefighting strategies must include:	<ul style="list-style-type: none"> • defensive • direct attack • indirect attack • offensive: • parallel attack
Firefighting tactics may include:	<ul style="list-style-type: none"> • backburning • burning out • control line construction • mopping-up • patrol • use of extinguishing media
Suppression techniques may include:	<ul style="list-style-type: none"> • dry firefighting • wet firefighting
Wildfire hazards may include:	<ul style="list-style-type: none"> • burns • disorientation • electrical installations and powerlines • embers

	<ul style="list-style-type: none"> • falling branches/trees • fatigue • heat related illness • lack of visibility • machinery/vehicle • manual handling • noise • radiant heat • smoke inhalation • snake or insect bite • sprain or fracture • trips and falls • water bombing operations
Communication may include:	<ul style="list-style-type: none"> • paging • personal contact • phone • radio • written notes
Weather conditions may include:	<ul style="list-style-type: none"> • atmospheric stability • relative humidity • temperature • variations to wind speed and direction
Variations in topography may include:	<ul style="list-style-type: none"> • aspect • elevation • landscape features • slope
Fuel features must include:	<ul style="list-style-type: none"> • arrangement/distribution • moisture content • quantity • size • type
Escape routes may include:	<ul style="list-style-type: none"> • prepared tracks • roads • trails • waterways
Safety zones may include:	<ul style="list-style-type: none"> • bare ground • burnt areas • clearings • rivers • site of a recent wildfire or prescribed burn • static water bodies

<i>Support firefighting operations</i> may include:	<ul style="list-style-type: none"> • providing/transporting food, water and equipment for an incident • working with earth moving equipment such as bulldozer, grader, tractor with blade
<i>Consumables</i> may include:	<ul style="list-style-type: none"> • flagging tape • fuel • rubbish • signs

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil

PUAFIR207 Operate breathing apparatus open circuit

Modification History

Release 2.0 This is the second release of this unit of competency in the PUA Public Safety Training Package.

Editorial update.

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to select, don, operate and maintain breathing apparatus equipment in a hazardous atmosphere. It includes conducting pre-donning checks and tests of breathing apparatus; donning and checking of breathing apparatus; operating breathing apparatus and concluding breathing apparatus operations.

The unit applies to personnel who work as a member of a team. Work at this level is undertaken under direct supervision and instruction.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR210 Prevent injury

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Conduct pre-donning checks and tests on breathing apparatus

1.1 Breathing apparatus is inspected for immediate use, in accordance with the organisational procedures

1.2 Faulty or damaged equipment is reported and recorded, in accordance with the organisational procedures

2 Don and check breathing apparatus

2.1 Breathing apparatus is donned, in accordance with the organisational procedures

2.2 Breathing apparatus is started and checked, in accordance with organisational procedures

2.3 Ancillary equipment required for tasks is selected for use

3 Operate breathing apparatus

3.1 Hazards are identified, monitored and controlled, in accordance with the organisational procedures

3.2 Communication is established and maintained with team members and other appropriate personnel throughout activity

3.3 Response activities are undertaken as a member of a team, demonstrating effective application of breathing apparatus, in accordance with the organisational procedures

3.4 Breathing apparatus control procedures are followed, in accordance with the organisational procedures

3.5 Entrapment procedures are implemented, in accordance with the organisational procedures

3.6 Personal safety is maintained, in accordance with organisational procedures

4 Conclude operations

4.1 Breathing apparatus set is shut down, in accordance with organisational procedures

4.2 Breathing apparatus set is removed, in accordance with organisational procedures

4.3 Cleaning and maintenance of breathing apparatus is

undertaken, in accordance with organisational procedures

4.4 Equipment is made ready for operational use, in accordance with organisational procedures

4.5 Participating in debriefing sessions

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

type of breathing apparatus must include

- open circuit

breathing apparatus is inspected must include

- ancillary equipment
- cylinder pressure
- integrity of air flow system
- serviceability and integrity of components

breathing apparatus control procedures must include

- entry or exit control officer
- entry or exit control point
- organisational procedures
- principles of breathing apparatus control
- stage one (one entry point) and stage two (multiple entry points)
- timing device

breathing apparatus control equipment must include

- breathing apparatus set tallies
- control boards
- entry control officer identification
- guideline and branch line tallies
- personal lines
- procedures

hazards must include

- disorientation in smoke/darkness or confinement
- entrapment
- exhaustion of air supply (regular gauge monitoring)

communications must include

entrapment procedures must include

- failure to maintain a face seal
- fire
- hazardous atmospheres
- malfunction of equipment
- manual handling
- structural hazards and/or hazardous materials
- distress signal unit
- hand signals
- portable radio
- activating the distress signal unit
- calling for assistance
- ceasing all strenuous activity
- operating breathing apparatus
- relocating to safest available place
- remaining calm

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR207B Operate breathing apparatus open circuit.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR207 Operate breathing apparatus open circuit

Modification History

Release 2.0 This is the second release of this unit of competency in the PUA Public Safety Training Package.

Editorial update.

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- conducting pre-donning checks and tests on breathing apparatus
- donning and checking breathing apparatus
- following organisational policies and procedures including implementing entrapment and breathing apparatus emergency procedures
- inspecting breathing apparatus after its use
- inspecting breathing apparatus and concluding breathing apparatus operations
- moving in conditions of reduced visibility
- operating breathing apparatus
- participating in debriefing sessions
- returning breathing apparatus to operational status
- complying with organisational procedures for breathing apparatus use and maintenance

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- characteristics, component parts, operation of compressed air breathing apparatus
- how breathing apparatus supports personal protection
- industry standards for breathing apparatus
- operation of breathing apparatus
- operational testing, operating procedures and safe work practices when wearing breathing apparatus

- organisational documentation, policies and procedures including entrapment procedures
- performance of breathing apparatus control equipment
- personal protective clothing and equipment
- respiratory system and effects of hazardous atmospheres on the body
- types of hazardous atmospheres including heated, smoke or other suspended particles
- use of personal lines and tallies
- utilisation of distress signal unit
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including safety assessments and risk mitigation

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in operational situations or in simulated operational training situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - range of controlled or simulated scenarios, breathing apparatus and associated equipment
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR209 Work safely around aircraft

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to apply safe work practices when operating in or around aircraft at an airbase. It includes working safely near aircraft and facilitating safe ground support and it applies to personnel working in the public safety sector who work around aircraft.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Work safely in and around aircraft

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Personal protective clothing and equipment is used, in accordance with operational procedures

1.2 Precautions and clearances are obtained and followed

when operating on or near aircraft movement areas

- 1.3 Any approach to an operating aircraft is made, in accordance with organisational aircraft approach procedures, from an angle visible to the pilot or flight crew and with approval of the pilot or flight crew
- 1.4 Adequate clearance is maintained from propellers, rotors and/or turbine engines, exhaust gases and engine intakes
- 1.5 Typical manoeuvring patterns of aircraft are anticipated through activities
- 1.6 Instructions or signals from pilots or staff controlling aircraft are complied with, in accordance with organisational procedures
- 1.7 Site hazards are identified and risks are assessed and control measures are implemented

2 Facilitate safe ground support

- 2.1 Appropriate precautions are observed when positioning vehicles or equipment close to aircraft
- 2.2 Aircraft design features are taken into account whilst boarding, loading or handling aircraft
- 2.3 Instructions from pilots and staff coordinating aircraft operations, organisational procedures and placards are followed during ground support operations
- 2.4 Aircraft loading is conducted under pilot or flight crew member supervision and appropriate weight, balance and loading system are complied with
- 2.5 Areas are designated and separated, in accordance with site features and specific operations being conducted
- 2.6 Fitting of equipment to an aircraft is conducted under pilot supervision, in accordance with appropriate regulatory approvals
- 2.7 Aircraft fuels, oils, and supplies are stored and handled, in accordance with regulatory requirements and organisational procedures
- 2.8 Aircraft or equipment defects or hazards are reported to pilot and/or appropriate supervisor
- 2.9 Appropriate aerodrome regulations are complied with

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR209B Work safely around aircraft.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR209 Work safely around aircraft

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- complying with regulatory requirements and organisational procedures
- delivering briefings in appropriate locations including an area that is free of distractions including movement and noise, is safe and convenient to subsequent deployment needs and has the necessary facilities and equipment
- ensuring safety and quality procedures are applied
- identifying hazards and risks and acting to minimise, mitigate, control or eliminate
- implementing precautions and working safely whilst around aircraft
- using personal protective clothing and equipment and specialist aviation support equipment

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- aerodrome layout, facilities and services including working zones and lighting facilities
- aerodrome legislation, industry standards, regulations and security procedures
- aircraft features and movement characteristics
- aircraft performance, operation, loading and refuelling precautions
- assessment and risk mitigation processes
- organisational documentation, policies and procedures
- participation in briefings including Situation, Mission, Execution, Administration, Command/control, Safety (SMEACS) and questions
- personal protective clothing and equipment including fire extinguisher, first aid kit, high visibility protective overalls and vests, respiratory protection, signalling devices, lighting or beacons and head, hand, eye, ear and foot protection
- roles and responsibilities of personnel supervising, managing and supporting aircraft operations
- site hazards

- suitable locations for conducting briefings and debriefings
- types of aircraft including aeroplanes, helicopters, remotely piloted aircraft and airborne vehicles
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including safe work practices around aircraft

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR210 Prevent injury

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit involves the skills and knowledge required to identify and avoid workplace hazards and risks, to maintain personal safety and to report identified issues to supervisors and team members.

It is designed as an introduction to safe work practices and is specifically relevant to a workplace requiring personnel to be involved in incidents, prescribed burns and/or operational aspects of emergency management. It includes identifying, implementing and monitoring effectiveness of workplace hazards and risk control procedures.

The unit applies to personnel who work as a member of a team. Work at this level is undertaken under direct supervision and instruction.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Identify workplace hazards and risks, and advise others

1.1 Procedures and practices are followed to identify hazards and risks in the workplace

1.2 Identified hazards and risks in the work area are communicated to team members and supervisors

1.3 Identified risk factors which may create or escalate the immediate risk to life, property or the environment are reported, in accordance with organisational procedures

2 Implement hazard and risk control procedures

2.1 Personal protective clothing and equipment is selected and donned, in accordance with organisational procedures

2.2 Hazard identification and risks controls are implemented, in accordance with Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) guidelines and organisational procedures

2.3 Equipment appropriate for dealing with a hazard is selected for use and checked, in accordance with organisational procedures

2.4 Personal health and welfare is managed, in accordance with organisational policy

3 Monitor effectiveness of hazard and risk control procedures

3.1 Situation awareness is maintained to ensure the continued effectiveness of hazard and risk control procedures

3.2 Changes in incident behaviour and conditions are reported immediately through the chain of command, in accordance with organisational procedures

3.3 Activities and debriefings regarding hazard and risk control procedures are participated in, as appropriate

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work

environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

personal protective clothing and equipment must include

- eye and head protection
- turn out uniform and gloves

controlling risks must include

- dynamic risk assessment
- safe person approach

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR215 Prevent injury.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUA FIR210 Prevent injury

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- applying safe work practices in accordance with organisational Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) policies and procedures
- identifying hazards and using risk control measures
- identifying workplace hazards and risks and advising others
- implementing hazard and risk control procedures
- monitoring effectiveness of hazard and risk control procedures
- selecting equipment pertinent to incidents, prescribed burning and/or operational aspects of emergency management
- working with organisational procedures including the selection and use of personal protective equipment

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- basic principles of a dynamic risk assessment and safe person approach
- hazards, including heat illness, fire, structural, aerial operations, hazardous materials and vehicles
- methods of hazard identification, risk control reporting and debriefing
- organisational documentation, policies and procedures for hazard and risk management
- personal protective clothing and equipment requirements
- risks to life, community, property and the environment
- situational awareness actions that support safety in the work place
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including occupational hazards and risks encountered in the workplace, safety assessments, risk mitigation processes and risk control measures such as eliminate, isolate and substitute

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR302 Suppress urban fire

Modification History

Release 2. Updated superseded HLT Pre-requisite unit.

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit involves the skills and knowledge required to work as a member of a team under limited supervision when suppressing an urban fire. It includes responding to fires and determining extinguishing media, equipment and structural fire behaviour. It also includes protecting people; how to attack fires, ventilate structures, observe and react to fire conditions; undertake ancillary firefighting operations and complete operations.

The unit applies to personnel required to suppress a range of different types of structure and non-structure fires where there is the potential for multiple hazards to be present.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

HLTAID011 Provide First Aid

PUAFIR203 Respond to urban fire

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Initiate response to fire

1.1 Fire details are received and initial response is determined, in accordance with organisational procedures

1.2 Firefighting personal protective clothing and equipment requirements are determined and used, based on available information

1.3 Changes to fire conditions are reported and acted on to determine firefighting tactics

1.4 Firefighting considerations are taken into account when determining tactics

2 Determine extinguishing media and equipment

2.1 Available static or reticulated water supplies to support firefighting operations are identified and capacity is determined

2.2 Selection of hose and equipment is sufficient to support firefighting operations

2.3 Extinguishing media are selected, in accordance with the type of fire within the area of operation

2.4 Breathing apparatus is used within its' safe work limitations, in accordance with manufacturers' specifications and organisational procedures

3 Determine structural fire behaviour

3.1 Combustion processes taking place in the structure are determined

3.2 Tactics for terminating combustion processes are determined

3.3 Presence of hazardous materials located in the fire area are identified and an appropriate plan of action is determined

4 Protect people

4.1 Primary and secondary searches are planned, conducted and supported, in accordance with organisational procedures

4.2 Appropriate priority and support is allocated to fire

rescue and evacuation activities

4.3 Casualties are treated and/or handed into the care of medical personnel once clear of threat of fire

5 Attack fire

5.1 Firefighting strategies and tactics are prioritised, implemented and monitored, in accordance with organisational procedures

5.2 Firefighting extinguishing media are selected, in accordance with the type of fire and the actual or potential hazards identified within the area of operations

5.3 Fire is located and access is gained in the safest and most effective manner to minimise damage to property or the risk of injury to others or self, in accordance with organisational procedures

5.4 Potential fire behaviour is anticipated and action is taken to protect the safety of self and others and to achieve determined strategies

5.5 Breathing apparatus procedures are complied with, in accordance with organisational requirements

5.6 Fire is attacked using a range of extinguishing media and application techniques appropriate to type and size of fire, in accordance with manufacturers' specifications and organisational procedures

5.7 Evidence of fire cause is protected and action is taken, in accordance with organisational procedures

5.8 Firefighting suppression activities, including extinguishing media, are used to contain spread of fire and damage to the environment and property

5.9 Burning and smouldering materials are identified and extinguished, in accordance with organisational requirements

5.10 Communication is maintained and monitored throughout firefighting operations, in accordance with organisational procedures

5.11 Firefighting ancillary activities are undertaken to avoid or minimise risk of environmental damage

6 Ventilate structure

6.1 Structures are ventilated, as required, using the most appropriate natural and mechanical ventilation

		techniques, in accordance with organisational procedures
	6.2	Structures are ventilated without endangering personnel or increasing the spread of fire, in accordance with organisational procedures
7 Observe and react to fire conditions	7.1	Fire is continually monitored and significant changes affecting the status of the fire and effectiveness of selected firefighting strategies are reported, in accordance with organisational procedures
	7.2	Firefighting strategies and tactics are modified and adjusted, in accordance with organisational procedures, the changing conditions at the fire or as directed
8 Undertake ancillary firefighting operations	8.1	Firefighting and ancillary activities undertaken at the incident ensure that the risk of injury to the public, other personnel and self is avoid or minimised
	8.2	Salvage and overhaul activities are undertaken to support the conclusion of firefighting operations, in accordance with organisational procedures
9 Complete operations	9.1	Equipment is made ready for operational use, in accordance with organisational procedures
	9.2	Damaged or missing equipment is replaced, recorded and/or reported, in accordance with organisational procedures
	9.3	Participate in debriefing sessions

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

fire must include

- fires involving electricity
- industrial complex
- mobile property fires

personal protective clothing and equipment must include	<ul style="list-style-type: none">• multi-storey structures• structure and non-structure fires which may also include<ul style="list-style-type: none">• fires involving fuels and chemicals• ship fires• breathing apparatus• distress alarms• structural fire protective clothing
reporting of changes to fire condition must include	<ul style="list-style-type: none">• initial reports at scene• reports of achievement during firefighting e.g. completion of rescue and fire under control etc.• reports of significant changes in conditions• Situation Reports (SITREPS)
equipment must include	<ul style="list-style-type: none">• branches/nozzles• breathing apparatus and control equipment• fire extinguishers• forcible entry tools• hand tools• hoses and hose fittings• ladders and rope lines• portable lighting• radios• salvage gear• small gear and ancillary equipment• stand pipes, hydrants and booster connections• ventilation equipment
extinguishing media must include	<ul style="list-style-type: none">• extinguishing powders• foams• gaseous extinguishing agents• water
firefighting strategies must include	<ul style="list-style-type: none">• confining the spread of fire• extinguishment• protecting exposures• protection of area of fire origin and evidence of cause• rescuing occupants• salvage and overhaul
access must include	<ul style="list-style-type: none">• forcible entry• normal entry• roof access from ladders and/or aerial

- application techniques must include
- appliance
 - defensive mode
 - direct attack
 - direction of attack
 - indirect attack
 - offensive mode
- ancillary activities must include three or more of the following
- damming and/or draining water runoff
 - guarding against hazards
 - making up equipment
 - overhaul
 - protecting the ignition site
 - salvage
 - securing the area
 - supply of materials
- structures to be ventilated must include
- commercial
 - high rise buildings
 - mobile structures i.e. road, rail, aviation and marine vehicles
 - multi-storey
 - residential

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR302B Suppress urban fire.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR302 Suppress urban fire

Modification History

Release 2. Updated superseded HLT Pre-requisite unit.

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- attacking fires
- completing operations
- controlling fire environment by cooling fire gases
- determining extinguishing media and equipment
- firefighting tactics including cooling the fuels, interrupting the chemical chain reaction, removing fuels, excluding oxygen and ventilation
- firefighting suppression activities including locating and accessing the fire, search and rescue, anticipation of fire behaviour, ensuring safety, applying extinguishing media, applying techniques to maximise the effect and minimise the damage and identifying and protecting area of fire origin and evidence of cause
- initiating response to fire
- observing and reacting to fire conditions whilst maintaining situational awareness
- operating breathing apparatus
- operating firefighting equipment
- participating as a firefighting team member
- performing ancillary firefighting operations
- protecting people
- recognising fire behaviour indicators
- undertaking salvage and overhaul
- using natural and mechanical ventilation techniques
- utilising firefighting strategies and tactics for rescue, exposures, confinement, extinguishment, overhaul, ventilation and salvage
- working with a range of extinguishing media

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the

requirements of the elements, performance criteria and range of conditions and includes knowledge of

- combustion processes including spontaneous heating combustion and ignition
- damage to the environment from fire suppression activities including air pollution, hazards to flora and fauna, soil and water pollution
- structural fire behaviour and factors which impact on spread
- fire behaviour indicators
- firefighting tactics including cooling fuels, interrupting chemical chain reaction, removing fuels, excluding oxygen and ventilation
- firefighting considerations including available firefighting resources, extinguishing media, fire exposures, signs of structural collapse, size of fire, topography, type of fire and weather
- hazardous materials including those defined by the Australian Dangerous Goods Code and other fire extinguishing substances
- organisational documentation, policies and procedures including reporting and recording incident details and breathing apparatus control procedures
- personal protective clothing and equipment requirements including breathing apparatus
- purpose of ventilation techniques including assisting in fire suppression activities, facilitating evacuation of occupants, maximising visibility within a structure, minimising damage, preventing build up of toxic or explosive atmospheres and providing clean air
- strategies and methods of attack for extinguishing fires in a range of structures
- types of media for firefighting and their suitability for different classes of fire
- use of firefighting equipment and application of techniques
- ventilation techniques including horizontal, hydraulic, mechanical, natural and vertical
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Competency should be assessed on the job or in a simulated environment.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations

- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - firefighting equipment, breathing apparatus, control equipment and extinguishing media
 - firefighting, ventilation and salvage equipment
 - range of controlled or simulated fires
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR303 Suppress wildfire

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to work as a member of a crew to apply appropriate fire control strategies and safe work practices to extinguish a wildfire, participate in mop ups and patrol operations and prepare equipment for the next crew.

The unit applies to personnel who work as a member of a crew or team. Work at this level is often undertaken without direct supervision and instruction. There may be some level of supervision of other members of the crew at this level.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR204 Respond to wildfire

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

- | | |
|---|--|
| 1 Receive and report details of wildfire | 1.1 Details of the wildfire including location, type, behaviour and developments are received and recorded |
| | 1.2 Fire details are reported, in accordance with organisational requirements |
| 2 Prepare to respond to fire | 2.1 Location of wildfire is confirmed and safest access route is determined |
| | 2.2 Personal protective clothing and equipment, apparel, food and water are obtained before departure, in accordance with organisational requirements |
| | 2.3 Most appropriate appliance or vehicle is selected and used |
| 3 Proceed to fire | 3.1 Location of wildfire is confirmed by observation or from instructions while on approach |
| | 3.2 Access to area is determined and achieved without injury to personnel or damage to vehicles, equipment or environmentally sensitive areas |
| | 3.3 Evidence observed on approach relevant to wildfire cause is noted and brought to the attention of appropriate authorities |
| | 3.4 Navigational aids are used for planning and operational purposes |
| | 3.5 Notification of arrival and appropriate report is provided |
| 4 Protect people and assets | 4.1 As far as conditions allow the number, location and safety of people and assets in the threatened area is determined and assessed |
| | 4.2 Appropriate protective procedures are implemented, under direction, to protect persons in the path of a wildfire |
| | 4.3 Access by the public and personnel to hazardous locations is controlled, as directed, in accordance with organisational procedures |
| | 4.4 Defensibility of property and assets is considered and, if appropriate, assistance is provided to help occupiers |
| | 4.5 Safety of people and assets in the threatened area is |

- monitored
- 4.6** Safety of people and security of assets in the area is checked and reported after the fire
- 5 Combat wildfire**
- 5.1** Briefing is received including area of operations, strategies and tactics to be employed
- 5.2** Escape routes and safety zones are confirmed and communicated to personnel
- 5.3** Firefighting media and equipment are selected and used in accordance with organisational procedures
- 5.4** Fire hazards are identified and action is taken to minimise the risks of injury to the public, personnel and self
- 5.5** Firefighting strategies and tactics are implemented to achieve objectives and to minimise overall damage and impact on assets and the environment
- 5.6** Fuel, weather and topographical factors are observed and potential fire behaviour is anticipated and acted upon to ensure safety
- 5.7** Communication is maintained with supervisor through the chain of command and with other firefighters in the work area
- 5.8** Fire control activities are undertaken to minimise overall damage and impact on assets and the environment
- 5.9** Potential fire behaviour is considered and acted upon to ensure safety and achievement of objectives
- 5.10** Fire reports are provided to supervisor, as required
- 5.11** Area of origin and evidence of fire cause are protected and brought to the attention of supervisor or relevant authority, in accordance with organisational procedures
- 6 Conduct mop up and patrol activities**
- 6.1** Mop up activities are carried out, in accordance with organisational procedures
- 6.2** Patrol of the fire is maintained
- 7 Recover and maintain equipment**
- 7.1** Equipment is made ready for operational use, in accordance with organisational procedures

- 7.2 Damaged or missing equipment is replaced, recorded and/or reported, in accordance with organisational procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR303 Suppress wildfire

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- anticipating and reacting to changing wildfire behaviour
- applying Work Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- assessing risk to life, property and the environment
- contributing to the implementation of firefighting strategies
- combating wildfires, performing firefighting tactics, and using firefighting equipment and extinguishing media
- communicating and working with team members
- conducting mop ups and patrol activities
- detecting hot spots and hazardous trees
- implementing and monitoring firefighting strategies and tactics
- interpreting fire weather, fuels and terrain and predicting likely impact on fire behaviour
- maintaining safety and health of self, other workers and people in a wildfire area
- participating in briefings and confirming instructions
- preparing to respond to wildfires, using navigation equipment
- proceeding to wildfires
- receiving, recording and reporting information

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- crew protective procedures
- access to wildfires
- recognition of environmentally sensitive areas and actions to minimise damage
- escape routes including prepared tracks, roads, trails and waterways
- fire behaviour and its response to different fuels, topography and weather conditions
- fire cause

- fireground hazards
- fire report requirements
- fuel types and factors that impact fire development
- media and equipment for firefighting
- means of transport to fire ground
- navigational aids including aerial photographs, compass, global positioning systems and maps
- organisational documentation, policies and procedures
- potential fire behaviour including fire development, flame height and intensity, fuel load and arrangement, rate of speed, spotting, change due to terrain, topography, changes due to weather conditions, winds and fire winds.
- protective procedures including alerts and warnings, insitu protection and relocation
- safety zones including bare ground, burnt areas, clearings, rivers, site of recent wildfire or prescribed burns and static water bodies
- strategies for firefighting including offensive strategies including direct attack, indirect attack, parallel attack and combined attack and defensive strategies including community and asset protection
- tactics for firefighting including back burning and burning out, control line construction - hand and machine and direct suppression and extinguishment
- tasks for firefighting including application of firefighting media, control line construction, mopping up and patrol
- topographical factors that affect fire development
- types of fires including crown, ground and surface
- types of assets that require protection
- weather factors that influence fire development
- Work Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation and safety near vehicles and machines

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - access to wildfire or prescribed burns and/or approved field based environment
 - firefighting equipment and extinguishing media
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR303B Suppress wildfire

Modification History

Release	TP Version	Comments
2	PUA12 V2	Application of the Unit added Unit revised to reflect current work requirements Context of Assessment revised Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to work as a situation-aware member of a crew to apply appropriate fire control strategies and safe work practices to extinguish a wildfire, participate in mop-up and patrol operations, and prepare equipment for the next crew.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Application of the Unit

This unit applies to personnel who work as a member of a team. Work at this level is often undertaken without direct supervision and instruction. There may be some level of supervision of other members of the crew at this level.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR204B Respond to wildfire

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|--|
| 1. Receive and report details of wildfire | 1.1 Details of the wildfire including its location, <i>type</i> , behaviour and development are received and recorded.
1.2 Fire details are reported in accordance with organisational procedures. |
| 2. Prepare to respond to fire | 2.1 Location of the wildfire is confirmed and the safest effective <i>access</i> route is determined.
2.2 <i>Personal protective clothing and equipment</i> , apparel, food and water are obtained before departure, in accordance with organisational requirements.
2.3 Most appropriate method of transport to the wildfire is selected and used. |
| 3. Proceed to fire | 3.1 Location of the wildfire is confirmed by observation or from instructions while on approach.
3.2 Access to area is determined and achieved without injury to personnel or damage to vehicles, equipment or <i>environmentally sensitive areas</i> .
3.3 Evidence observed on approach relevant to wildfire cause is noted and brought to the attention of the appropriate authority.
3.4 <i>Navigational aids</i> are used for planning and operational purposes. |
| 4. Protect people and assets | 4.1 As far as conditions allow, number, location and safety of people and <i>assets</i> in the threatened area is determined and assessed. |

- 4.2 Appropriate *protective procedures* are implemented under direction, to protect persons in the path of a wildfire.
- 4.3 Access by the public and personnel to hazardous locations is controlled as directed and in accordance with organisational procedures.
- 4.4 Defensibility of property is considered and, if appropriate, assistance is provided to help occupiers.
- 4.5 Safety of people and assets in the threatened area is monitored during the course of the fire.
- 4.6 Safety of people and security of assets in the area is checked and reported after the passing of the fire.

5. Combat wildfire

- 5.1 Access to the area of operations is gained in the safest and most effective manner.
- 5.2 Notification of arrival and appropriate report is provided.
- 5.3 Briefing is received including area of operations, strategies and tactics to be employed.
- 5.4 Most suitable location to commence wildfire control operations is selected.
- 5.5 *Firefighting media and equipment* are selected and used effectively and safely in accordance with organisational procedures.
- 5.6 *Fire hazards* are identified and action taken to minimise the risk of injury to the public, personnel and self.
- 5.7 *Firefighting strategies* are implemented to achieve objectives in accordance with organisational procedures.
- 5.8 Fire control activities are undertaken to minimise overall damage and impact on assets and the environment.
- 5.9 *Potential fire behaviour* is considered and acted upon to ensure safety and achievement of objective.
- 5.10 *Fuel, weather* and *topographical factors* are observed and potential fire behaviour anticipated.
- 5.11 Communication is maintained with supervisor and other firefighters in the work area.
- 5.12 *Fire reports* are provided to supervisor as required.
- 5.13 Area of origin and *evidence of fire cause* are protected and brought to attention of supervisor or relevant authority.
- 5.14 *Escape routes* and *safety zones* are established

- and communicated to personnel.
- 6. Conduct mop-up and patrol activities**
- 6.1 Mop-up activities are carried out in accordance with guidelines and conditions.
- 6.2 Patrol of the perimeter or sector of the fire is maintained in accordance with organisational procedures and guidelines.
- 7. Recover and maintain equipment**
- 7.1 Equipment is made up and made ready for operational use in accordance with organisational procedures.
- 7.2 Damaged or missing equipment is replaced, recorded and/or reported in accordance with organisational procedures.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- communicate effectively in writing and orally
- detect hot spots and hazardous trees
- interpret fire weather, fuels and terrain and predict the likely impact on fire behaviour
- mop-up
- read maps
- receive briefings and confirm instructions
- undertake back burning and burning out
- use wildfire control tools and equipment
- work as part of a team

Required Knowledge

- defensive/offensive firefighting strategies and tactics:
 - asset protection
 - backburning and burning out
 - control lines and firebreaks
 - defensible space
 - direct, indirect, parallel attack
 - fire attack procedures
 - lighting patterns
 - standard operating procedures; reporting; patrol; mop-up
 - wet, dry firefighting
- fire behaviour:

- fire development
- flame height and intensity
- rate of spread,
- junction zones
- spotting
- firefighting protocols
- fireground hazards
- fire weather conditions and impact on fire behaviour:
 - atmospheric stability
 - relative humidity
 - temperature
 - wind speed and direction
- fuel and its impact on fire behaviour
 - moisture content, quantity, type, arrangement and distribution,
 - size, drought effect, curing
- organisational first aid requirements
- organisational procedures for dealing with injury
- protection of area of origin and evidence of fire cause
- safety near vehicles and machines
- terrain and physical feature and their impact on fire behaviour and suppression:
 - aspect
 - fuel variations
 - slope
 - weather variations

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- anticipate and react to changing wildfire behaviour
- observe and react to weather behaviour
- accurately assess whether or not it is safe to defend assets
- undertake dry wildfire control activity
- monitor effectiveness of tactics
- use firefighting equipment and extinguishing media
- maintain safety and health of self, other workers and

- people in the wildfire area
- use communication equipment
- read maps
- protect area of origin and evidence of fire cause

Consistency in performance

Competency should be demonstrated over time in a range of actual and/or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Evidence of performance at a wildfire or prescribed burn is required for attainment of Elements 5 and 6 of this unit.

The remaining elements should be assessed in an agency approved field-based environment or simulation.

Specific resources for assessment

Access is required to:

- access to wildfire or prescribed burns and/or approved field-based environment
- firefighting equipment and extinguishing media

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment. Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for

different work environments and situations that may affect performance. <i>Bold italicised</i> wording in the Performance Criteria is detailed below.	
<i>Types</i> must include:	<ul style="list-style-type: none"> • crown • ground • surface
<i>Access</i> may include:	<ul style="list-style-type: none"> • aircraft • boat • foot • vehicle
<i>Environmentally sensitive areas</i> may include:	<ul style="list-style-type: none"> • areas of: <ul style="list-style-type: none"> • fragile soils • native flora and fauna • rare and endangered species • threat to water quality
<i>Navigational aids</i> must include:	<ul style="list-style-type: none"> • maps
and may also include:	<ul style="list-style-type: none"> • aerial photographs • compass • global positioning systems
<i>Assets</i> may include:	<ul style="list-style-type: none"> • area of rare or sensitive flora and fauna • buildings • culturally significant sites • crops • plantations • property • public lands • stock • utilities and infrastructure (rail, power and telephone lines, water supply structures, communications towers, bridges)
<i>Protective procedures</i> may include:	<ul style="list-style-type: none"> • alerts and warnings • in-situ protection • relocation
<i>Firefighting media</i> must include:	<ul style="list-style-type: none"> • water
and may also include:	<ul style="list-style-type: none"> • Class A foam • earth • fire suppressants (short and long term) • retardants

	<ul style="list-style-type: none"> • wetting agent
Firefighting equipment must include:	<ul style="list-style-type: none"> • driptorch • hand tools • hose and small gear • pump • tanker
and may also include:	<ul style="list-style-type: none"> • aircraft • chainsaw • earth moving machinery • knap sack • ropes and lines
Fire hazards must include:	<ul style="list-style-type: none"> • burns • disorientation • environmental • falling branches and trees • falling objects • fatigue • heat-related illness (heat exhaustion and dehydration) • lack of visibility • manual handling • mine shafts • rolling objects • smoke inhalation • snake or insect bite • sprain or fracture • trips/falls • water bombing operation
Firefighting strategies must include:	<ul style="list-style-type: none"> • combination attack • combined strategy • defensive strategy • direct attack • indirect attack • mop-up • offensive strategy • parallel attack • patrol
Potential fire behaviour may include:	<ul style="list-style-type: none"> • fire development • flame height and intensity • fuel load and arrangement • rate of spread

	<ul style="list-style-type: none"> • spotting • change due to terrain, topography • change due to weather conditions - winds, fire whirls
Fuel may include:	<ul style="list-style-type: none"> • crop • forest • grass • heath • plantation: <ul style="list-style-type: none"> • stage 1 – post establishment • stage 2 – pre-canopy closure • stage 3a – canopy closure (unpruned) • stage 3b – canopy closure (pruned) • stage 4 – thinned • stage 5 – mature • stage 6 – harvesting/clear felling • scrub
Fuel factors which may impact on fire development must include:	<ul style="list-style-type: none"> • arrangement/distribution • effects of drought • moisture content • quantity • seasonal effects • size • topography • type
Weather factors which may impact on fire development must include:	<ul style="list-style-type: none"> • anabatic winds • atmospheric stability • cold fronts • diurnal variations • katabatic winds • land breezes • local effects • relative humidity • sea breezes • temperature • vegetation edge effects • wind changes • wind direction and speed
Topographical factors which may impact on fire development must include:	<ul style="list-style-type: none"> • aspect • elevation • local wind effects

	<ul style="list-style-type: none"> • slope • wind turbulence
<i>Fire reports</i> may include:	<ul style="list-style-type: none"> • effectiveness of strategies and tactics • fire behaviour • number and status of resources • safety and hazards • weather • welfare of personnel • work achieved and required
<i>Evidence of fire cause</i> may include:	<ul style="list-style-type: none"> • fresh vehicles tracks • nature and behaviour of fire at the scene upon arrival • nature and colour of smoke and number of columns • people and vehicles leaving the scene • whether gates on access routes to the fire are closed, opened or locked
<i>Escape routes</i> may include:	<ul style="list-style-type: none"> • prepared tracks • roads • trails • waterways
<i>Safety zones</i> may include:	<ul style="list-style-type: none"> • bare ground • burnt areas • clearings • rivers • site of a recent wildfire or prescribed burn • static water bodies

Unit Sector(s)

Not applicable.

PUAFIR310 Operate specialist appliance

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to operate a specialist appliance at an incident.

A specialist appliance is a vehicle designed for a specific purpose which may include hazardous materials response, mobile communication, heavy rescue, salvage or specialist mechanical support.

The unit applies to personnel who are required to safely operate specialist appliances in emergency response and firefighting situations. It should be noted that individuals may be required to demonstrate competence to organisational standards to be deemed an operator of a specific specialist vehicle.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Site specialist appliance

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Specialist appliance and ancillary equipment is sited, in accordance with organisational procedures, to minimise

hazards which may impact on safe working operations

- 1.2** Specialist appliance is positioned, in accordance with organisational procedures, to support operational requirements and to prevent injury to personnel or damage to equipment and facilities
 - 1.3** Personal protective clothing and equipment is selected and worn, in accordance with organisational procedures and Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) guidelines
 - 1.4** Specialist appliance equipment is deployed, in accordance with organisational procedures and WHS/OHS guidelines
- 2 Operate specialist appliance**
- 2.1** Specialist appliance is operated, in accordance with organisational procedures and manufacturers' specifications
 - 2.2** Safe clearances are maintained to ensure that personnel are not injured by the operation of specialist appliance
 - 2.3** Performance of specialist appliance is monitored and adjusted, as required, in response to changed conditions and to achieve determined strategies and objectives
 - 2.4** Action is taken to rectify any deficiencies in the operation of specialist appliance, as required
 - 2.5** Specialist appliance is operated in a manner that prevents injury to personnel or damage to equipment and facilities
 - 2.6** Fire spread, onsite hazards and atmospheric conditions including potential impact on specialist appliance operations are monitored and relevant information is referred to appropriate personnel
 - 2.7** Communication is established and maintained through the chain of command
- 3 Conclude specialist appliance operations**
- 3.1** Ancillary equipment is collected and stowed, in accordance with organisational procedures and WHS/OHS guidelines
 - 3.2** Specialist appliance is checked and maintained, and any faults or deficiencies are reported, in accordance with organisational procedures

3.3 Participate in debriefing sessions

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR318 Operate specialist appliance.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUA FIR310 Operate specialist appliance

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- checking and maintaining equipment and reporting faults
- concluding specialist appliance operations
- identifying and avoiding hazards
- implementing safe work practices
- operating specialist appliance
- operating equipment located on specific appliances
- siting specialist appliance
- using approved communication methods
- working with ancillary equipment
- wearing personal protective clothing and equipment

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- ancillary equipment
- communication methods on fire ground
- hazards including atmospheric conditions such as wind direction and strength, fire explosion, fire spread, hazardous atmospheres such as smoke and toxic gases and structural collapse
- impact of weather on operation of specialist appliance
- organisational documentation, policies and procedures for use in specialist appliances
- personal protective clothing and equipment
- potential hazards
- principal features and components of specialist appliance
- safe working operations including compliance with manufacturers' specifications, organisational operational procedures and WHS/OHS guidelines
- specialist appliance including breathing apparatus unit, command unit, firefighting appliance

either non-water or foam, foam or water tender, HAZMAT (hazardous materials) response unit, hose layer, lighting and salvage units and rescue tender

- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and personal protective clothing and equipment currently used in industry including
 - organisational specialist appliances and site suitable for assessment
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR312 Operate aerial ignition equipment in an aircraft

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to prepare, operate and maintain aerial ignition equipment in an aircraft. Aerial ignition equipment is used to drop incendiaries, capsules or gelled petroleum, from fixed wing aircraft or helicopter.

Aerial ignition operations are undertaken to modify or reduce fuel loads in key areas and to decrease fire intensity and suppression difficulty at wildfires or prescribed burns.

The unit applies to personnel responsible for the safe, effective and efficient conduct of aerial ignition operations to a specified burn prescription and/or fire suppression operation and for liaising with ground and support crews including incendiary operation supervisors.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR209 Work safely around aircraft

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare for operations of ignition equipment

- 1.1** Personal protection clothing and equipment and other safety equipment is selected, inspected and tested, in accordance with organisational procedures, prior to operations commencing
- 1.2** Requirements for aerial ignition operations are identified and confirmed with relevant personnel
- 1.3** Activities are undertaken, in accordance with industry standards, legislation, organisational procedures, Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- 1.4** Incendiary device to be used is confirmed
- 1.5** Incendiary devices and associated consumable materials are stored and transported, in accordance with the organisational procedures and requirements
- 1.6** Ignition equipment is installed in aircraft, in accordance with the organisational procedures and aircraft operator requirements
- 1.7** Ignition equipment is inspected to ensure correct operation
- 1.8** Mixing operations for incendiary device are undertaken, in accordance with organisational procedures, manufacturers' guidelines and prevailing conditions
- 1.9** Incendiary devices are loaded into ignition equipment, in accordance with the organisational procedures
- 1.10** Ignition equipment is tested and adjusted, where required, to ensure correct operation

2 Conduct aerial ignition operations

- 2.1** Ignition equipment is operated, in accordance with organisational procedures and the manufacturers' specifications
- 2.2** Adjustments to ignition equipment are undertaken, as required, in response to changed conditions or alterations to burn plan
- 2.3** Emergency procedures are conducted, as required

- 2.4** Communications between pilot, navigator and ignition equipment operator are maintained throughout the operation
- 2.5** Ignition operations are conducted, in accordance with burn plan
- 3 Service, maintain and store incendiary equipment**
- 3.1** Excess incendiary devices are disposed of, in accordance with organisational procedures
- 3.2** Ignition equipment is serviced, maintained and repaired within scope of authority
- 3.3** Equipment faults are documented and forwarded to appropriate personnel for action
- 3.4** Ignition equipment is stowed and forwarded to appropriate personnel for maintenance

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Ignition equipment must include one of the following

- automated incendiary machines
- hand held manual incendiary injection
- helitorch aerial or drip torch

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR312B Operate aerial ignition equipment in an aircraft.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUA FIR312 Operate aerial ignition equipment in an aircraft

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- adhering to safe working practices if machine or ignition equipment malfunctions
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including aircraft or other emergency procedures and personal protective clothing and equipment
- conducting aerial ignition operations using approved devices and equipment
- demonstrating pre-flight testing and installation of aerial ignition equipment
- following approved flight plan
- implementing industry standards and legislation
- operating for extended periods in an aircraft
- preparing for of ignition equipment
- reporting equipment malfunctions, accidents and incidents
- selecting, inspecting and testing personal protective clothing and equipment
- servicing, maintaining, repairing and storing approved devices and equipment
- using communications equipment
- using ignition equipment including helitorch aerial or drip torch, hand held manual incendiary injection and automated incendiary machines
- working as a member of a team

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- aircraft safety
- characteristics and limitations of incendiary devices and equipment
- emergency procedures
- guidelines relating to safe use of equipment including personal protective equipment
- incendiary capsule materials including potassium permanganate, ethylene glycol (antifreeze),

- petroleum products, gelling powder and methanol
- ignition equipment including helitorch aerial or drip torch, hand held manual incendiary injection equipment and automated incendiary machines
- industry standards
- lighting patterns
- mechanical knowledge sufficient to service, maintain and repair aerial ignition equipment
- mixing equipment
- organisational documentation, policies and procedures including procedures for working in aerial ignition operations
- service, maintenance and repair of equipment
- personal protection clothing and equipment including ear protectors, eye protection, gloves and other personal protection gear, fire resistant clothing, footwear, rubber gloves, vapour masks and respirators and safety helmets with visors
- types and applications of aerial ignition equipment
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including safety and emergency procedures for undertaking aerial ignition operations, risk mitigation and hazard identification

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Assessment will take place in a simulated environment followed by an assessment by an accredited operator on the job.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - aerial ignition equipment and materials
 - aircraft
 - an area to conduct operations
 - appropriate tools for testing, maintenance and inspection of equipment
 - personal protective equipment and relevant safety equipment

- safe disposal facilities
- transport of incendiary devices and ignition equipment
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR402 Conduct simple prescribed burns

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to prepare, conduct and evaluate simple prescribed burns in accordance with approved burn plans.

A prescribed burn is the controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity and rate of spread required to attain planned resource management objectives. A simple prescribed burn is characterised by low risk, low intensity, small area, low potential impact on assets, completion in one shift and minimal variation of fuel and terrain.

A prescribed burn plan is an approved plan for the conduct of prescribed burning, it includes a map identifying the area to be burned and incorporates the specifications and conditions under which the operation is to be conducted.

The unit is applicable to personnel responsible for preparing, conducting and evaluating a simple prescribed burn on public and private land.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR303 Suppress wildfire

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare to burn

- 1.1 Burn operations for a simple prescribed burn are identified and undertaken, in accordance with approved prescribed burn plan, burn plan objectives, organisational procedures and legislative and regulatory requirements
- 1.2 Permits are obtained, in accordance with organisational procedures and legislative and regulatory requirements
- 1.3 Burn notifications and plans are issued to persons or organisations, in accordance with prescribed burn plan, organisational procedures and legislative requirements
- 1.4 Control lines, including secondary control lines, are specified and prepared, in accordance with organisational procedures
- 1.5 Prescribed burn plan operational hazards and risks to safety of people, property, assets, ecology and environment are identified and risk mitigation works are completed
- 1.6 Forecast weather conditions are monitored, recorded and assessed, in accordance with organisational procedures
- 1.7 Fuel conditions are monitored, in accordance with organisational procedures and prescribed burn plan
- 1.8 Resource requirements are confirmed with reference to burn plan

2 Conduct burn

- 2.1 Prescribed burn notifications are issued, in accordance with organisational procedures
- 2.2 Pre-burn checks are conducted, in accordance with organisational procedures
- 2.3 Local weather conditions for day of burn are monitored and contingency arrangements actioned and communicated accordingly
- 2.4 Resources are gathered and personnel are briefed, in accordance with prescribed burn plan and contingency

arrangements

- 2.5 Burn ignition strategies, including lighting techniques patterns and sequences are implemented, in accordance with organisational procedures and prescribed burn plan
 - 2.6 Burning is monitored, patrol activities are conducted and operational changes made, as required
 - 2.7 Contingencies are implemented, in accordance with prescribed burn plan, as required
 - 2.8 Burn documentation is kept, in accordance with organisational procedures
 - 2.9 Burn operations are concluded and burn security is implemented, in accordance with organisational procedures
 - 2.10 Crews are debriefed and resources released from the burn
 - 2.11 Incidents are reported and investigated, in accordance with organisational procedures
- 3 Conduct post burn activities**
- 3.1 Outcomes of the burn are assessed against burn objectives, in accordance with organisational procedures
 - 3.2 Variations from the burn plan are reported, in accordance with organisational procedures
 - 3.3 Restoration and rehabilitation works are identified and carried out, in accordance with organisational procedures
 - 3.4 Prescribed burn records are submitted, in accordance with the organisational procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

prescribed burn plan must include

- approval of plan for the conduct of prescribed burning
- map identifying area to be burned
- specifications and conditions under which operation is to be conducted

burn objectives must include one or more of the following

- asset protection
- biodiversity protection
- community protection
- habitat management
- hazard reduction
- management of cultural sites and activities
- protection of fire sensitive ecological communities
- vegetation management

personnel or organisation must include one or more of the following

- personnel or organisations who
 - have an interest in adjacent land to which a burn could spread
 - have an interest in managing the consequences of a burn
 - have an interest in specific assets
 - have an interest in the area to be burned
 - may be concerned by evidence of a burn

resources must include one or more of the following

- contingency resources
- crews for control, suppression and ground ignition
- equipment and supplies
- logistical support
- other vehicles
- tankers

burn ignition strategies and tactics must include

- contingency arrangements
- fire behaviour to be achieved
- ignition methods, lighting patterns, sequencing and timing of ignition

lighting techniques must include one or more of the following

- hand held
- vehicle mounted propelled incendiaries
- wind and waterproof matches

lighting techniques and patterns must include

- contour lighting
- echelon
- grid
- line

- lighting sequence must include one or more of the following
- multi-line
 - spot
 - lighting sequences that considers
 - fuel arrangement
 - fuel moisture
 - slope
 - time of day
 - wind direction
- monitoring burn must include one or more of the following
- fire shape and spread
 - flame height
 - fuel moisture content
 - predictions
 - rate of spread
 - recording
 - safety considerations
 - smoke development
 - weather observation
 - wind speed and direction
- concluding operations and burn security must include one or more of the following
- mitigating hazards for public safety
 - mopping up and black out
 - patrolling burn area
 - reopening roads
 - transfer of responsibility, as per organisational procedures
- outcomes of the burn must include one or more of the following
- achievement of burn objectives
 - escapes
 - external impacts
 - levels of scorch
 - percentage of area burnt
 - reporting and storage of burn documentation

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR412 Conduct simple prescribed burns.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR402 Conduct simple prescribed burns

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including hazards, risk mitigation and safety of personnel
- checking burn and crew activities
- completing burn notifications
- concluding burn operations and implementing burn security
- conducting operational briefings and debriefings, safe burns utilising resources and post burn activities including operations and security
- confirming resources, location, construction and suitability of control lines for prescribed burns
- identifying and implementing restoration and rehabilitation activities
- implementing contingency arrangements
- interpreting and implementing simple prescribed burn plans
- interpreting simple prescribed burn plans and objectives, fire behaviour conditions and existing and forecast weather conditions
- monitoring equipment
- planning for contingencies
- preparing for a simple prescribed burn
- recording actions taken
- using fire prediction tools and resources

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- briefing and debriefing content and processes
- burn notification including verbal and written notification
- characteristics of a simple prescribed burn including completed in one shift, involves

minimal variation of fuels and terrain, low intensity, low potential impact on assets, low risk and small area

- conclusion of simple prescribed burns including operations and security
- contingency arrangements including command structure, safety considerations such as escape routes and safety zones, actions to take in the event of unexpected fire behaviour changes, resolution of escapes, special resources and secondary control lines, resource requirements, resolution of resource breakdowns, injury on fire line and burn targets not met
- contingency plans
- fire prediction tools
- ground ignition patterns and techniques
- impact of conditions at simple prescribed burns on potential fire behaviour
- legislation, industry standards, codes of practice and regulations
- legislative and organisational authorisations required
- organisational documentation, policies and procedures
- outcomes of simple prescribed burn
- personnel and organisations involved in simple prescribed burn activities
- required permits
- resource requirements
- restoration and rehabilitation
- seasonal restrictions on simple prescribed burns
- simple prescribed burn and securing burn monitoring
- techniques, patterns and sequencing for lighting
- types of property and assets
- types of simple prescribed burns, prescribed burn plans and objectives
- weather conditions including: temperature, relative humidity, weather changes, atmospheric stability, drought index, fire danger index, weather forecasts, actual or anticipated changes in conditions and progress targets not met
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation and safe work practices

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Competency should be demonstrated in a range of actual and/or field based workplace environments with evidence collected from undertaking a simple prescribed burn being required.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - fire management and contingency plans
 - lighting and suppression crews
 - lighting and suppression equipment
 - simple prescribed burn plans
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR406 Develop simple prescribed burn plans

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to develop simple prescribed burn plans for specified burn areas and to prepare the plans to achieve identified objectives.

A prescribed burn is the controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity and rate of spread required to attain planned resource management objectives. A simple prescribed burn is characterised by low risk, low intensity, small area, low potential impact on assets, completion in one shift and minimal variation of fuel and terrain.

A prescribed burn plan is an approved plan for the conduct of prescribed burning, it includes a map identifying the area to be burned and incorporates the specifications and conditions under which the operation is to be conducted.

The unit is applicable to personnel responsible for the development of simple prescribed burn plans.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR303 Suppress wildfire

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Identify burn areas and burn objectives

1.1 Areas requiring simple prescribed burning are identified, in accordance with organisational procedures

1.2 Burn objectives are identified, in accordance with organisational procedures

1.3 Target groups are identified and consultation process is undertaken, in accordance with organisational procedures

1.4 Legislative and regulatory requirements are identified and complied with throughout planning process

2 Prepare prescribed burn plan for simple burn

2.1 Key features of the burn area are identified including variations in terrain, fuel types and quantities control lines and weather

2.2 Risks from proposed burn, both on and off site, are assessed and considered in planning process including operational hazards, safety of people, protection of property, assets, environment and ecological risks

2.3 Results of consultation are factored into the planning process, in accordance with organisational procedures

2.4 Fire behaviour to meet burn objectives and to account for variations in fuel, terrain and weather is determined

2.5 Burn ignition strategies and tactics required for fire behaviour, intensity and that are suitable for location are determined, in accordance with organisational procedures

2.6 Lighting techniques and lighting patterns are identified

2.7 Hazard and risk mitigation are determined and asset protection works are identified

2.8 Strategies for mitigating hazards and risks are identified and required preparatory works are identified

2.9 Strategies and tactics for controlling prescribed burn are identified

- 2.10 Type and quantity of resources required are identified
 - 2.11 Prescriptions for implementation of burn plan strategies and tactics are documented, in accordance with organisational procedures
 - 2.12 Contingencies are outlined in the prescribed burn plan
 - 2.13 Prescribed burn plan is prepared, in accordance with organisational procedures
- 3 Gain approval of prescribed burn plan**
- 3.1 Prescribed burn plan is submitted for approval, in accordance with organisational procedures and legislative requirements
 - 3.2 Modifications and amendments to prescribed burn plan are made based on feedback received
 - 3.3 Prescribed burn plan approval is gained

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

simple prescribed burn plan must include

- an approved plan for conduct of simple prescribed burn
- map identifying area to be burned
- specifications and conditions under which operation is to be conducted

simple prescribed burn objectives must include one or more of the following

- asset protection
- biodiversity protection
- community protection
- habitat management
- hazard reduction
- management of cultural sites and activities
- management of cultural sites and activities
- protection of fire sensitive ecological communities

target consultation groups must include one or more of the following

- vegetation management
- adjacent land owners or managers
- commercial operations within impact zone
- community groups with specific interests
- government organisations including local, state and federal
- groups or individuals that may be adversely affected
- other groups and people within prescribing organisation

lighting techniques must include

- hand held
- wind and/or waterproof matches

lighting patterns include one or more of the following

- contour lighting
- echelon
- grid
- line
- multi-line
- spot

operational hazards must include two or more of the following

- adverse terrain or weather conditions
- crew size
- falling trees and limbs
- hazardous material
- high fuel loads
- ignition methods
- plant
- powerlines
- road traffic
- vegetation type

safety of people must include two or more of the following

- impact of smoke on vulnerable communities near burn area
- safety of any people permanently or temporarily in burn area
- safety of people involved with burn implementation
- safety of people on areas adjacent to burn area

property and assets must include two or more of the following that are near the burn area

- camps or recreational areas
- commercial land use such as crops or industry
- cultural sites or historical buildings
- other property and assets
- plantations

environmental and ecological risks must include

- research plots and reference areas
- stock
- urban areas
- utilities - power and telephone lines, water supply structures and communications towers
- impact on
 - native flora and fauna including rare and endangered species
 - smoke
 - soil
 - use of chemical fire suppressants
 - water quality or supply
- crews for ground ignition and suppression
- equipment backup
- ignition and suppression equipment and supplies
- logistical support
- other vehicles
- tankers

resources must include one or more of the following

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR413 Develop simple prescribed burn plans.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR406 Develop simple prescribed burn plans

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- applying legislative, regulatory, organisational and permit requirements
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation and safe work practices
- assessing fuel types and quantities in burn area
- determining actions to minimise impacts of simple prescribed burn
- developing contingency arrangements
- developing pre-burn work schedule
- gaining simple prescribed burn approval
- identifying and working with resources
- identifying burn areas including developing timelines for planning and conduct of simple prescribed burn, simple prescribed burn objectives, strategies and tactics to meet simple prescribed burn objectives, ignition strategies and lighting techniques and patterns for ignition
- identifying resources
- identifying, assessing and mitigating operational hazards and risks
- identifying, assessing and mitigating risks to people, property and assets, ecological and environmental risks
- implementing legislation and regulations
- interpreting map of area and identifying key features
- predicting anticipated fire behaviour and intensity in burn area
- preparing plans and map for simple prescribed burning
- targeting consultation groups are identified, liaised with and consulted

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- accumulated fuels
- characteristics of simple prescribed burns including completed in one shift, involves minimal variation of fuels and terrain, low intensity, low potential impact on assets, low risk and small area
- contingencies
- effects of fire on vegetation, fauna, people, property, assets, ecology and the environment
- fire behaviour for fuel type being prescribed
- fire prediction tools
- ignition strategies and tactics
- legislative, regulatory, organisational and permit requirements for simple prescribed fires
 - notification requirements
 - organisational documentation, policies and procedures
 - planned burn hazards and risks
 - resource requirements and capabilities
- simple prescribed burn plans
- simple prescribed burning ignition and suppression strategies
- smoke management
- target groups and community
- traffic management plan requirements
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation and safe work practices

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Competency should be demonstrated in a range of actual and/or field based workplace environments.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - area requiring application of fire under prescribed conditions

- existing management plans and data relevant to area being prescribed
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR504 Assist with formulation and implementation of plans and policies

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to consult on, develop, implement and evaluate a policy or plan for an organisation. It applies to personnel required to contribute, both individually and as part of a work team, to the formulation and implementation of organisational policies and plans.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Monitor administration of organisational policies, procedures and plans

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Requirements for the administration of organisational policies, procedures and practices are identified and monitored

- | | | |
|--|------------|--|
| | 1.2 | Policies and plans that are no longer relevant are identified and recommendations for change are made, in accordance with organisational procedures |
| 2 Identify and consider stakeholder concerns | 2.1 | Stakeholders are identified and consulted, in accordance with organisational procedures |
| | 2.2 | Organisation is represented at stakeholder meetings and external events with policies, procedures and plans explained |
| | 2.3 | Meetings with stakeholders are conducted on a regular basis or as required, in accordance with organisational procedures |
| 3 Facilitate policy change within the organisation | 3.1 | Policies, procedures and plans are facilitated, in accordance with organisational procedures |
| | 3.2 | Personnel are encouraged to participate in and comment on proposed changes to policies, procedures and plans |
| | 3.3 | Formal submissions on policies, procedures, plans and operational issues are drafted based on feedback |
| | 3.4 | Submissions are written and submitted, in accordance with organisational procedures |
| 4 Contribute to strategic and operational planning process | 4.1 | Contributions are made to organisational forward planning initiatives |
| | 4.2 | Contributions to strategic and operational planning processes are focused on activities relevant to the organisation |
| 5 Assist in the preparation and implementation of organisational business plans | 5.1 | Development of strategic plan is contributed to and linked to organisational business planning |
| | 5.2 | Organisational objectives and plans are implemented through activities and projects related to legislation, industry awards and agreements and policies and procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of

competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR504B Assist with formulation and implementation of plans and policies.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR504 Assist with formulation and implementation of plans and policies

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- assisting in the development, implementation and evaluation of policies, procedures or plans
- assisting in the preparation and implementation of organisational business plans
- contributing to strategic and operational planning processes
- developing and proposing submissions
- facilitating policy and plan change within the organisation
- following consultative processes
- identifying and considering stakeholder concerns
- implementing change management strategies to deal with resistance to policy development
- monitoring the administration of organisational policies, procedures and plans

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- concepts involved in the policy cycle
- consultative procedures and processes in the policy cycle
- methods for implementing and evaluating policies, procedures and plans
- organisational documentation, policies and procedures including submissions
- reasons for resistance to policy development and strategies for dealing with issues that arise
- role of management, employees and stakeholders in policy and plan development
- stakeholders and external organisations
- submission types
- types of operational plans
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Competency should be demonstrated over time and in a range of contexts; the evaluation of the development and implementation of organisational plans and policies may require a few months.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR506 Conduct complex prescribed burns

Modification History

Release 2.0 This is the second release of this unit of competency in the PUA Public Safety Training Package.

Editorial update.

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to prepare and conduct complex prescribed burns, in accordance with approved burn plans.

A prescribed burn is the controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity and rate of spread required to attain planned resource management objectives. An approved prescribed burn plan includes a map identifying the area to be burned and incorporates the specifications and conditions under which the operation is to be conducted.

Complex prescribed burns are characterised by moderate to high risk, a range of fire intensity, being in medium to large areas, having significant potential impact on assets and involving a variety of fuels and terrain. A burn operation may involve a large number of resources requiring the establishment of a formal management and support structure. A prescribed burn may require several separate ignitions (ground and/or aerial) possibly over several days. It may have several high value assets requiring complex protection actions.

The unit applies to personnel responsible for preparing, conducting and evaluating complex prescribed burns on public and private land.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR303 Suppress wildfire

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to burn

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Complex prescribed burn operations are identified and undertaken, in accordance with approved prescribed burn plan, burn objectives, organisational procedures, and legislative and regulatory requirements
- 1.2 Permits are obtained, in accordance with organisational procedures and legislative and regulatory requirements
- 1.3 Burn notifications and plans are issued to personnel or organisations, in accordance with prescribed burn plan, organisational procedures and legislative requirements
- 1.4 Control lines, including secondary control lines are specified and prepared, in accordance with organisational procedures
- 1.5 Prescribed burn plan, operational hazards and risks to safety of people, property, assets, ecology and environment are identified and risk mitigation works completed
- 1.6 Forecast weather conditions are monitored, recorded and assessed, in accordance with organisational procedures
- 1.7 Fuel conditions are monitored, in accordance with organisational procedures
- 1.8 Resource requirements are confirmed with reference to burn plan and anticipated conditions
- 1.9 Forecast weather conditions are monitored throughout prescribed complex burn

2 Conduct burn

- 2.1 Burn notifications are issued, in accordance with organisational procedures
- 2.2 Pre-burn checks are conducted, in accordance with organisational procedures
- 2.3 Local weather conditions for day of burn are monitored and contingency arrangements actioned and communicated accordingly
- 2.4 Resources are gathered and personnel briefed, in accordance with prescribed burn plan and contingency arrangements
- 2.5 Burn ignition strategies and tactics are implemented, in accordance with prescribed burn plan and organisational procedures including lighting techniques for ground and/or aerial ignition, as relevant to the specific burn, lighting patterns and lighting sequence
- 2.6 Burning is monitored, patrol activities are conducted and operational changes made, as required
- 2.7 Contingencies are implemented, as required, in accordance with prescribed burn plan
- 2.8 Burn documentation is kept, in accordance with organisational procedures
- 2.9 Burn operations are concluded and burn security is implemented in accordance with organisational requirements
- 2.10 Crews are debriefed and resources released from the burn
- 2.11 Incidents are reported and investigated in accordance with organisational procedures

3 Conduct post burn activities

- 3.1 Outcomes of burn are assessed and reported against burn objectives, in accordance with organisational procedures
- 3.2 Variations from burn plan are reported, in accordance with organisational procedures
- 3.3 Restoration and rehabilitation works are identified and carried out, in accordance with organisational procedures
- 3.4 Complex prescribed burn records are submitted, in

accordance with organisational procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

prescribed burn plan must include

- an approved plan for conduct of prescribed burning
- map identifying the area to be burned
- specifications and conditions under which operation is to be conducted

burn objectives must include one or more of the following

- asset protection
- biodiversity protection
- community protection
- habitat management
- hazard reduction
- management of cultural sites and activities
- protection of fire sensitive ecological communities
- vegetation management

operational hazards must include one or more of the following

- adverse terrain or weather conditions
- crew size
- falling trees and limbs
- hazardous materials
- ignition methods
- plant
- road traffic
- vegetation

environmental and ecological risks must include three or more of the following

- impact of smoke
- impact of use of any chemical fire suppressants
- impact on native flora and fauna, including rare and endangered species
- impact on soil
- impact on water quality or supply

contingency arrangements must include

- actions to take in the event of unexpected weather
- command structure
- dealing with escapes
- resource breakdowns
- resource requirements
- safety considerations including escape routes and safety zones
- special resources and/or secondary control lines
- wind changes

personnel or organisations must include one or more of the following

- personnel or organisations who
 - have an interest in managing the consequences of a burn
 - have an interest in preventing health impacts from smoke e.g. nursing homes, health departments
 - have an interest in specific assets
 - have an interest in the area to be burned
 - may be adversely affected by the burn
 - may be concerned by evidence of a burn
 - may have adjacent land to which a burn could spread

resource requirements must include one or more of the following

- contingency resources
- crews for
 - aircraft ground support
 - control and suppression
 - ground ignition

burn ignition strategies and tactics must include:

- equipment and supplies
- logistical support
- tankers and other vehicles
- contingency arrangements
- fire behaviour to be achieved
- ignition methods, lighting patterns, sequencing and timing of ignition

lighting techniques for ground and aerial ignition must include three or more of the following

- hand held drip torch
- aerial drip torch
- aerial incendiaries
- hand held propelled incendiaries
- vehicle mounted propelled incendiaries
- vehicle mounted incendiaries
- wind and/or waterproof matches

lighting patterns must include two or more of the following

- backing fire ignition
- spot or grid ignition
- strip ignition
- flank fire ignition

lighting sequence must include

- fuel arrangement
- fuel moisture
- slope
- time of day
- wind direction

monitoring complex prescribed burn must include four or more of the following

- fire development, shape and spread
- flame height
- fuel moisture content
- predictions
- rate of spread
- safety considerations
- smoke development
- weather observations

conclusion and complex prescribed burn security activities must include

- mitigating hazards for public safety
- mopping up and blacking out
- patrolling burn area
- reopening roads
- transfer of responsibility procedures

outcomes of the complex prescribed burn must include two or more of the following

- achievement of burn objectives
- escapes
- external impacts
- levels of scorch
- percentage of area burnt
- reporting and storage of burn documentation
- all those involved with burn implementation
- any in areas adjacent to burn area
- any permanently or temporarily in burn area
- impact of smoke on vulnerable communities near burn area

safety of people must include

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR511 Conduct complex prescribed burns.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUA FIR506 Conduct complex prescribed burns

Modification History

Release 2.0 This is the second release of this unit of competency in the PUA Public Safety Training Package.

Editorial update.

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation and safe work practices
- concluding burn operations and implementing burn security
- conducting operational briefings and debriefings
- conducting post burn activities
- conducting safe complex prescribed burn operations by utilising appropriate resources (ground and air)
- confirming location, construction and suitability of control lines for prescribed burns
- confirming resources required
- evaluating outcomes against objectives
- identifying and protecting assets
- implementing contingency arrangements
- interpreting and implementing complex prescribed burn plans
- interpreting existing and forecast weather conditions and fire behaviour conditions
- issuing verbal and written burn notifications
- monitoring burn and patrol activities
- preparing to burn
- recording actions taken
- responding to changing conditions
- restoring and rehabilitating sites
- using fire prediction tools
- using monitoring equipment
- utilising lighting techniques and sequencing
- working with ignition patterns and techniques

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- characteristics of complex prescribed burns including involvement of a variety of fuels and terrain, medium to large areas, moderate to high risk, range of fire intensity and significant potential impact on assets
- contingency plans
- evaluation of burn outcomes against objectives
- fire prediction tools and their use
- fuel sampling techniques
- ground and aerial ignition patterns and techniques
- impact of conditions of a complex prescribed burn on potential fire behaviour
- legislation, industry standards, codes of practice and regulations
- legislative, regulatory and organisational authorisations
- organisational documentation, policies and procedures
- permit requirements
- procedures for monitoring, concluding and securing burn
- resource requirements and capabilities
- restoration and rehabilitation activities including site stabilisation and recording and reporting future restoration and rehabilitation requirement
- seasonal restrictions on prescribed complex burns
- smoke modelling and smoke impacts
- techniques, patterns and sequencing for lighting
- traffic management plans
- types of prescribed complex burns
- types of property and assets within or near burn area including urban areas, commercial land use such as crops or industry, any cultural sites or historical buildings, other property and assets, stock, utilities such as power and telephone lines, water supply, structures and communications towers, camps or recreational areas, plantations and research plots and reference areas
- verbal and written burn notifications
- weather conditions including temperature, relative humidity, wind, atmospheric stability, drought index, fire danger index, weather forecasts and actual or anticipated changes in conditions
- weather monitoring techniques
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation and safe work practices

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training

Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in operational situations or in simulated operational training situations that reflect workplace conditions. Competency should be demonstrated in an operational environment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - an area for proposed complex prescribed burn
 - authorisation to light burn
 - fire management plans
 - lighting and suppression crews
 - lighting equipment
 - prescribed burn plans including plan for proposed assessment burn
 - suppression equipment
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR515 Develop complex prescribed burn plans

Modification History

Release 2.0 This is the second release of this unit of competency in the PUA Public Safety Training Package.

Editorial update.

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to develop complex prescribed burn plans for specified burn areas to achieve identified objectives.

A prescribed burn is the controlled application of fire under specified environmental conditions to a predetermined area at a time, intensity and rate of spread required to attain planned resource management objectives. An approved prescribed burn plan includes a map identifying the area to be burned and incorporates the specifications and conditions under which the operation is to be conducted.

Complex prescribed burns are characterised by moderate to high risk, a range of fire intensity, being in medium to large areas, having significant potential impact on assets and involving a variety of fuels and terrain. The burn operation may involve a large number of resources requiring the establishment of a formal management and support structure. It may require several separate ignitions, ground and/or aerial, possibly over several days and it may include a number of high value assets requiring complex protection actions.

The unit is applicable to personnel responsible for developing complex prescribed burn prescriptions.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR303 Suppress wildfire

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Identify burn area and burn objectives

2 Prepare prescribed burn plan for a complex burn

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Areas requiring complex prescribed burn plans are identified, in accordance with organisational and permit procedures and legislative and regulatory requirements
- 1.2 Burn objectives are identified and consultation process is undertaken, in accordance with organisational procedures
- 1.3 Target consultation groups are identified, and consultation process is initiated, in accordance with organisational procedures
- 1.4 Legislative and regulatory requirements are identified and complied with throughout planning process
- 2.1 Key features of burn area are identified including variations in terrain, fuel types and quantities, control lines and weather
- 2.2 Risks from the proposed burn, both on and off site, are assessed and considered in planning process including operational hazards, safety of people, protection of property, assets, environmental and ecological risks
- 2.3 Results of consultation are factored into the planning process, in accordance with organisational procedures
- 2.4 Fire behaviour to meet burn objectives and to account for variations in fuel, terrain and weather is determined
- 2.5 Burn ignition strategies and tactics suited to location that provide required fire behaviour and intensity are determined, in accordance with organisational

procedures

- 2.6 Lighting techniques and patterns for both ground based and/or aerial ignition for specific burn are identified
 - 2.7 Strategies for mitigating hazards and risks are identified and preparatory works are planned
 - 2.8 Strategies and tactics for controlling prescribed burn are identified
 - 2.9 Type and quantity of resources required are identified
 - 2.10 Conditions for implementation of burn ignition strategies and tactics are specified, in accordance with organisational procedures
 - 2.11 Prescribed burn plan is prepared, in accordance with organisational procedures
 - 2.12 Contingencies are outlined in prescribed burn plan
- 3 Gain prescribed burn plan approval**
- 3.1 Prescribed burn plan is submitted for approval, in accordance with legislative and organisational requirements
 - 3.2 Modifications and amendments to prescribed burn plan are made, based on feedback received
 - 3.3 Prescribed burn plan approval is gained

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

- complex prescribed burn plans must include
- approved plan for conduct of prescribed burning
 - map identifying area to be burned
 - specifications and conditions under which operation is to be conducted

burn objectives must include one or more of the following

- asset, biodiversity and community protection
- habitat management
- hazard reduction
- management of cultural sites and activities
- protection of fire sensitive ecological communities
- vegetation management

target consultation groups must include one or more of the following

- adjacent land owners or managers
- commercial operations within impact zone
- community groups with specific interests
- government organisations including local, state and federal
- other groups and people within the prescribing organisation
- people that may be affected by burn

burn ignition strategies and tactics must include

- contingency planning
- fire behaviour to be achieved
- ignition methods, sequencing and timing of ignition

lighting techniques for ground and aerial ignition must include three or more of the following

- hand held drip torch
- aerial drip torch
- aerial incendiaries
- hand held propelled incendiaries
- vehicle mounted propelled incendiaries
- vehicle mounted incendiaries
- wind and/or water proof matches

lighting patterns must include two or more of the following

- backing fire ignition
- spot or grid ignition
- strip ignition
- flank fire ignition

operational hazards must include two or more of the following

- adjoining land use and proximity to urban areas
- adverse terrain or weather conditions
- crew size
- falling trees and limbs
- hazardous materials
- high fuel loads
- ignition method
- plant
- powerlines
- road traffic
- vegetation type

safety of people must include two or more of the following

- impact of smoke on vulnerable communities near the burn area
- safety of any people permanently or temporarily in burn area
- safety of people involved with burn implementation
- safety of people on areas adjacent to burn area

property and assets must include two or more of the following

- any of the following that are in or near the burn area
 - camps or recreational areas
 - commercial land use such as crops or industry
 - cultural sites or historical buildings
 - other property and assets
 - plantations
 - research plots and reference areas
 - stock
 - urban areas
 - utilities - power and telephone lines, water supply structures and communications towers

environmental and ecological risks must include

- impact of native flora and fauna including rare and endangered species
- impact of smoke
- impact of soil
- impact of use of chemical fire suppressants
- impact on water quality or supply

resources required must include one or more of the following

- aircraft and crews including incendiary operations supervisors and machine operators for aerial ignition
- aircraft ground support
- control line standards
- crews and supervisors for ground ignition, control and patrol work
- equipment and supplies including fuel and incendiaries
- planning and logistical support
- pre-burn work schedule
- tankers, other ignition and suppression vehicles, equipment and fuel

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR513 Develop complex prescribed burn plans.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUA FIR515 Develop complex prescribed burn plans

Modification History

Release 2.0 This is the second release of this unit of competency in the PUA Public Safety Training Package.

Editorial update.

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- applying legislative, regulatory, organisational and permit requirements
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risks mitigation and safe work practices
- assessing characteristics of multiple fuel types, terrain and weather
- developing a pre-burn work schedule
- developing contingency arrangements
- documenting complex prescribed burn plans including objectives
- gaining complex prescribed burn approval
- identifying actions to minimise impacts of complex prescribed burn preparation
- identifying resources
- identifying, assessing and mitigating operational hazards and risks including to people, property, assets, ecology and environment
- identifying, liaising and consulting with target consultation groups
- interpreting maps of area and identifying key features
- predicting fire behaviour and intensity in burn area
- preparing maps for complex burn operational use
- preparing plans for complex prescribed burns including developing lighting techniques and patterns for ground and/or aerial ignition, tactics involving multiple fuel types, ignition strategies, burn objectives, strategies and tactics to meet objectives and timelines for planning and conduct of burn
- recommending actions and communicating them
- responding to feedback and adjusting plans for approval

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- accumulated fuels
- burn feasibility
- characteristics of complex prescribed burn including medium to large areas, moderate to high risk, range of fire intensity, significant potential impact on assets and variety of fuels and terrain
- complex prescribed burning ignition and suppression strategies including ignition patterns and sequences for ground and aerial
- contingency arrangements
- control line suitability
- effects of fire on people, property, assets, ecology and environment
- fire prediction tools
- fuel sampling techniques
- legislative, regulatory, organisational and permit requirements
- organisational documentation, policies and procedures including pre-burn procedures
- planned burn hazards and risks
- resource capabilities
- smoke modelling
- traffic management
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation and safe work practices
- written and verbal notification requirements

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in operational situations or in simulated operational training situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including

- area requiring application of fire under prescribed conditions
- existing management plans and data relevant to area being prescribed
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAFIR601 Develop and administer organisational policies, procedures and practices

Modification History

Release 1. This is the first release of this unit of competency in the Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to administer policies, procedures and practices to support the achievement of organisational and operational objectives.

The unit applies to personnel required to lead a team to develop policies and supporting procedures to meet identified organisational needs. Policies developed will require integration into the organisation's strategic and business planning.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR504 Assist with the formulation and implementation of plans and policies

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Identify and develop policies, procedures and practices

- 1.1 Need for new or review of policies, procedures and practices is identified in consultation with stakeholders
- 1.2 Consultative processes are used to exchange information with stakeholders about policies, procedures and practices to assist in problem solving and decision making, in accordance with organisational procedures
- 1.3 Cooperation and input is obtained from stakeholders
- 1.4 Policies, procedures and practices are reviewed or developed with stakeholders, in accordance with organisational procedures
- 1.5 Reviewed or new policies, procedures and plans are submitted, in accordance with organisational procedures

2 Manage the implementation of policies, procedures and practices

- 2.1 Reviewed or new policies, procedures and practices are integrated into organisational strategic and business plans
- 2.2 Reviewed or new organisational policies, practices and procedures are implemented and monitored for adherence and compliance
- 2.3 Administration procedures are updated to reflect reviewed or new policies, procedures and processes
- 2.4 Communication about reviewed or new policies, procedures and processes to stakeholders is facilitated, in accordance with organisational procedures
- 2.5 Policies and procedures information is gathered, stored and safely secured with confidentiality maintained, in accordance with organisational procedures
- 2.6 Copyright provisions are observed, in accordance with organisational procedures

3 Review policies, procedures and practices

- 3.1 Policies, procedures and practices are reviewed to ensure they are current and meet organisational business and strategic plans
- 3.2 Decisions and actions about policies, procedures and practices are recorded, in accordance with organisational

procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR601B Develop and administer agency policy, procedures and practices.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUA FIR601 Develop and administer organisational policies, procedures and practices

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- disseminating information about reviewed or new policies, procedures and processes to stakeholders
- documenting reviewed or new policies, procedures and processes
- identifying and developing policies, procedures and practices
- integrating reviewed or new policies, procedures and processes in business and strategic plans
- managing the implementation of policies, procedures and practices
- reviewing policies, procedures and practices
- undertaking consultation during the preparation, development and review of policies, procedures and practices
- utilising liaising skills
- working with a variety of communication methods and techniques to make presentations and submissions to stakeholders

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- business and strategic plans
- communication methods and techniques
- internal and external stakeholders
- organisational documentation, policies, procedures and practices
- policy cycle
- strategies for implementing organisational policies, procedures and practices
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUALAW001 Protect and preserve incident scene

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to conduct an initial assessment on receipt of a call, when enroute and/or at the incident and to then take action to maintain public safety, preserve scene and record details and information on arrival at the scene of an accident or incident.

The unit is applicable personnel who are the first to arrive at the scene of an accident or incident. It applies to public safety personnel at an incident who need to understand the importance of maintaining the legal integrity of a scene.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Fire

Unit Sector

Fire

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Secure and preserve scene 1.1 Participation in initial assessment when enroute and at

the incident is undertaken to identify factors which will impact on public safety and scene preservation

- | | |
|--|--|
| 2 Record and report details of incident scene | <p>1.2 Incident and/or accident site is secured to preserve the scene, identify evidence and area of origin and to maintain public safety, in accordance with legislative requirements</p> <p>2.1 Details of the scene are noted, recorded and reported, in accordance with organisational policies and procedures</p> <p>2.2 Witness details and information volunteered is recorded, in accordance with organisational and legislative requirements</p> <p>2.3 Information is communicated to relevant personnel, in line with organisation's procedures</p> |
|--|--|

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

types of incident scene must include one or more of the following

- aircraft
- animal incident
- crime scene
- explosions
- hazardous materials
- incident involving death or injury to person or damage to property
- industrial/mining accident
- marine
- natural disaster
- search for missing persons or evidence
- structure fire
- train
- urban scene
- vehicle accident
- vehicle fire

- wildfire

Unit Mapping Information

This unit replaces and is equivalent to PUALAW001B Protect and preserve incident scene.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUALAW001 Protect and preserve incident scene

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- applying questioning skills to gain accurate information
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements
- communicating information and liaising with all stakeholders
- conducting assessment enroute and at the incident scene
- implementing organisational policies and procedures
- observing scene and surrounding environment
- recording and reporting details of incident scene in accordance with organisational requirements
- securing and preserving scene, evidence and area or origin
- securing scene including removing non-emergency personnel from scene, isolating scene and erecting barriers
- taking notes accurately

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- factors impacting on public safety and scene preservation including those that could impact on safety of investigators, response team, security and/or preservation of actual site, security and preservation of situational evidence and traffic
- factors that may impact security of scene including topography, climatic conditions, human interference, animal interference, preservation of life/property, structural integrity and availability of personnel
- methods of securing scene
- organisational and legislative requirements
- organisational documentation, policies and procedures
- organisational procedures relative to scene preservation, collecting information and taking

witness details

- tactical factors affecting quality of investigation including environmental circumstances, chronology of events, access to scene, number of persons at scene, availability of support services and boundaries
- types of incident scenes
- witness details including name, contact details and other details are recorded, in accordance with organisational policies, procedures and legislative requirements
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAMAN005 Manage projects

Modification History

Release 2.0 This is the second release of this unit of competency in the Public Safety Training Package.

Editorial adjustments and clarification of text in Assessment Conditions.

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to manage and evaluate projects.

The unit is applicable to any personnel undertaking a project management role. This includes management of small and short term projects as well as roles with a specific project management focus.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUATEA003 Lead, manage and develop teams

Competency Field

Management

Unit Sector

Public Safety

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Identify project scope

1.1 Identify and record scope, objectives and outcomes of project

1.2 Strategy to achieve project objectives, outcomes and client requirements is developed

1.3 A risk management system is developed and applied to ensure project objectives can be met within organisational accountability frameworks

2 Acquire project resources

2.1 Project resources and equipment are identified, acquired and allocated

2.2 Project scope and objectives are analysed to determine tasks to achieve agreed outcomes on time and within budget

2.3 Process for monitoring, evaluating and reporting performance against objectives are developed and applied

2.4 Roles and responsibilities of team members and stakeholders are identified and agreed

3 Manage project activities

3.1 Project is initiated, in accordance with organisational policies and strategic direction, in consultation with stakeholders

3.2 Tasks are implemented, in accordance with project plan and organisational procedures

3.3 Communication process is established including responsibilities for conflict resolution

3.4 Progress is monitored to ensure time, performance, cost and quality of project is achieved

3.5 Proposed variations are investigated and negotiated, in consultation with stakeholders

4 Finalise project and evaluate and report on activities

4.1 Project is completed, outcomes are recorded and opportunities for future improvement are established

- 4.2 Evaluation of completed project is undertaken against agreed objectives and is reported to stakeholders

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAMAN005B Manage projects.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAMAN005 Manage projects

Modification History

Release 2.0 This is the second release of this unit of competency in the Public Safety Training Package.

Editorial adjustments and clarification of text in Assessment Conditions.

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- analysing outcomes on completion of project
- designing strategies to achieve project outcomes and client requirements
- evaluating and reporting on project performance and project achievements
- following organisational policies and procedures including Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- identifying and preparing project scope
- implementing communication strategies with internal and external clients
- managing project according to predetermined timeframes and available resources
- maximising team effectiveness and staff selection
- monitoring project progress
- negotiating with contractors and suppliers
- obtaining project resources.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- basics of contract law
- communication techniques
- cost schedule control systems
- human resource management and policies
- integration of project activities
- organisational documentation, policies and procedures including Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) legislated requirements
- organisational procurement guidelines
- project management systems, tools and techniques

- project plans
- project specifications and objectives
- resource management
- risk management techniques
- types of stakeholders.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in operational situations or in simulated operational training situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAOIL202 Use basic equipment operations for oil spill response

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to operate, deploy, monitor and recover basic (Level 1) oil spill response equipment, whilst working as a team member.

An oil spill is the release of liquid petroleum hydrocarbon into the environment, either aquatic or on land. There are three categorised levels of oil spills; Level 1 spills are mild, causing localised damage in marine and or land environments.

The unit is applicable to personnel deployed to operate basic (Level 1) oil spill response equipment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Marine Pollution Response

Unit Sector

Not applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Undertake a health and safety site review

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Identify and communicate potential oil spill hazards and risks

1.2 Report hazards and risks, in accordance with

- organisational procedures
- 1.3** Select and use personal protective clothing and equipment, in accordance with Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) guidelines and Safety Data Sheet (SDS) requirements
- 2 Prepare Level 1 equipment for use**
- 2.1** Use the incident action plan and/or site specific deployment plan to identify and select oil spill response equipment, in accordance with organisational requirements and supervisor's instructions
- 2.2** Use organisational procedures and manufacturers' specifications, in the management of routine preoperational checks of equipment
- 2.3** Report unsafe or faulty equipment, in accordance with organisational procedures, and set aside for repair and/or replacement
- 3 Operate and/or deploy Level 1 equipment**
- 3.1** Operate and maintain equipment, in accordance with organisational procedures and manufacturers' specifications
- 3.2** Complete work tasks, in accordance with organisational procedures, WHS/OHS requirements and the incident action plan
- 3.3** Identify, action and monitor environmental implications associated with oil spill response and maintenance of equipment
- 3.4** Monitor oil spill environmental conditions, in conjunction with operational activities
- 4 Check, clean and store Level 1 equipment**
- 4.1** Report equipment use, in accordance with organisational procedures, site specific deployment plan and incident action plan requirements
- 4.2** Clean, secure and store equipment, including personal protective clothing and equipment, in accordance with organisational procedures, manufacturers' specifications and maintenance manuals
- 4.3** Report equipment faults or damage to supervisor, in accordance with organisational procedures
- 4.4** Maintain and clean workplace, in accordance with organisational procedures and WHS/ OHS guidelines

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAOIL201 Use basic equipment operations for oil spill response.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAOIL202 Use basic equipment operations for oil spill response

Modification History

Release 1. This is the first release of this unit of competency in the Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- checking, cleaning and storing Level 1 equipment including monitoring their performance
- communicating with team members and organisational personnel
- following organisational policies and procedures
- identifying hazards including chemical, operational and working environments
- loading and unloading materials safely
- modifying activities in relation to risk and environment
- operating and deploying Level 1 equipment
- preparing Level 1 equipment for use including preoperational checks
- reading and interpreting Safety Data Sheets (SDS)
- recognising and addressing problems when dismantling, inspecting and assembling equipment
- undertaking a health and safety site review including identifying and assessing potential risks
- using personal protective clothing and equipment
- working in a team to safely deploy and monitor basic (Level 1) equipment for the containment, recovery and storage of oil from a spill

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- characteristics and liabilities of Level 1 oil spill equipment including operation of and environmental impact of the equipment
- environmental conditions and implications of oil spill including oil spill response equipment required
- organisational documentation, policies and procedures
- personal protective clothing and equipment

- potential hazards
- preoperational checks
- safe working procedures and practices
- Safety Data Sheets (SDS)
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operations manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAOIL303 Apply health, safety and risk controls when working on oiled shorelines

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to apply health, safety and risk controls when working on an oiled shoreline. It includes identifying potential hazards, following procedures for risk control, supporting safety guidelines for working with oil and reporting on hazards, injuries and near misses.

The unit is applicable to shoreline supervisors and/or coordinators responsible for health, safety and risk controls to ensure the wellbeing of all responders reacting to an oiled shoreline incident.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Marine Pollution Response

Unit Sector

Not applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Identify potential hazards

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Identify and analyse hazards at oiled shoreline before and during incident

1.2 Complete a risk assessment for identified hazards in

accordance organisational procedures and Work, Health and Safety (WHS)/ Occupational Health and Safety (OHS) requirements

- 1.3 Identify and apply controls for hazards
 - 1.4 Review effectiveness of controls within the shoreline supervisor or coordinator's scope of authority
 - 1.5 Identify and report on any remaining risks to relevant personnel and organisations or agencies
- 2 Follow procedures for risk control**
- 2.1 Select, use and maintain personal protective clothing and equipment, in accordance with Safety Data Sheet (SDS) requirements
 - 2.2 Develop site specific health and safety plan and continuously review throughout incident
 - 2.3 Coordinate induction training for oil spill responders attending incident
- 3 Follow safety guidelines for working with oil**
- 3.1 Explain contact procedures for personnel involved in oil spill response
 - 3.2 Follow approved safety procedures and use personal protective clothing and equipment, as specified, in accordance with organisational procedures
 - 3.3 Implement safety procedures when operating near volatile oil substances
- 4 Report hazards, injuries, near misses**
- 4.1 Communicate and apply reporting requirements for hazards, injuries and near miss incidents
 - 4.2 Implement remediation strategies and practices, as required, following completion of incident report
 - 4.3 Complete organisational documentation and reports, in accordance with organisational procedures and forward to relevant personnel

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAOIL301 Apply health, safety and risk controls when working on oiled shorelines.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAOIL303 Apply health, safety and risk controls when working on oiled shorelines

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including applying health and safety practices when working in oiled shoreline environments
- assessing risks
- complying with safety guidelines for working with oiled shorelines
- developing and reviewing site specific health and safety plans
- ensuring tasks are performed to meet safety requirements and quality systems
- following procedures for risk control
- identifying, documenting and managing health and safety, potential hazards and associated risks for oiled shorelines and continually review
- implementing controls for hazardous in oiled shoreline situations
- implementing emergency provisions
- implementing organisational policies and procedures
- recognising potential emergency situations and communicating promptly
- reporting hazards, injuries and near misses
- using personal protective clothing and equipment and material safety data sheets

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- correct use of equipment for handling materials
- environmental impacts and risks to individuals and the community
- hazards and hazardous areas including chemical, operational and working environments
- operational characteristics of oil spill equipment
- organisational documentation, policies and procedures
- personal protective clothing and equipment
- risk mitigation processes including controls for hazards
- Safety Data Sheets (SDS)

- severity of risks from materials
- site specific health and safety planning
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Simulations will be required for the timely assessment of this unit of competency. Simulations should be based on potential work environment and should include the use of case studies and scenarios using what if questions and answers.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operations manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAOIL304 Use advanced equipment operations for oil spill response

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit involves the skills and knowledge required to safely deploy, operate, monitor and recover advanced oil spill response equipment.

The unit is applicable to personnel responsible for the choices and deployment of appropriate advanced oil spill response equipment to meet the type of oil spill operations and environmental conditions for Level 1, 2 or 3 responses.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Marine Pollution Response

Unit Sector

Not applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Manage safety of operation

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Identify hazards and risks for the site and equipment use through a job safety analysis
- 1.2 Apply the hierarchy of controls to manage hazards and risks

- 5.2 Identify, action and monitor environmental implications associated with the operation and maintenance of equipment
- 5.3 Identify any changes to response as a result of ongoing monitoring of operations
- 6 **Check, clean and store equipment**
 - 6.1 Maintain records of equipment use, in accordance with organisational procedures, the incident management system and incident action plan
 - 6.2 Clean, secure and store equipment, in accordance with organisational procedures, manufacturers' specifications, maintenance manual and/or supervisor's instructions
 - 6.3 Report and take action on equipment malfunction, fault, wear or damage, in accordance with organisational procedures
 - 6.4 Maintain and clean workplace, in accordance with organisational procedures, WHS/OHS requirements and demobilisation plan

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAOIL302 Use advanced equipment operations for oil spill response.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAOIL304 Use advanced equipment operations for oil spill response

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (OHS)/Occupational Health and Safety (OHS) requirements
- checking, cleaning and storing advanced equipment
- communicating with work team, incident management team and stakeholders including conducting briefings and debriefings
- completing maintenance records
- conducting pre-operational checks
- demonstrating safe deployment and operation of equipment to contain, recover and store oil
- ensuring safety and hazard control procedures are implemented
- following organisational policies and procedures
- handling and using equipment safely including loading and unloading of equipment and materials
- identifying hazardous situations and taking appropriate action
- identifying hazards including chemical and operational and working environments
- managing the safety of oil spill operation
- modifying activities dependent on risk and environment
- monitoring and reassessing situations to ensure response meets environmental conditions
- monitoring equipment performance including identifying equipment requiring licensed operators
- performing risk assessments
- preparing advanced equipment for use
- reading and interpreting Safety Data Sheets (SDS)
- recognising and addressing problems when dismantling, inspecting and assembling equipment
- using personal protective clothing and equipment
- working safely

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- communication methods and techniques including briefing and debriefing processes
- deployment plans
- environmental implications
- hazards including chemical and operational and working environments
- hierarchy of controls
- incident action plans
- operational characteristics of advanced oil spill response equipment
- organisational documentation, policies and procedures
- personal protective clothing and equipment
- safe operation of equipment
- Safety Data Sheets (SDS)
- WHS/OHS requirements and responsibilities including risk mitigation processes

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operations manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAOPE015 Conduct briefings and debriefings

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to lead and conduct a briefing and/or a debriefing in operational and nonoperational situations, in a range of environments. It includes planning and preparing for briefings and debriefings, conducting briefings and debriefings and concluding briefings and debriefings.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Operations

Unit Sector

Public Safety

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan and prepare for briefing and debriefing

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Content and format for briefing and debriefing are determined
- 1.2 Briefing and debriefing plan is prepared, in accordance with organisational policies and procedures
- 1.3 Personnel involved in the activity are identified and informed of briefing and debriefing requirements

- | | | |
|---|------------|---|
| | 1.4 | Safe and appropriate location for the briefing and debriefing is selected |
| 2 Conduct briefing and debriefing | 2.1 | Purpose and structure of the briefing and debriefing is outlined to incident personnel |
| | 2.2 | Understanding is sought and clarifications are provided, as required |
| | 2.3 | Contributions during the debriefing and evaluation by personnel of their anticipated or actual roles in the activity is encouraged |
| | 2.4 | Briefing is conducted using Situation, Mission, Execution, Administration/logistics, Command/control and Safety (SMEACS) |
| | 2.5 | Briefing and debriefing checklist is used, as appropriate, in accordance with organisational policies and procedures |
| 3 Conclude briefing and debriefing | 3.1 | Contributions of personnel are acknowledged in a positive way |
| | 3.2 | Briefing and debriefing follow up action is identified and acted upon in a timely manner |
| | 3.3 | Debriefing activity is reviewed against the policies, procedures and training of the organisation to identify lessons learnt and opportunities for continuous improvement |
| | 3.4 | Briefing and debriefing findings are summarised and recorded, in a format suitable for subsequent action |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

content and format for briefings and

- adapting language to suit audience

debriefings must include

- collaborative approach
- descriptive and illustrative
- facilitator led
- predetermined Situation, Mission, Execution, Administration/logistics, Command/control and Safety (SMEACS)
- problem based

Unit Mapping Information

This unit replaces and is equivalent to PUAOPE015A Conduct briefings and debriefings.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAOPE015 Conduct briefings and debriefings

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- communicating with personnel in a group setting
- concluding briefings and debriefings including follow up and subsequent actions
- conducting briefings and debriefings using Situation, Mission, Execution, Administration/logistics, Command/control and Safety (SMEACS)
- eliciting and encouraging contributions to briefings and debriefings in a constructive and positive way
- following organisational policies and procedures including Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- planning and preparing for the briefings and debriefings including content, format and location
- preparing briefing and debriefing checklist and plan

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements performance criteria and range of conditions and includes knowledge of

- appropriate follow up and subsequent actions after a briefing or debriefing
- briefing and debriefing plans
- content and format for conducting briefings and debriefings
- organisational documentation, policies and procedures including Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- personnel roles and responsibilities
- personnel who may participate in briefings and debriefings including contractors, local, state, territory and federal government employees, operations personnel, support personnel, volunteers and personnel from other organisations and/or agencies
- safe and appropriate locations to conduct briefings and debriefings
- types of briefings and debriefings
- use of Situation, Mission, Execution, Administration/logistics, Command/control and Safety

(SMEACS) in briefings

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUAOPE016 Manage a multi-team sector

Modification History

Release 2.0 This is the second release of this unit of competency in the Public Safety Training Package.

Editorial adjustments and clarification of text in Assessment Conditions.

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to manage a multi-team response at an incident which may be time critical and/or potentially threatening to life, property or the environment.

An individual performing in this role has the title of Sector or Division Commander and/or Level 1 Operations Officer and is delegated responsibility by either the Incident Controller or Operations Officer. The individual is responsible for managing a sector or division at an incident.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

One of the following

PUAFIR302 Suppress urban fire

PUAFIR303 Suppress wildfire.

Competency Field

Operations

Unit Sector

Public Safety

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Conduct assessment of incident

- 1.1 Initial briefing is obtained, in accordance with organisational procedures
- 1.2 Risk assessment of all factors relevant to the sector is conducted
- 1.3 Resources for the incident are identified
- 1.4 Constraints which may impede the response are identified
- 1.5 Initial response options are identified and assessed

2 Take command of sector

- 2.1 Command of all sector personnel is established and maintained, in accordance with organisational policies and procedures
- 2.2 Communications systems are used, in accordance with organisational policies and procedures
- 2.3 Reporting processes are activated, in accordance with organisational policies and procedures, to provide continuous monitoring and evaluation of incident

3 Implement operations portion of IAP

- 3.1 Incident Action Plan (IAP) is communicated to teams, in accordance with organisational procedures
- 3.2 Resources are deployed within area of operations to ensure portion of the IAP is implemented, in accordance with organisational procedures
- 3.3 Operations are conducted and monitored, in accordance with the IAP
- 3.4 Operational reports are issued, in accordance with organisational policies and procedures
- 3.5 Operations are modified, as required, to suit the situation

4 Manage and monitor sector operations

- 4.1 Sector is managed, in accordance with organisational policies and procedures
- 4.2 Safe work practices and health and welfare procedures

and arrangements are implemented and monitored

- 4.3 Strategies are implemented, and tactics are determined, in accordance with the IAP
 - 4.4 Team leaders are briefed on Incident Controller's intent and are tasked, in accordance with the IAP
 - 4.5 Specific tasks are reviewed and modified, as required
 - 4.6 Regular exchange of information is maintained within the chain of command on incident situation, progress, achievement of incident objectives and identified risks
 - 4.7 Unexpected situations that require a quick and decisive response are recognised and responded to in accordance with the Incident Controller's intent
 - 4.8 Situation reports are provided through the chain of command on required modification to the IAP, including additional resources required, surplus resources and hazards present
 - 4.9 Need for logistical support is identified and communicated through the chain of command
 - 4.10 IAP activities are coordinated with adjacent sectors
- 5 Manage post incident operations**
- 5.1 Resources are accounted for and demobilised, in accordance with organisational requirements
 - 5.2 Post operational documentation is completed, in accordance with organisational procedures
 - 5.3 Sector debriefing is conducted, in accordance with organisational procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUAOPE016A Manage a multi-team sector.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAOPE016 Manage a multi-team sector

Modification History

Release 2.0 This is the second release of this unit of competency in the Public Safety Training Package.

Editorial adjustments and clarification of text in Assessment Conditions.

Release 1.0 This is the first release of this unit of competency in the PUA Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- accessing information and support the chain of command
- adapting tactics
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- assessing effectiveness of strategies and tactics on sector or division
- briefing and debriefing personnel
- completing documentation
- conducting an assessment of the area of operation
- deploying and managing human and physical resources
- establishing command of sector or division
- following organisational policies and procedures
- identifying and assessing risks
- implementing operations portion of the incident action plan
- leading teams
- maintaining shared situational awareness
- making decisions, negotiating and resolving conflict
- managing and monitoring sector or division operations
- managing post incident operations including demobilisation arrangements
- providing reports through the chain of command
- using communications systems.

Knowledge Evidence

- Australasian Inter-service Incident Management System (AIIMS) structure
- constraints on actions that may limit available options
- equipment and personnel capabilities for incident type

- human and physical resources available for the incident
- incident action plan objectives, strategies and tactics including Incident Controller's intent
- incident site layouts
- initial response options
- organisational command structure
- organisational policies, procedures and documentation for managing operations
- post operational procedures
- processes for implementing, monitoring, amending and reviewing strategies and tactics
- requirements for reporting and recording
- risk assessment
- types of incidents
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including risk mitigation.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in operational situations or in simulated operational training situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

PUATEA001 Work in a team

Modification History

Release 1. This is the first release of this unit of competency in the Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to work with others whilst making a positive contribution to the effectiveness and efficiency of a team in a work environment, when under direct supervision. Limited responsibility towards others is required.

The unit applies to personnel working in public safety and is particularly pertinent to new staff in assisting with integration into the team culture of the organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable

Competency Field

Team work

Unit Sector

Not applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Contribute to team activities

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Roles and responsibilities of team members are recognised
- 1.2 Contribution is made to identifying team goals and objectives

- 1.3 Work activities are completed to required standards and within stated timeframes, in accordance with organisational policies and procedures
 - 1.4 Assistance in the completion of tasks is requested from other team members
 - 1.5 Team members are assisted to ensure efficient and safe completion of tasks, in accordance with organisational policies and procedures
 - 1.6 Participation by team members is encouraged and acknowledged
 - 1.7 Changes in allocated roles and responsibilities are implemented, in accordance with organisational procedures
 - 1.8 Team meetings are attended regularly, punctually and are contributed to, in accordance with organisational procedures
- 2 Share knowledge and information**
- 2.1 Information related to work is communicated with team members to enable efficient completion of tasks, in accordance with the organisational policies and procedures
 - 2.2 Knowledge and skills are shared between team members
- 3 Give and receive support to or from team members**
- 3.1 Feedback or assistance is given to other team members in an appropriate and timely manner
 - 3.2 Team members are supported in achieving organisational goals
 - 3.3 Feedback from other team members is acted upon, in accordance with organisational procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to PUATEA001B Work in a team.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUATEA001 Work in a team

Modification History

Release 1. This is the first release of this unit of competency in the Public Safety Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- attending and working in a variety of team situations
- completing organisational documentation
- contributing to organisational goals and team activities, team meetings and the achievement of tasks consistent with goals
- displaying interpersonal skills and encouraging team members
- following instructions
- following organisational policies and procedures
- giving and receiving support to and from team members
- identifying work conditions and types of activities to be undertaken
- listening and using a variety of communication skills
- providing appropriate suggestions, feedback and information to team members
- reporting information
- requesting assistance from appropriate personnel
- sharing knowledge and information

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- composition of teams including roles and responsibilities of members
- nonoperational and operational communication processes
- organisational documentation, policies and procedures
- organisational goals and activities
- potential work task conditions
- techniques for assisting and supporting others
- techniques for giving and receiving feedback in a constructive manner
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including risk mitigation

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operational manuals.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

RGRHBR302 Carry out natural mare mating procedures

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to carry out mare mating procedures using stallions for natural service to maximise conception rates and live foal outcomes. It includes identifying mares in oestrus, attending mares for service, providing support for reproductive services and keeping accurate records.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts within horse breeding environments.

No licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- ACMEQU202 Handle horses safely.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to perform mare mating procedures	1.1 Interpret the work program to determine work to be undertaken, and confirm with supervisor 1.2 Communicate with other workers to ensure smooth operation of the mating process 1.3 Adhere to requirements for the care and handling of horses 1.4 Select, use and maintain personal protective equipment (PPE) for safety and infection control purposes
2. Identify mares in a state of oestrus	2.1 Identify and select mares due for teasing or service 2.2 Identify work health and safety hazards, including horse behaviour and body language, assess risks and implement suitable controls 2.3 Catch and restrain selected mare, and foal if present, using safe horse handling techniques, for teasing or other oestrus identification procedures 2.4 Complete stud records according to workplace requirements
3. Attend mares for service	3.1 Prepare mare for hand service according to stud practice 3.2 Separate from mare and safely restrain foal, if present, according to stud practice 3.3 Restrain mare safely for natural service, using appropriate equipment according to stud practice 3.4 Attend mare for the service process 3.5 Return mare to box or paddock 3.6 Complete workplace records
4. Handle mares for routine veterinary reproductive procedures	4.1 Handle mare and foal to ensure both are settled and safe 4.2 Lead mare (and foal) into crush, ensuring safety and wellbeing of both mare and foal, if present 4.3 Use an appropriate restraint method in the crush 4.4 Provide support for manual or ultrasound follicle and pregnancy testing procedures 4.5 Assist the veterinarian to prepare for examination,

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	swabbing or treatment of the mare
5. Maintain accurate identification and records	5.1 Complete records of identification and breeding according to industry standards 5.2 Report details of any treatment performed, including follow-up treatment

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information in written work program and instructions
Writing	<ul style="list-style-type: none"> Record information relating to mating mares and breeding, accurately and legibly
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following regulatory and workplace procedures, including safe work, safe horse handling practices, and animal welfare requirements, in own role and work area
Interact with others	<ul style="list-style-type: none"> Work cooperatively with a range of personnel in different roles using clear communication techniques to carry out mating activities
Get the work done	<ul style="list-style-type: none"> Plan and sequence multiple tasks; monitor activity and prioritise tasks to achieve outcomes Make decisions about routine mating activities, taking responsibility for actions taken Use workplace technology, tools and systems to complete records and reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

Code and title current version	Code and title previous version	Comments	Equivalence status
RGRHBR302 Carry out natural mare mating procedures	ACMHBR303 Carry out natural mare mating procedures	Code changed to reflect appropriate industry sector usage Minor changes for clarity Removal of points duplicating performance criteria in performance evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

Assessment Requirements for RGRHBR302 Carry out natural mare mating procedures

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- carried out natural mating preparation and service procedures for at least three mares, including:
 - two with a foal at foot
 - one maiden mare
- maintained accurate records of mating and breeding activities for each individual horse.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices relevant to mare mating procedures:
 - relevant horse breeding terminology
 - relevant anatomy and physiology of male and female reproductive systems in horses, including conception and gestation
 - common infertility in mares and what may be treated by veterinarians
 - oestrus cycle in mares and dioestrus behaviour and its detection
- safe work practices:
 - safe horse handling techniques
 - hazard and risk identification and minimisation
 - personal protective equipment (PPE)
 - biosecurity, hygiene and infection control practices relevant to mating procedures
- key regulatory requirements relating to animal welfare
- mare identification methods, including mare status and stallion booking
- procedures for preparation for mating, including:

- uterine swabbing and treatment
- role of veterinarians in carrying out follicle and pregnancy testing
- mare handling procedures, including types and purpose of different handling restraints
- workplace recording and reporting procedures, including stud recordkeeping requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace with teasing yards, stud veterinary facilities, breeding area or barn and foal restraint areas
- resources, equipment and materials:
 - mares to be mated, assessed as suitable for the experience and skill of the individual
 - at least one working stallion and teaser
 - tack, equipment and restraints required for teasing and natural mating
 - personal protective equipment (PPE) correctly fitted and applicable to activity for the individual
- specifications:
 - workplace recording and reporting forms or systems
 - work instructions or program for carrying out mating procedures.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

RGRHBR303 Assist with artificial insemination of mares

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to assist with mare artificial insemination (AI) procedures to maximise conception rates and live foal outcomes. It includes identifying mares in oestrus, attending mares for service, providing support for reproductive services and keeping accurate records.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts within horse breeding environments.

No licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- ACMEQU202 Handle horses safely.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for AI mare procedures	1.1 Interpret the work program to determine work to be undertaken, and confirm with management 1.2 Communicate with other workers to ensure smooth operation of the production process 1.3 Adhere to requirements for the care and handling of horses 1.4 Select, use and maintain personal protective equipment (PPE) for safety and hygiene purposes
2. Identify mares in a state of oestrus	2.1 Identify and select mares due for teasing or service 2.2 Identify work health and safety hazards, including horse behaviour and body language, assess risks and implement suitable controls 2.3 Catch and restrain selected mare, and foal if present, using safe horse handling techniques, for teasing or other oestrus identification procedures 2.4 Complete stud records according to workplace requirements
3. Attend mares for AI	3.1 Prepare mare for AI routines according to stud practice 3.2 Restrain mare safely for AI and secure any foal at foot in close proximity 3.3 Attend mare for the AI process 3.4 Return mare, and foal if present, to box or paddock 3.5 Complete workplace records
4. Handle mares for routine veterinary reproductive procedures	4.1 Handle mare and foal to ensure both are settled and safe 4.2 Lead mare (and foal) into crush, ensuring safety and wellbeing of both mare and foal, if present 4.3 Use an appropriate restraint method in the crush 4.4 Provide support for manual or ultrasound follicle and pregnancy testing procedures and AI 4.5 Assist the veterinarian to prepare for examination, swabbing, treatment or AI of the mare

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information in written work program and instructions
Writing	<ul style="list-style-type: none"> Record information relating to mare AI and breeding, accurately and legibly
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following regulatory and workplace procedures, including safe work, safe horse handling practices, hygiene and biosecurity, and animal welfare requirements, in own role and work area
Interact with others	<ul style="list-style-type: none"> Work cooperatively with a range of personnel in different roles using clear communication techniques to carry out AI activities
Get the work done	<ul style="list-style-type: none"> Plan and sequence multiple tasks; monitor activity and prioritise tasks to achieve outcomes Make decisions about routine AI activities, taking responsibility for actions taken Use workplace technology, tools and systems to complete records and reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RGRHBR303 Assist with artificial insemination of mares	ACMHBR304 Assist with artificial insemination of mares	Code changed to reflect appropriate industry sector usage Minor changes for clarity Removal of points duplicating performance criteria in performance evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

Assessment Requirements for RGRHBR303 Assist with artificial insemination of mares

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- carried out artificial insemination (AI) procedures with at least three mares, including at least one with foal at foot
- maintained accurate records of AI and breeding activities for each individual horse.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- relevant horse breeding terminology
- relevant anatomy and physiology of male and female reproductive systems in horses, including:
 - conception and gestation
 - common infertility in mares and what may be treated by veterinarians
 - oestrus cycle in mares and dioestrus behaviour and its detection
- procedures for preparation for AI
- requirements of veterinarians in carrying out follicle and pregnancy testing
- mare handling procedures, including types and purpose of different handling restraints for mares
- mare identification methods, including mare status and stallion booking
- infection control and testing of mares
- key regulatory requirements relating to animal welfare
- safe work practices:
 - safe horse handling techniques
 - hazard and risk identification and minimisation
 - personal protective equipment (PPE)

- biosecurity and hygiene practices relevant to AI procedures
- workplace recording and reporting procedures, including stud recordkeeping requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - various mares requiring AI assessed as suitable for the experience and skill of the individual
 - tack, equipment and restraints required for AI
 - PPE fitted and applicable for task for individual
 - workplace recording and reporting forms or systems
- specifications:
 - work instructions or program for carrying out AI procedures.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

RGRHBR304 Assess suitability of horses for specific uses

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to assess the suitability of horses for specific uses, and defines the standard required to identify horse conformation, assess soundness and temperament of horses, and maintain accurate data documentation.

The unit applies to individuals who work under broad direction, taking responsibility for their own work. They complete routine activities and work in a range of known contexts within horse breeding and other horse industry environments.

No licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- ACMEQU202 Handle horses safely.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Assess horse conformation	1.1 Observe horse body language and behaviour to identify potential safety risks prior to approaching individual horses 1.2 Determine conformation requirements for specific use of a horse 1.3 Evaluate the conformation of a horse using relevant horse sector criteria and practices 1.4 Report on the desirable conformation of a horse
2. Report on unsoundness and blemishes in the horse	2.1 Examine the horse for unsoundness and blemishes using safe horse handling techniques 2.2 Record unsoundness and blemishes detected, including those on the fore and hind limbs and hooves, and assess level of effect for specific use 2.3 Report issues of unsoundness to relevant personnel
3. Report on the way of going of horses	3.1 Evaluate and report on essential elements of the way of going of the horse 3.2 Assess and report on the natural gaits of the horse 3.3 Detect and report defects in the way of going of the horse, including lameness
4. Report on undesirable behaviours and habits of horses	4.1 Observe and determine any behavioural issues the horse has that could pose a workplace risk or impact on horse suitability for purpose 4.2 Report behavioural issues that may be hazardous to people and other horses, according to workplace practices
5. Evaluate overall suitability of the horse for specific uses	5.1 Identify the horse characteristics needed for a specific use 5.2 Analyse findings from examining and observing individual horses to determine suitability for the specified use 5.3 Identify breed of horse and determine the effect this may have on suitability for use 5.4 Report on the findings of horse suitability for specific uses using correct concepts and horse industry terminology

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Record data and observations in workplace forms accurately and legibly
Oral communication	<ul style="list-style-type: none"> Use active listening and questioning techniques to clarify and confirm requirements Use clear language suitable for intended audience to ensure clarity of meaning when reporting and giving reasons for findings to others
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following workplace procedures, including safe horse handling practices and animal welfare requirements, in own role and work area
Get the work done	<ul style="list-style-type: none"> Apply specialist knowledge to analyse assessment findings and make decisions about horse suitability; taking responsibility for decisions and the outcome of the assessment Use workplace technology, tools and systems to complete records and reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RGRHBR304 Assess suitability of horses for specific uses	ACMHBR305 Assess suitability of horses for specific uses	Code changed to reflect appropriate industry sector usage Minor edits and new performance criteria 2.3 for clarity Removal of points duplicating performance criteria in performance evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

Assessment Requirements for RGRHBR304 Assess suitability of horses for specific uses

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- identified and assessed the suitability of at least three horses for specific uses
- maintained appropriate records of each horse assessed
- evaluated the overall suitability of each horse for specific uses, and reported on findings.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- desirable and undesirable conformations for specific uses
- common blemishes on fore and hind limbs and hooves
- common behavioural issues in horses
- desirable and undesirable natural gaits
- process for determining characteristics needed for specific uses
- impact of breeding or parentage on individual horse suitability for a specific use
- factors that affect suitability of an individual horse for a specific use, including gender, class and age
- how the final assessment could affect value of horse
- horse industry terminology relevant to assessing horse suitability.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:

- various live horses to be assessed for suitability for specific uses, assessed as suitable for the experience and skill of the individual
- specifications:
 - criteria for specific uses the horses are to be used for.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

RGRHBR305 Handle young horses

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to handle young horses in order to conduct a range of routine tasks, including catching and weaning foals and preparing yearlings for sale.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts within horse breeding and horse industry environments.

No licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- ACMEQU202 Handle horses safely.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work with young horses	1.1 Interpret and clarify work instructions and workplace procedures for handling young horses 1.2 Identify hazards and risks associated with catching and handling young horses, and implement control measures to minimise 1.3 Assemble gear, and check gear and facilities for safe use 1.4 Select and correctly fit personal protective equipment (PPE) appropriate for activities 1.5 Ensure records relating to young horses are updated regularly and accurately according to workplace requirements
2. Catch and handle foals	2.1 Catch foals of various ages using safe and ethical horse handling techniques 2.2 Restrain foals for routine health and husbandry procedures according to workplace practices
3. Assist with weaning foals	3.1 Identify suitable facilities for the safe handling, training and weaning of foals 3.2 Fit foals with a halter or head collar 3.3 Lead weanling foals 3.4 Handle weanling foal legs and pick up feet
4. Perform routine tasks preparing and presenting yearlings for sale	4.1 Carry out routine daily checks of yearlings according to workplace procedures 4.2 Lead yearlings for exercise and presentation 4.3 Exercise yearlings according to individual requirements 4.4 Shampoo, groom and trim yearlings in safe facility 4.5 Fit head collars, bridles, bits, rugs and safety gear

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Navigate the world of work	<ul style="list-style-type: none"> Follow work health and safety, safe horse handling and animal welfare requirements associated with own role and area of work with young horses
Get the work done	<ul style="list-style-type: none"> Plan and sequence tasks, prioritising activities to achieve work outcomes for handling young horses Use workplace technology, tools and/or systems to complete records and reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RGRHBR305 Handle young horses	ACMHBR307 Handle young horses	<p>Code changed to reflect appropriate industry sector usage</p> <p>Minor changes and new PC1.4 for clarity</p> <p>Removal of points duplicating performance criteria in performance evidence</p>	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

Assessment Requirements for RGRHBR305 Handle young horses

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- safely handled and conducted a range of routine activities with young horses, including:
 - caught and handled three foals
 - assisted with weaning three foals
 - prepared and presented three yearlings for sale
- completed required records for each horse.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- suitable facilities for weaning and yearling preparation
- potential dangers to the foal and mare during weaning, and appropriate actions to reduce them
- stress responses sometimes associated with weaning for both mare and weanling:
 - fretting
 - over-heating
 - refusing food
 - overeating
 - self-inflicted injuries
- potential dangers to the yearlings during sale preparation, and appropriate actions to reduce them:
 - removing any potential hazards from stalls and handling areas
 - exercising in confined areas
 - monitoring exercise
- effects of exercise on joints and bones of the legs

- various responses in yearlings associated with sale preparation:
 - fretting
 - poor appetite
 - overeating
 - stable vices
- suitable tack and equipment for young horses
- safe horse handling techniques for young horses
- key features of regulatory requirements relevant to working with horses for:
 - work health and safety, including use of personal protective equipment
 - animal welfare
 - biosecurity.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions, including a small handling yard and crush
- resources, equipment and materials:
 - various young horses including weaning foals, weanlings and yearlings – note that young horses can be less compliant and highly reactive, and should be assessed as suitable for the experience and skill of the individual
 - appropriate tack for handling and caring for young horses
 - personal protective equipment (PPE) correctly fitted and applicable for task for individual
- specifications:
 - work instructions and workplace procedures for handling young horses.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

RGRHBR306 Raise young horses

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to raise young horses, including observing foal development, meeting dietary needs, and handling and assisting with educating young horses.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts within horse breeding and horse industry environments.

No licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- ACMEQU202 Handle horses safely.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Monitor young horse development	1.1 Observe and assess young horse health, conformation, development and behaviour 1.2 Detect and report symptoms of ill health, common diseases, undesirable conformation and developmental disorders 1.3 Record young horse health and growth rate according to workplace practices 1.4 Vaccinate young horses under instruction
2. Monitor young horse behaviour	2.1 Observe young horse behaviour 2.2 Detect and report signs of stress to relevant personnel 2.3 Record observed behaviour according to workplace practices 2.4 Provide enrichment activities to young horses
3. Meet the dietary requirements of young horses	3.1 Monitor young horses for signs of adequate nutrition 3.2 Wean foals onto suitable pasture and supplement with feeds 3.3 Meet feed requirements of growing horses 3.4 Ensure feeding plans for young horses are appropriate for purpose
4. Handle and assist with the education of young horses	4.1 Check paddocks and facilities to minimise the risk of injury and blemishes to young horses 4.2 Use safe and ethical horse handling techniques to assist in educating young horses to be led and tied up 4.3 Provide young horses with social support of other young horses and/or nanny mare or gelding 4.4 Train weanlings and yearlings to parade for sale

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Writing	<ul style="list-style-type: none"> Record and report health and development information about young horses accurately in workplace forms
Navigate the world of work	<ul style="list-style-type: none"> Follow regulatory and workplace procedures, including work health and safety, safe horse handling, biosecurity and animal welfare requirements, associated with own role and area of work with young horses
Get the work done	<ul style="list-style-type: none"> Plan and sequence tasks, prioritising activities to achieve work outcomes for raising young horses Use workplace technology, tools and/or systems to complete records and reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RGRHBR306 Raise young horses	ACMHBR311 Raise young horses	<p>Code changed to reflect appropriate industry sector usage</p> <p>One prerequisite removed</p> <p>Minor changes and new element 2 for clarity</p> <p>Removal of points duplicating performance criteria in performance evidence</p>	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

Assessment Requirements for RGRHBR306 Raise young horses

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- safely handled, fed and cared for at least three young horses (covering foals, weanlings and/or yearlings)
- observed each young horse and reported on behaviour and development
- educated three young horses to be led, tied and paraded in hand.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for raising young horses, including:
 - desirable and undesirable conformation and strategies to address undesirable conformation or characteristics
 - developmental disorders of young horses
 - diseases and common illnesses associated with young horses
 - monitoring behaviour
- animal health and welfare practices for young horses:
 - feeding and nutrition requirements for young horses and weaning foals
 - vaccination, worming and rotational or seasonal parasite programs
 - weaning practices
 - enrichment activities
- work health and safety practices applicable to working with young horses
- safe horse handling techniques for educating young horses
- hygiene, infection control and biosecurity practices applicable to working with young horses
- key principles and features of animal welfare legislation.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - various young horses – note that young horses can be less compliant and highly reactive, and should be assessed as suitable for the experience and skill of the individual
 - appropriate tack and equipment used for handling and caring for young horses
 - personal protective equipment (PPE) correctly fitted and applicable for task of individual
- specifications:
 - work instructions and workplace procedures for handling young horses.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

RGRHBR307 Carry out procedures for foaling down mares

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to monitor mares and their newborn at foaling; and refer high risk issues or problems for expert advice.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They complete routine activities and work in a range of known contexts within horse breeding and other horse industry environments.

No licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

Nil

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for foaling	1.1 Calculate and document foaling due dates for all mares confirmed pregnant 1.2 Assess and monitor condition and health status of pregnant mare prior to foaling, including arranging for Caslick to be opened for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>relevant mares</p> <p>1.3 Identify hazards and assess and control risks in assisting with birthing, and follow safe work and safe horse handling practices</p> <p>1.4 Check and prepare birthing equipment, resources and materials, and environment, including personal protective equipment for safety and infection control purposes</p> <p>1.5 Move mares to an area where intervention can be carried out with minimal disruption and where biosecurity and quarantine procedures can be implemented</p> <p>1.6 Prepare a foaling plan according to workplace practices</p>
2. Monitor the foaling process	<p>2.1 Make regular observations to detect the signs of imminent parturition</p> <p>2.2 Prepare a pregnant mare for foaling</p> <p>2.3 Check regularly for signs of problems that may occur during foaling, and seek professional advice if required</p> <p>2.4 Make regular observations of mare and foal during foaling</p> <p>2.5 Ensure the foaling environment, facilities and equipment are maintained in a safe, hygienic and operational state</p> <p>2.6 Update and maintain records of foaling and foaling outcomes</p>
3. Carry out monitoring after foal has been born	<p>3.1 Allow mare to lie and rest for as long as possible</p> <p>3.2 Allow the foal to stand to break the umbilical cord, and treat stump with iodine</p> <p>3.3 Assist with tying the placenta after the mare stands and checking for expulsion</p> <p>3.4 Examine the placenta to ensure no part of it has been retained</p> <p>3.5 Monitor the mare and foal for nursing and general health</p> <p>3.6 Maintain foaling environment, facilities and equipment in a safe, hygienic and operational state, and report or fix faults</p> <p>3.7 Update foaling records accurately according to workplace practices</p>
4. Monitor and report on newborn foals	<p>4.1 Monitor and report on the health of newborn foal</p> <p>4.2 Record the markings and other identifying features of newly born foals</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.3 Report conditions or signs of ill health requiring veterinary assistance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Use basic arithmetic to calculate gestation times and expected birthing dates
Navigate the world of work	<ul style="list-style-type: none"> Comply with workplace procedures, including safe work and horse handling practices, and animal welfare requirements, in own role and work area
Interact with others	<ul style="list-style-type: none"> Work cooperatively with other personnel using clear communication techniques to report foaling activity
Get the work done	<ul style="list-style-type: none"> Plan and sequence multiple tasks, monitoring activity and prioritising tasks to achieve outcomes Use workplace technology, tools and systems to complete records and reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RGRHBR307 Carry out procedures for foaling down mares	ACMHBR312 Carry out procedures for foaling down mares	Code changed to reflect appropriate industry sector usage Minor changes for clarity Removal of points duplicating performance criteria in performance evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

Assessment Requirements for RGRHBR307 Carry out procedures for foaling down mares

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- monitored and prepared at least two mares for foaling
- checked and monitored the condition of each mare post-foaling
- handled one newly born foal safely
- recorded and reported details of mares and foals according to workplace requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for foaling down mares, including:
 - signs of dystocia or malpresentation by timing rate of progress in giving birth and the initial presentation of the foal
 - stages of foaling and common timeframes, including water breaking, expulsion of the foetus, and expulsion of afterbirth
 - scenarios where specialist advice or assistance is needed
 - reasons for undertaking and timing of IgG (immunoglobulin) test on newborn foals
 - common timeframes for foals to stand and drink
 - features of safe and secure post-foaling environment
- safe work practices:
 - safe and ethical horse handling techniques
 - hazard identification and practices for controlling risks in foaling and post-foaling environment
 - personal protective equipment (PPE) for safety and infection control
 - maintaining hygienic and environmentally responsible workplace practices

- workplace recording and reporting requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - various live mares in-foal and newborn foals assessed as suitable for the experience and skill of the individual
 - appropriate tack for horse and activity
 - PPE correctly fitted and applicable to activity for the individual
 - equipment required for foaling down
- specifications:
 - work instructions for carrying out foaling down of mares
 - foaling recording/reporting forms.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

RGRHBR401 Maintain horse stud records

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to assist with the administration and maintenance of horse stud records and horse nominations for sale, bonus schemes or exhibition.

The unit applies to individuals who work under supervision and take responsibility for their own work. They complete routine activities and work in a range of known contexts within horse breeding or other horse industry environments.

No licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

Nil

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Gather stud breeding information	1.1 Interpret and confirm work program with supervisor 1.2 Obtain and collate breeding program documents according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	enterprise practices 1.3 Maintain records accurately in designated workplace system
2. Assist with administering horse sales, bonus schemes or exhibition nominations	2.1 Complete relevant fields in entry forms for specified activity, and forward to supervisor 2.2 Submit nominations for horse sales, bonus schemes or exhibitions according to workplace procedures
3. Assist with administering requirements of external bodies	3.1 Obtain or supply information about horse pedigrees and histories according to supervisor instructions 3.2 Complete relevant sections of horse transfer and registration forms, and forward to supervisor to complete
4. Maintain stud breeding records	4.1 Identify horses, including foals at foot, arriving and departing according to stud procedures, including safe work practices around horses 4.2 Check breeding and operational records, in areas of own responsibility, are accurate and up-to-date

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information needed in application forms Proofread own work to ensure accuracy of information
Writing	<ul style="list-style-type: none"> Enter data and information accurately to complete records and forms for internal and external purposes
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following workplace procedures for own role and area of work
Get the work done	<ul style="list-style-type: none"> Plan, sequence and prioritise activities to achieve work outcomes Use workplace technology, tools and/or systems to complete records and reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RGRHBR401 Maintain horse stud records	ACMHBR309 Follow stud operational procedures	Code and title changed to reflect appropriate industry sector usage and level of responsibility Changes throughout to clarify intent of unit	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

Assessment Requirements for RGRHBR401 Maintain horse stud records

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- assisted with preparing nominations for at least three horses for sale, bonus scheme and/or exhibition
- obtained or prepared information, records and/or registrations for two external bodies as instructed
- maintained accurate routine stud records relevant to own role
- identified and recorded arrival and departure of at least three horses
- entered information and data into workplace systems.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- nature of stud business in which the individual works
- processes and protocols of the stud business in which the individual works
- types of records and record keeping system used by the horse stud
- requirements and procedures laid down by the relevant breed societies or the keeper of the relevant stud book
- legislative requirements and workplace procedures and instructions relevant to role for:
 - animal health and welfare
 - biosecurity
 - workplace health and safety.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- specifications:
 - for stud records
 - application or entry forms for exhibitions, bonus schemes or sales.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

RGRHBR403 Handle and care for breeding stallions

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to handle and care for stallions, particularly throughout the mating process.

The unit applies to individuals who use specialised horse breeding knowledge and skills and have experience working with stallions. They have responsibility for a work activity, area or team, and provide and communicate solutions for a range of predictable and sometimes unpredictable problems in the horse breeding sector.

Licensing, legislative, regulatory or certification requirements apply to this unit. Users are advised to check with the relevant Principal Racing Authority for current licence or registration requirements.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

The prerequisite unit of competency for this unit is:

- ACMEQU202 Handle horses safely.

Note the following chain of prerequisites that also applies to this unit.

Unit of competency	Prerequisite requirement
ACMEQU202 Handle horses safely	ACMEQU205 Apply knowledge of horse behaviour

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to handle stallions	1.1 Identify work hazards, assess risks and implement suitable controls for activities involving stallions 1.2 Confirm the work program with management 1.3 Communicate with other workers to ensure smooth operation of the mating process 1.4 Research known behaviour of individual stallions to be handled, and advise others of any specific risks 1.5 Ensure workers involved with activities have the skills needed to safely handle stallions 1.6 Select, check and maintain tools and equipment, including personal protective equipment (PPE) used for safety and hygiene purposes
2. Care for stallions	2.1 Observe body language and behaviour of stallions before handling, and assess safety risks 2.2 Catch, groom and exercise stallions using safe horse handling techniques to maintain fitness and monitor for condition and general health 2.3 Parade stallion for prospective breeders to select according to workplace practices 2.4 Conduct checks and observe, identify and record changes in stallion behaviour and health 2.5 Comply with prescribed nutritional programs, and complete records 2.6 Monitor work hazards, assess risks and implement suitable controls on an ongoing basis 2.7 Maintain prescribed horse health routines throughout and between breeding seasons
3. Serve mares or dummy	3.1 Select and fit appropriate halter, bit and/or chain to control stallion 3.2 Approach mare to pre-tease 3.3 Identify and implement any additional requirements to ensure safe mating procedure 3.4 Allow stallion to mount mare or dummy safely 3.5 Ensure stallion ejaculates and dismounts mare safely

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.6 Collect semen for sampling or mating according to workplace procedures, and minimising stress to stallion 3.7 Wash stallion down according to workplace hygiene practices
4. Complete hygiene and administration activities	4.1 Clean equipment, collection and mating areas, and store equipment according to workplace procedures 4.2 Dispose of all containers, leftover fluids, waste and debris following environmental and biosecurity procedures 4.3 Complete all records and documentation

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret information in written work program and instructions
Writing	<ul style="list-style-type: none"> Record information relating to mating stallions accurately and legibly
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for following regulatory and workplace procedures, including safe work, safe horse handling practices, animal welfare and biosecurity requirements, in own role and work area
Interact with others	<ul style="list-style-type: none"> Work cooperatively with a range of personnel in different roles using clear communication techniques to carry out mating activities
Get the work done	<ul style="list-style-type: none"> Plan and sequence multiple tasks; monitoring activity and prioritising tasks to achieve outcomes Make decisions about routine mating activities, taking responsibility for actions taken Use workplace technology, tools and/or systems to complete records and reports

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RGRHBR403 Handle and care for breeding stallions	ACMHBR403 Handle and care for stallions	Code and title changed to reflect outcome and appropriate industry sector usage Minor changes and new PC 1.4, 2.3 and 3.3 for clarity Removal of points duplicating performance criteria in performance evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

Assessment Requirements for RGRHBR403 Handle and care for breeding stallions

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- safely handled and attended at least one stallion throughout three mating processes and/or semen collections used for artificial insemination (AI)
- cared for and monitored the stallion for signs of disease, ill health or injury
- maintained workplace records for stallion.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices for handling and caring for stallions, including:
 - stallion behaviour, body language and potential safety risks
 - common equine injury and disease that affect breeding stallions
 - procedures for monitoring stallion health
 - indicators of stallion health and welfare
 - accurate identification and recording in the mating process
 - strategies for managing efficient and well-managed stud activities to maximise conception rates and live foal outcomes
- work health and safety requirements and safe work practices:
 - safe horse handling techniques
 - hazard identification, risk assessment and controls
 - handling frozen semen and working with liquid nitrogen – AI only
 - types and correct fit of personal protective equipment (PPE)
 - duty of care for workers
- key requirements of environmental and biosecurity procedures, including for:

- disposing of wastes
- infection control
- site hygiene
- workplace recording and reporting procedures.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - at least one live stallion – note that stallions can be less compliant and highly reactive, and should be assessed as suitable for the experience and skill of the individual
 - various mares for mating, or dummies
 - equipment and restraints required for mating activities
 - appropriate tack for horse and activity
 - PPE correctly fitted and applicable to activity for the individual
- specifications:
 - work instructions or program for carrying out mating procedures.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

RGRHBR505 Oversee administration of stud records

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to manage and maintain accurate stud breeding and sales records for a property.

The unit applies to individuals who use specialised knowledge and skills, have responsibility for a work activity, area or team, and provide and communicate solutions to a range of predictable and sometimes unpredictable problems in the horse breeding sector.

No licensing or certification requirements apply to this unit at the time of publication.

Work health and safety and animal welfare legislation relevant to interacting with horses applies to workers in this industry. Requirements vary between industry sectors and state/territory jurisdictions. Users are advised to check with the relevant authority for specific requirements.

Pre-requisite Unit

Nil

Unit Sector

Horse Breeding (HBR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Gather and manage information needed for managing stud records	1.1 Confirm and clarify work program and requirements with management 1.2 Identify and source stud documentation required for managing the

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	breeding program 1.3 Collate records of horses arriving and departing the stud, in line with established stud protocols 1.4 Discuss requirements in relation to recordkeeping and horse identification with operational personnel and management
2. Nominate horses for sales, bonus schemes or exhibition	2.1 Obtain, complete and organise submission of appropriate entry forms for specified activities within required timeframes 2.2 Nominate horses manually or electronically through established systems according to organisational procedures 2.3 Organise payment of relevant fees by the due dates
3. Organise external reporting and recording requirements	3.1 Organise the transfer or access of pedigrees and histories with controlling agents 3.2 Supply breeding returns to relevant breed societies and individuals within required timeframes 3.3 Complete and oversee horse transfer and registration forms to the relevant controlling body within required timeframes 3.4 Maintain health and safety and biosecurity records for the stud 3.5 Advise and assist clients with reporting requirements
4. Supervise maintenance of stud records	4.1 Oversee the management of recordkeeping systems within the stud to ensure sound records are readily accessible 4.2 Establish processes to ensure breeding and operational records are accurate and kept up-to-date

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret key information in a range of documentation, including work program, and entry requirements and application processes for exhibiting and selling horses

Skill	Description
Writing	<ul style="list-style-type: none"> Prepare and present data and information clearly in a logical and sequenced structure to enhance readability
Navigate the world of work	<ul style="list-style-type: none"> Take responsibility for maintaining records, following workplace procedures and requirements from external bodies
Interact with others	<ul style="list-style-type: none"> Use communication practices and protocols suitable for liaising with management, operational personnel and external personnel
Get the work done	<ul style="list-style-type: none"> Take responsibility for planning and sequencing tasks and workload; meeting requirements of student stable management and expectations of own role Uses main features and functions of digital tools to complete tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RGRHBR505 Oversee administration of student records	ACMHBR401 Carry out student stable management duties	Code and title changed to reflect appropriate industry sector usage, level of responsibility and intent of unit Removal of points duplicating performance criteria in performance evidence	No equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

Assessment Requirements for RGRHBR505 Overseas administration of stud records

Modification History

Release	Comments
Release 1	This version released with RGR Racing and Breeding Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- managed processes for the sale and/or exhibition of at least three horses
- prepared forms and records for three external organisations
- followed up on processes to ensure the maintenance of accurate and up-to-date stud records.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- operations and business objectives of the workplace stud
- workplace stud program, procedures and instructions
- procedures and requirements for:
 - breed societies
 - keeper of the relevant stud book
 - sales and exhibition bodies
 - breeding bonus schemes
- breeding records and data and reporting requirements, including:
 - service and foaling dates
 - horse and foal identification
 - stallion and mare deaths
 - stillbirths and neonatal deaths
 - abnormalities
- regulatory requirements relevant to role for:
 - animal health and welfare

- work health and safety
- biosecurity
- employment of staff and contractors
- financial reporting.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - application or entry forms for exhibitions or sales
 - financial and other workplace records or systems
- specifications:
 - stud records for selected horses.

Training and assessment strategies must show evidence of the use of guidance provided in the *Companion Volume: User Guide: Safety in Equine Training*.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c4b8489-f7e1-463b-81c8-6ecce6c192a0>

RIICAR301D Rehabilitate exploration site

Modification History

Release	Comment
1	This unit replaces RIICAR301A Rehabilitate exploration site
2	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to rehabilitate exploration sites in Drilling and Metalliferous mining.

This unit is appropriate for those in operational or technical specialist roles

No licensing, legislation or certification requirements apply to this unit at the time of publication.

Unit Sector

Drilling

Metalliferous mining

Elements and Performance Criteria

1. Plan and prepare for site rehabilitation	<p>1.1 Access, interpret and apply exploration site rehabilitation documentation and ensure the work activity is compliant</p> <p>1.2 Access, read, interpret and apply the rehabilitation plan and Environmental Work Procedures (EWP)</p> <p>1.3 Identify, address and report potential hazards and risks</p> <p>1.4 Select and wear personal protective equipment appropriate for the work activity</p> <p>1.5 Obtain map of area and identify location of sites to be rehabilitated</p>
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	1.6 Establish communication system and protocols 1.7 Carry out rehabilitation plant and equipment pre-start checks
2. Rehabilitate exploration site	2.1 Assess and address hydrocarbon spills at drill site 2.2 Ensure saline or contaminated water sumps are completely dry 2.3 Identify and address waste materials according to rehabilitation plan and Environmental Work Procedures (EWP) 2.4 Operate plant and machinery to scarify all cleared areas 2.5 Retrieve cleared vegetation and return to rehabilitated site 2.6 Remove and dispose of all rubbish 2.7 Re-vegetate area, if required 2.8 Record rehabilitation details 2.9 Inspect rehabilitated site for compliance
3. Cap drill holes	3.1 Excavate hole collar to suitable depth 3.2 Pour excess drill chips into drill hole 3.3 Select and insert hole plug firmly into hole opening/collar, and ensure water ingress and future erosion is prevented 3.4 Backfill excavated soil onto plug and compact firmly, allowing for subsidence and run off 3.5 Peg hole site and mark with ID number
4. Rehabilitate access tracks	4.1 Remove all windrows 4.2 Scarify tracks 4.3 Retrieve cleared vegetation and restore to access track 4.4 Block or disguise the entrance to the track

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIICAR301A Rehabilitate exploration site

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIICAR301D Rehabilitate exploration site

Modification History

Release	Comment
1	This unit replaces RIICAR301A Rehabilitate exploration site
2	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient completion of exploration site rehabilitation including:
 - selecting and using the required tools and equipment
 - correctly following rehabilitation procedures
 - identifying and applying hole-capping methods
- demonstrates completion of rehabilitating exploration sites that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - correctly interpreting a rehabilitation plan and Environmental Work Procedures
 - marking the location of sites to be rehabilitated on a map of the area
 - completing plant and equipment pre-start checks
 - identifying, recording and reporting hazards and risks
 - completing rehabilitation operations

Knowledge Evidence

The candidate must demonstrate knowledge in rehabilitating exploration sites through:

- relevant state or territory regulations
- rehabilitation principles and practices
- environmental work procedures

- types and operational characteristics of plant/equipment used in rehabilitation operations
- re-vegetation methods and types
- hole-capping methods

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years
Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors	

	assessor and/or Industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.
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*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIICAR302D Rehabilitate small mine site

Modification History

Release	Comment
1	This unit replaces RIICAR302A Rehabilitate small mine site.
2	Editorial corrections. Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to rehabilitate small mine sites in Extractive and Metalliferous mining.

This unit is appropriate for those working in operational or technical specialist roles.

No licensing, legislation, or certification requirements apply to this unit at the time of publication.

Unit Sector

Extractive

Metalliferous mining

Elements and Performance Criteria

1. Plan and prepare for small mine site rehabilitation	<p>1.1 Access, interpret and apply small mine site rehabilitation documentation and ensure the work activity is compliant</p> <p>1.2 Access, read, interpret and apply the rehabilitation plan and Environmental Work Procedures (EWP)</p> <p>1.3 Identify rehabilitation and vegetation removal requirements</p> <p>1.4 Identify natural water flow/water courses around the site</p>
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	<p>1.5 Ensure removal of all recoverable equipment no longer required</p> <p>1.6 Identify specific equipment, materials and operations required</p> <p>1.7 Identify, address and report hazards</p> <p>1.8 Identify plan to minimise rehabilitation time and residual damage</p>
2. Rehabilitate site	<p>2.1 Apply WHS procedures and information throughout the work</p> <p>2.2 Identify and address site environmental concerns</p> <p>2.3 Select and use correct equipment and materials</p> <p>2.4 Remove abandoned materials and rubbish from site</p> <p>2.5 Restore surface in accordance with rehabilitation plan</p> <p>2.6 Remove residual mullock to designated location</p> <p>2.7 Establish run-off and drainage channels</p> <p>2.8 Maintain communication systems and protocol</p>

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIICAR302A Rehabilitate small mine site

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIICAR302D Rehabilitate small mine site

Modification History

Release	Comment
1	This unit replaces RIICAR302A Rehabilitate small mine site.
2	<p>Editorial corrections.</p> <p>Required frequency and volume of evidence amended in Performance evidence.</p> <p>Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.</p>

Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant documentation, policies and procedures
- implements the requirements, procedures and techniques for safe, effective and efficient small mine site rehabilitation including:
 - selecting and using the required tools and equipment
 - correctly following rehabilitation procedures
- demonstrates completion of rehabilitating small mine sites that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - correctly interpreting a rehabilitation plan and Environmental Work Procedures
 - identifying, recording and reporting hazards and risks
 - completing rehabilitation operations
 - correctly operating and using equipment and materials

Knowledge Evidence

The candidate must demonstrate knowledge in small mine site rehabilitation through:

- identifying non-native plants
- relevant internal and external bodies

- accessing, reading and interpreting written material appropriate for local conditions
- graphic information
- identifying faults
- procedures for the disposal of environmentally sensitive fluids and materials
- planning for rehabilitation
- ground-water procedures and handling

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years

Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors assessor and/or Industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.
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*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIENV401E Supervise dust and noise control

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to supervise dust and noise control in the resources and infrastructure industries.

It applies to those working in supervisory roles. They are generally responsible for the output of others, contribute to the development of technical solutions to non-routine problems and apply management plans to the workplace.

Licensing, legislative and certification requirements may apply to this unit and can vary between states, territories and industry sectors. Users must check requirements with relevant body before applying the unit.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Access and share requirements and procedures	1.1 Obtain, interpret and confirm work requirements 1.2 Access, interpret and apply documentation required to supervise dust and noise control 1.3 Communicate clearly to relevant personnel 1.4 Explain the health and environmental implications of non-conformance to all relevant personnel
2. Plan and implement site requirement	2.1 Plan control measures and work practices with colleagues to ensure compliance 2.2 Implement control measures and work practices to ensure compliance 2.3 Plan and implement dust and noise monitoring according to workplace procedures 2.4 Identify dust and noise control training needs and implement training as required
3. Monitor, adjust and	3.1 Identify, rectify and report actual/potential dust and noise problems

ELEMENT	PERFORMANCE CRITERIA
report	<p>promptly and decisively to ensure compliance</p> <p>3.2 Manage activities so that potential non-compliance issues are minimised</p> <p>3.3 Submit recommendations on improvements in dust and noise control according to workplace procedures</p> <p>3.4 Inform individuals/teams of the results of improvements in dust and noise control</p> <p>3.5 Maintain systems, written records and reporting procedures according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> • Identifies and interprets information from workplace procedures, policies, documentation and systems
Oral communication	<ul style="list-style-type: none"> • Presents information or assistance using industry specific vocabulary • Uses listening and questioning to clarify and confirm understanding
Problem solving	<ul style="list-style-type: none"> • Identifies a range of factors that impact on a decision, including own values and principles, the needs, power, values, beliefs and assumptions of stakeholders

Unit Mapping Information

Supersedes and is equivalent to RIIENV401D Supervise dust and noise control.

Links

Companion Volume implementation guides is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIENV401E Supervise dust and noise control

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- supervise dust and noise control on at least two occasions, including:
 - accessing and interpreting compliance documentation
 - investigating and implementing control measures
 - implementing dust and noise monitoring
 - processing written reports and records
 - identifying recommendations and communicating to the work team.

During the above, the candidate must:

- locate and apply relevant legislation, documentation, policies and procedures and confirm that the work activity is compliant
- implement the requirements, procedures and techniques for supervising dust and noise control
- work effectively with others to supervise dust and noise control in a way that meets all required outcomes
- communicate clearly and concisely with others to receive and clarify work instructions and to determine coordination requirements prior to commencing and during work activities.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key legislation required to supervise dust and noise control
- key policies, procedures and documentation required to supervise dust and noise control
- the organisation and site requirements and procedures
- harmful dust and noise levels

- the health and environmental implication of non-conformance
- potential dust and noise problems
- dust and noise control measures
- principles and techniques for identifying relevant hazards and emergencies
- techniques for coordinating and communicating job activities with others.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - equipment related to supervising dust and noise control
 - relevant documentation
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the Companion Volume Implementation Guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes

Links

Companion Volume implementation guides is found on VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIMEX201E Suppress dust in open-cut environments

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to suppress dust in open-cut environments in coal mining, metalliferous mining and extractive industries. It involves carrying out and adjusting dust suppression activities based on the site's application schedule and prevailing weather conditions.

The unit applies to those working in operational roles. They generally work under supervision to undertake a prescribed range of functions involving known routines and procedures and take some responsibility for the quality of work outcomes.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories and industry sectors. Users must check requirements with relevant body before applying the unit.

Unit Sector

Coal mining

Extractive

Metalliferous mining

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for dust suppression	1.1 Obtain, interpret and confirm work requirements 1.2 Access, interpret and apply dust suppression documentation 1.3 Select and wear personal protective equipment required for work activities 1.4 Identify potential hazards and environmental issues,

ELEMENT	PERFORMANCE CRITERIA
	implement control measures within scope of own role and escalate where required 1.5 Obtain and interpret emergency procedures and identify steps required to respond to emergencies 1.6 Select, access and interpret appropriate dust suppression procedure for the work activity and site conditions 1.7 Carry out pre-start and start-up according to manufacturer specifications and site requirement
2. Apply dust suppressant and rehabilitation measures	2.1 Apply selected dust suppression methods according to site requirements 2.2 Adjust dust suppression activities to the application schedule and weather conditions 2.3 Communicate and coordinate activities with others prior to, during and on completion of the work activity 2.4 Confirm dust creation is minimised 2.5 Apply rehabilitation measures to stabilise dumps and tailings sites
3. Carry out post-operational procedures for suppressing dust	3.1 Carry out park up, shutdown and secure equipment procedures according to manufacturer specifications and site requirements 3.2 Carry out operator maintenance and servicing according to manufacturer specifications and site requirements 3.3 Complete records and reports according to site requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	<ul style="list-style-type: none"> Calculates basic measurements including mass and dimensions
Oral communication	<ul style="list-style-type: none"> Conveys information and requirements clearly and listens actively
Reading	<ul style="list-style-type: none"> Identifies and interprets specific information from workplace documentation
Self-management	<ul style="list-style-type: none"> Monitors and minimises own exposure to worksite risks and hazards during activities

SKILL	DESCRIPTION
Writing	<ul style="list-style-type: none">• Completes records and reports using sector specific vocabulary, grammatical structures and conventions

Unit Mapping Information

Supersedes and is equivalent to RIIMEX201D Suppress dust in open-cut environment.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIMEX201E Suppress dust in open-cut environments

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- suppress dust in open-cut environments on at least two occasions, including:
 - identifying situations requiring dust suppression, including any hazards and environmental considerations
 - applying rehabilitation measures to stabilise dumps and tailings sites.

During the above, the candidate must:

- locate and apply required documentation, policies and procedures
- implement the requirements, procedures and techniques to suppress dust safely, effectively and efficiently in an open-cut environment, including:
 - using vehicle directions and signals
 - applying equipment operating requirements and procedures
 - identifying and addressing hazards
 - interpreting plans, reports, maps and specifications
 - working while wearing protective equipment
- work effectively with others to undertake and complete dust suppression in an open-cut environment that meets the required outcomes, including:
 - communicating with others to receive and clarify work instructions
 - completing written and verbal records and reports
 - applying decision making and troubleshooting techniques.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- policies, procedures and documentation required to suppress dust in open-cut environments, including those relating to:
 - basic geological and technical data relating to rock formations
 - environmental protection
 - fire, accident and emergency
 - personal protective equipment
 - site maintenance records and reporting requirements
 - site operational, quality and communication requirements
 - site product characteristics
 - work health and safety
- types, characteristics, technical capabilities and limitations of plant and equipment required to suppress dust in open-cut environments, including:
 - pre-start, start-up and operating techniques
 - isolation and shutdown procedures
- principles, methods and techniques for suppressing dust in open-cut environments, including:
 - interpreting plans, reports, maps and specifications
 - interpreting required data
 - applying rehabilitation measures to stabilise dumps and tailing sites
 - using vehicle directions and signals.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - an environment where dust prevention is required
 - dust prevention equipment
 - simulated or actual documentation of work requirements and reports
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the RII implementation guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

***While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIMPO206D Conduct bulk water truck operations

Modification History

Release	Comments
1	This unit replaces RIIMPO206B Conduct bulk water truck operations. Performance Criteria amended to make requirements more explicit; Manoeuvring, Driving and Parking Up added; Operator Maintenance element added.
2	Modification History added.
3	Editorial corrections; removed repetition from Performance Criteria; amend reference to Licensing requirements in Unit Application.
4	Performance Criteria 3.6 amended for clarity. Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.
5	Performance Criteria 3.6 and Performance Evidence grammatical corrections. No new content.

Application

This unit describes a participant's skills and knowledge required to conduct bulk water truck operations in the Coal and Metalliferous mining and Extractive.

This unit is appropriate for those working in operational roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors. Relevant information must be sourced prior to application of the unit.

Unit Sector

Extractive

Coal mining

Metalliferous mining

Elements and Performance Criteria

<p>1. Plan and prepare for bulk water truck operations</p>	<p>1.1 Access, interpret and apply bulk water truck operations documentation and ensure the work activity is compliant</p> <p>1.2 Obtain, read, interpret, clarify and confirm work requirements</p> <p>1.3 Identify and address potential risks, hazards and environmental issues and implement control measures</p> <p>1.4 Select and wear personal protective equipment appropriate for work activities</p> <p>1.5 Obtain and interpret emergency procedures, and be prepared for fire/accident/emergency</p>
<p>2. Operate truck</p>	<p>2.1 Carry out pre-start, start-up, park-up, shutdown, and secure equipment procedures</p> <p>2.2 Coordinate activities with others at the site prior to commencement of, and during, the work activity</p> <p>2.3 Select and modify the operating technique to appropriately meet changing work conditions</p> <p>2.4 Drive truck within recommended speed, engine capability and limitations</p> <p>2.5 Act on or report monitoring systems and alarms</p> <p>2.6 Continually monitor hazards and risks, and ensure safety of self, other personnel, plant and equipment</p>
<p>3. Load, haul and distribute water</p>	<p>3.1 Position water cart at load and discharge/distribution points</p> <p>3.2 Load water cart to within the authorised carrying capacity and to suit the site and task conditions</p> <p>3.3 Carry out water haulage operations efficiently, safely and smoothly avoiding surge and sway</p> <p>3.4 Discharge/distribute water efficiently in accordance with requirements and procedures</p> <p>3.5 Monitor and maintain discharge and distribution systems throughout the operations</p> <p>3.6 Complete the work plan within the operating capacity of the equipment</p>
<p>4. Carry out machine operator maintenance</p>	<p>4.1 Prepare machine for maintenance</p> <p>4.2 Conduct inspection and fault finding</p> <p>4.3 Carry out scheduled maintenance tasks</p> <p>4.4 Return machine to service</p>

	4.5	Process written maintenance records
5. Conduct housekeeping activities	5.1	Clear work area and dispose of or recycle materials
	5.2	Manage/report hazards, and maintain a safe working environment
	5.3	Process records

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

No equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIMPO206D Conduct bulk water truck operations

Modification History

Release	Comments
1	This unit replaces RIIMPO206B Conduct bulk water truck operations. Performance Criteria amended to make requirements more explicit; Manoeuvring, Driving and Parking Up added; Operator Maintenance element added.
2	Modification History added.
3	Editorial corrections; removed repetition from Performance Criteria; amend reference to Licensing requirements in Unit Application.
4	Performance Criteria 3.6 amended for clarity. Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.
5	Performance Criteria 3.6 and Performance Evidence grammatical corrections. No new content.

Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient completion of bulk water truck operations including:
 - conducting prestart checks prior to commencing operations and shutdown procedures on completion of operations
 - carrying out vehicle refuelling requirements and procedures
 - driving and operating the vehicles and equipment to site conditions and requirements

- applying safe work practices and identifying and reporting all potential hazards, risks and environmental issues
- applying problem solving and troubleshooting techniques
- works effectively with others to undertake and complete bulk water truck operations that meets all of the required outcomes including:
 - using a range of communications techniques and equipment to convey information to others
 - complying with written and verbal reporting requirements and procedures
- demonstrates completion of conducting bulk water truck operations that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - correctly positioning water cart at load and discharge/distribution points and load water cart to capacity
 - distributing water efficiently across haul roads
 - adjusting driving and operating techniques to suit the work environment and ground conditions
 - completing a minimum of 500 metres bulk water truck operations

Knowledge Evidence

The candidate must demonstrate knowledge of the following when conducting bulk water truck operations:

- identifying equipment processes, technical capability and limitations
- identifying, interpreting and using geological and technical data (basic)
- using mine operational systems
- being prepared for fire/accident/emergency
- identifying signs of operator fatigue and how it should be managed
- applying chemical and fuel safety measures
- applying operational, maintenance and basic diagnostics
- completing housekeeping activities

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,

- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years
Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors assessor and/or Industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.	

*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIMPO304E Conduct wheel loader operations

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.

Application

This unit describes the skills and knowledge required to operate and shift loads using wheel loader operations.

This unit applies to those working in site-based roles

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors, and must be sourced from state jurisdictions prior to applying this unit.

Unit Sector

Coal mining

Extractive

Metalliferous mining

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for wheel loader operations	1.1 Access, interpret and apply wheel loader operations documentation 1.2 Obtain, interpret, clarify and confirm work requirements 1.3 Identify hazards and environmental issues, assess the risks and implement control measures in line with workplace policies 1.4 Select and wear personal protective equipment required for work activities 1.5 Access, interpret and apply geological and survey data required to

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>complete the work activity</p> <p>1.6 Inspect and prepare work area in coordination with others in line with workplace procedures</p> <p>1.7 Select required loader equipment and confirm suitability for work activities</p> <p>1.8 Obtain and interpret emergency procedures for loaders, and be prepared for fires, accidents and emergencies</p> <p>1.9 Coordinate and communicate planned activities with others at the site prior to commencement of work activity</p>
2. Operate the wheel loader in line with established requirements to complete work activity	<p>2.1 Carry out prestart and start-up checks in line with workplace procedures</p> <p>2.2 Identify faults or defects and rectify or report within scope of own responsibility and according to workplace procedures</p> <p>2.3 Drive and operate loader using techniques suited to equipment capabilities, site and work conditions, and according to workplace environments</p> <p>2.4 Monitor and manage equipment performance using indicators and alarms in line with manufacturers' specifications</p> <p>2.5 Monitor hazards and risks during operations, and ensure safety of self, other personnel, plant and equipment</p> <p>2.6 Park up, shut down, secure and carry out post operational inspection of equipment in line with workplace procedures</p>
3. Conduct housekeeping activities	<p>3.1 Clear work area and dispose or recycle materials according to workplace procedures</p> <p>3.2 Manage and/or report hazards, and maintain a safe working environment</p> <p>3.3 Complete and file or distribute documentation in a manner that complies with workplace practices</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Identifies and interprets information from workplace procedures, documentation, legislation and regulations
Numeracy	<ul style="list-style-type: none"> Uses equipment operating capacity schedule to confirm safe weight load limits

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RIIMPO304E Conduct wheel loader operations (Release 1)	RIIMPO304D Conduct wheel loader operations (Release 5)	Minor updates to reflect changes to operator maintenance activities	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIMPO304E Conduct wheel loader operations

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements and performance criteria of this unit.

The candidate must demonstrate completion of wheel loader operations that safely, effectively and efficiently follows workplace procedures to carry out work activity on at least two occasions, and include:

- conducting prestart checks prior to commencing operations and shutdown procedures on completion of operations
- driving and operating the wheel loader for operations and adjusting techniques to suit site conditions
- shifting loads, carries the load as close to the ground as possible and deposits load to the correct location
- parking and securing the equipment

In the course of the above work the candidate must also:

- locate and apply relevant documentation, policies and procedures
- select and wear personal protective equipment required for work activities
- carry out vehicle refuelling requirements and procedures where applicable
- apply safe work practices, identifying and reporting all potential hazards, risks and environmental issues
- apply problem solving and troubleshooting techniques
- conduct loading and unloading
- manage changes in the loads centre of gravity during transportation
- select and use the required tools and equipment according to original equipment manufacturer manual
- monitor and manage equipment performance using indicators and alarms
- identify common equipment faults
- inspect and prepare work area

- use a range of communication techniques and equipment essential to the safe completion of work activity, including hand, audible and other signals
- meet written and verbal reporting requirements and procedures associated with equipment operations
-

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

Key policies and procedures, legislation and established requirements for wheel loader operation without attachments, including those relating to:

- work health and safety, including signs of operator fatigue and how it should be managed identifying
- operational, maintenance and basic diagnostics
- housekeeping activities
- personal protective equipment
- maintenance and basic diagnostics
- fire, accident and emergency

Key factors affecting work activities described in performance evidence above, including:

- equipment processes, technical capability and limitations
- geological and technical data
- loading techniques
- plans, reports, maps, specifications

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - wheel loader
 - materials to be shifted
 - personal protective equipment
- be conducted in a safe environment; and,
- be assessed in context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 Year
	2	2 Years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 Years

Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.
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*Guidance on simulated environments has been stipulated in the RII implementation guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a Unit of Competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIMPO318F Conduct civil construction skid steer loader operations

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.
Release 2	Editorial and other amendments made to clarify requirements in Application and Performance Criteria 5.3.

Application

This unit describes the skills and knowledge required operate a skid steer loader to load, haul and distribute materials.

This unit applies to those working in site based roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors, and must be sourced from state jurisdictions prior to applying this unit.

This unit alone does not provide sufficient skill to independently load and unload equipment. To perform this activity safely, personnel must either complete or be assisting someone who has completed RIIHAN308F Load and unload plant or equivalent.

Unit Sector

Civil infrastructure

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for skid steer loader operations	1.1 Access, interpret and apply skid steer loader operations documentation 1.2 Obtain, interpret, clarify and confirm work requirements 1.3 Identify hazards and environmental issues, assess the risks and

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>implement control measures in line with workplace policies</p> <p>1.4 Select and wear personal protective equipment required for work activities</p> <p>1.5 Obtain, identify and implement traffic signage requirements according to standard operating procedures and safe work practices</p> <p>1.6 Select required skid steer equipment and confirm suitability for work activities</p> <p>1.7 Obtain and interpret emergency procedures for skid steers, and be prepared for fires, accidents and emergencies</p> <p>1.8 Coordinate and communicate planned activities with others at the site prior to commencement of work activity</p>
2. Operate skid steer loader in line with established requirements	<p>2.1 Carry out prestart and start-up checks in line with workplace procedures</p> <p>2.2 Identify faults or defects and rectify or report within scope of own responsibility and according to workplace procedures</p> <p>2.3 Drive and operate loader using techniques suited to equipment capabilities and site work conditions, and according to workplace procedures</p> <p>2.4 Monitor hazards and risks during operations, and ensure safety of self, other personnel, plant and equipment</p> <p>2.5 Monitor and manage equipment performance using indicators and alarms</p>
3. Load, carry and place materials to complete work activity	<p>3.1 Establish weight of load and ensure it is within safe operational limits of the machine</p> <p>3.2 Position machinery to ensure stable and effective shift of materials according to work requirements</p> <p>3.3 Shift materials safely and effectively, using hand audible and communication signals, in line with workplace procedures</p> <p>3.4 Park up, shut down, secure and carry out post operational inspection of equipment in line with workplace procedures</p>
4. Select, remove, fit and use attachments for a skid steer loader	<p>4.1 Select appropriate attachment and required equipment for the task, and in accordance with safe working load requirements</p> <p>4.2 Fit attachment in line with workplace procedures</p> <p>4.3 Test attachment and ensure correct fitting and operation</p>

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.4 Use attachment within design limits and in accordance with workplace procedures</p> <p>4.5 Remove, clean and store attachments in designated location in line with workplace procedures</p>
5. Prepare to relocate the skid steer loader	<p>5.1 Prepare for relocation of skid steer loader</p> <p>5.2 Move skid steer loader safely within and/or between work areas, observing relevant codes and traffic management requirements</p> <p>5.3 Assist loading and unloading machine from float/trailer as required by safe work practices</p>
6. Conduct housekeeping activities	<p>6.1 Clear work area and dispose of or recycle materials according to workplace procedures</p> <p>6.2 Manage and/or report hazards to maintain a safe working environment</p> <p>6.3 Complete and file or distribute documentation in a manner that complies with workplace practices</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Identifies and interprets information from workplace procedures, documentation, legislation and regulations
Numeracy	<ul style="list-style-type: none"> Uses equipment operating capacity schedule to confirm safe weight load limits

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RIIMPO318F Conduct civil construction skid steer loader operations (Release 1)	RIIMPO318E Conduct civil construction skid steer loader operations (Release 1)	Minor updates to reflect changes to operator maintenance and relocation activities	Equivalent unit

Links

Companion Volume Implementation Guides are available from VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIMPO318F Conduct civil construction skid steer loader operations

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.
Release 2	Editorial and other amendments made to clarify requirements in Application and Performance Criteria 5.3.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements and performance criteria of this unit.

The candidate must demonstrate completion of skid steer loader operations that safely, effectively and efficiently follows workplace procedures to carry out work activity on at least two occasions, and include:

- conducting prestart checks prior to commencing operations and shutdown procedures on completion of operations
- driving and operating the equipment to site conditions
- completion of operations to specification using at least two different material types (i.e. one different material per occasion) including:
 - stripping/spreading materials
 - backfilling
 - excavations
 - mixing materials
- selecting, fitting, testing, using and removing attachments on at least two occasions (i.e. one attachment per occasion), the attachment must be certified and approved in line with workplace procedures and could include, but not limited to, the following:
 - multipurpose bucket
 - forks
 - dozer blade
 - backhoe
 - auger
 - chain digger
 - power broom
 - profiler

- tiller/mixer
- rotary hoe
- hammer
- asphalt cutter/saw
- concrete cutter/saw
- rake
- assisting with loading and unloading skid steer loader from float/trailer
- safely parking and securing equipment

In the course of the above the candidate must also:

- locate and apply relevant documentation, policies and procedures
- select and wear personal protective equipment required for work activities
- apply safe work practices, identifying and reporting all potential hazards, risks and environmental issues
- apply problem solving and troubleshooting techniques when operating equipment
- monitor and manage equipment performance using indicators and alarms
- identify common equipment faults
- apply levelling techniques
- establish weight of load
- manage changes in the loads centre of gravity during transportation
- select and use the required tools and equipment
- apply methods of changing machine attachments
- use a range of communication techniques and equipment essential to the safe completion of work activity, including hand, audible and other signals
- meet written and verbal reporting requirements and procedures associated with equipment operations
- organise work activities to meet all task requirements
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Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

Key policies and procedures, legislation and established requirements for skid steer loader operations, including those relating to:

- isolation requirements for skid steer loader
- fires, accidents and emergencies
- work health and safety, including signs of operator fatigue and how it should be managed
- traffic control responsibilities and authorities
- project quality requirements
- chain of responsibility for loading and unloading of equipment
- operational, maintenance and basic diagnostics
- personal protective equipment

- recyclable materials
- housekeeping activities

Key factors affecting work activities described in performance evidence above, including:

- equipment processes, technical capability and limitations
- drawings and sketches
- ground conditions
- materials characteristics, including density and viscosity

Key features associated with civil construction works, including:

- civil construction terminology
- basic principles of material technology and material compaction for civil works
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - a skid steer loader
 - materials to be shifted
 - personal protective equipment
- be conducted in a safe environment; and,
- be assessed in context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment

- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 Year
	2	2 Years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 Years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors, assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and, where no industry standard is specified, should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the RII implementation guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a Unit of Competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIMPO319E Conduct backhoe/loader operations

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.
Release 2	This version was released with RII Resources and Infrastructure Industry Training Package Version 7.1. Editorial amendments to Performance Evidence to clarify task requirements.

Application

This unit describes the skills and knowledge required to operate a backhoe/loader to load, distribute and place materials.

This unit applies to those working in site based roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors, and must be sourced from state jurisdictions prior to applying this unit.

Unit Sector

Civil infrastructure

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for backhoe/loader operations	1.1 Access, interpret and apply backhoe/loader operations documentation 1.2 Obtain, interpret, clarify and confirm work instructions 1.3 Identify hazards and environmental issues, assess the risks and implement control measures in line with workplace policies 1.4 Select and wear personal protective equipment required for work

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>activities</p> <p>1.5 Identify, obtain and implement signage traffic management requirements according to standard operating procedures and safe work practices</p> <p>1.6 Select required backhoe/loader equipment and confirm suitability for work activities</p> <p>1.7 Obtain and interpret emergency procedures for backhoe/loaders, and be prepared for fires, accidents and emergencies</p> <p>1.8 Coordinate and communicate planned activities with others at the site prior to commencement of work activity</p>
2. Operate backhoe/loader in line with established requirements	<p>2.1 Carry out prestart and start-up checks in line with workplace procedures</p> <p>2.2 Identify faults or defects and rectify or report within scope of own responsibility and according to workplace procedures</p> <p>2.3 Drive and operate machine using techniques suited to equipment capabilities, site and work conditions, and according to workplace procedures</p> <p>2.4 Monitor hazards and risks during operations, and ensure safety of self, other personnel, plant and equipment</p> <p>2.5 Monitor and manage equipment performance using indicators and alarms</p>
3. Load, carry and place materials to complete work activity	<p>3.1 Establish weight of load and ensure it is within safe operational limits of the machine</p> <p>3.2 Use lifting gear within safe working load requirements and in line with workplace procedures</p> <p>3.3 Position and locate machinery to ensure stable and effective shift materials according to work requirements</p> <p>3.4 Shift materials safely and effectively, using hand, audible and communication signal, in line with workplace procedures</p> <p>3.5 Park up, shut down, secure and carry out post operational inspection of equipment in line with workplace procedures</p>
4. Select, remove, fit and attachments for a backhoe/loader	<p>4.1 Select attachment for the task and fit attachment in line with workplace procedures</p> <p>4.2 Test attachment and ensure correct fitting and operation</p>

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.3 Use attachment within design limits and in accordance with workplace procedures 4.4 Remove, clean and store attachments in designated location in line with workplace procedures
5. Relocate the backhoe/ loader	5.1 Prepare backhoe/loader for relocation 5.2 Move backhoe/loader safely between worksites, observing relevant codes and traffic management requirements
6. Conduct housekeeping activities	6.1 Clear work area and dispose of or recycle materials according to workplace procedures 6.2 Manage and/or report hazards to maintain a safe working environment 6.3 Complete and file or distribute documentation in a manner that complies with workplace practices

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Identifies and interprets information from workplace procedures, documentation, legislation and regulations
Numeracy	<ul style="list-style-type: none"> Uses equipment operating capacity schedule to confirm safe weight load limits

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RIIMPO319E Conduct backhoe/loader operations (Release	RIIMPO319D Conduct backhoe/loader operations (Release 3)	Minor updates to reflect changes to operator maintenance activities and	Equivalent unit

1)		assessment for attachments	
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Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIMPO319E Conduct backhoe/loader operations

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.
Release 2	This version was released with RII Resources and Infrastructure Industry Training Package Version 7.1. Editorial amendments to Performance Evidence to clarify task requirements.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements and performance criteria of this unit.

The candidate must demonstrate completion of loader/backhoe operations that safely, effectively and efficiently follows workplace procedures to carry out work activity on at least two occasions, and include:

- conducting prestart checks prior to commencing operations and shutdown procedures on completion of operations
- driving and operating the equipment, and adjusting techniques to suit site conditions
- completion of operations to specification using at least two different material types (i.e. one different material type per occasion) including:
 - mixing materials
 - stripping/spreading materials
 - trench excavation
 - backfilling
 - lifting and carry materials
 - loading dump trucks, wagons, hoppers or chutes
 - cutting/boxing
- selecting, fitting, testing, using and removing at least two attachments (i.e. one attachment per occasion), which must be certified and approved in line with workplace procedures and could include, but are not limited to, the following:
 - extending devices
 - tilt bucket
 - buckets

- compaction wheel
- ripper
- plate compactor
- rock breaker
- auger
- broom
- mower/slasher
- forklift
- 4 in 1 bucket and free/rock grab
- parking and securing of equipment

In the course of the above work the candidate must also:

- locate and apply relevant documentation, policies and procedures
- select and wear personal protective equipment required for work activities
- carry out vehicle refuelling requirements and procedures where applicable
- apply safe work practices, identifying and reporting all potential hazards, risks and environmental issues
- apply problem solving and troubleshooting techniques when operating equipment
- monitor and manage equipment performance using indicators and alarms
- identify common equipment faults
- apply levelling techniques
- establish weight of load
- manage changes in the loads centre of gravity during transportation
- select and use the required tools and equipment
- work safely around other machines and personnel
- apply methods of changing machine attachments
- use a range of communication techniques and equipment essential to the safe completion of work activity, including hand, audible and other signals
- meet written and verbal reporting requirements and procedures associated with equipment operations
- organise work activities to meet all task requirements
-

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

Key policies and procedures, legislation and established requirements for backhoe/loader operations, including those relating to:

- isolation requirements
- fires, accidents and emergencies
- work health and safety, including signs of operator fatigue and how it should be managed
- site isolation and traffic control responsibilities and authorities

- project quality requirements
- operational, maintenance and basic diagnostics
- personal protective equipment
- recyclable materials
- housekeeping activities

Key factors affecting work activities described in performance evidence above, including:

- equipment processes, technical capability and limitations
- drawings and sketches
- ground conditions
- materials characteristics, including density and viscosity

Key features associated with civil construction works, including:

- civil construction terminology
- basic principles of material technology and material compaction for civil works
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - backhoe/loader
 - personal protective equipment
- be conducted in a safe environment; and,
- be assessed in context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements.

This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided

- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 Year
	2	2 Years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 Years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the RII implementation guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a Unit of Competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

Links

Companion Volume Implementation Guides are available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIMPO324F Conduct civil construction grader operations

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.
Release 2	Editorial corrections.
Release 3	Minor change to performance evidence.
Release 4	Editorial and other amendments made to clarify requirements in Application and Performance Criteria 4.3.

Application

This unit describes the skills and knowledge required to conduct grader operations.

This unit applies to those working in site based roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors, and must be sourced from state jurisdictions prior to applying this unit.

This unit alone does not provide sufficient skill to independently load and unload equipment. To perform this activity safely, personnel must either complete or be assisting someone who has completed RIIHAN308F Load and unload plant or equivalent.

Unit Sector

Civil infrastructure

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for grader operations	1.1 Access, interpret and apply grader operations documentation 1.2 Obtain, interpret, clarify and confirm work instructions 1.3 Identify hazards and environmental issues, assess the risks and

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>implement control measures in line with workplace policies</p> <p>1.4 Select and wear personal protective equipment required for work activities</p> <p>1.5 Identify, obtain and implement traffic management signage requirements according to standard operating procedures and safe work practices</p> <p>1.6 Select required grader equipment and/or attachments and confirm suitability for work activities</p> <p>1.7 Obtain and interpret emergency procedures for graders, and be prepared for fires, accidents and emergencies</p> <p>1.8 Coordinate and communicate planned activities with others at the site prior to commencement of work activity</p>
2. Operate grader in line with established requirements to complete work activity	<p>2.1 Carry out prestart and start-up checks in line with workplace procedures</p> <p>2.2 Identify faults or defects and rectify or report within scope of own responsibility and according to workplace procedures</p> <p>2.3 Drive and operate grader using techniques suited to equipment capabilities, site and work conditions, and according to workplace procedures</p> <p>2.4 Identify and apply operating techniques for grader to achieve optimum output within specified tolerances</p> <p>2.5 Perform work activity within the operating capacity of the equipment in accordance with manufacturers' specifications</p> <p>2.6 Monitor hazards and risks during operations, and ensure safety of self, other personnel, plant and equipment</p> <p>2.7 Monitor and manage equipment performance using indicators and alarms</p> <p>2.8 Park up, shut down, secure and carry out post operational inspection of equipment in line with workplace procedures</p>
3. Select, remove, fit and use attachments for grader	<p>3.1 Select attachment for the task</p> <p>3.2 Fit attachment in line with workplace procedures</p> <p>3.3 Test attachment and ensure correct fitting and operation</p> <p>3.4 Use attachment within design limits and in accordance with workplace procedures</p> <p>3.5 Remove, clean and store attachments in designated location in line</p>

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	with workplace procedures
4. Prepare to relocate the grader	4.1 Prepare grader for relocation 4.2 Move grader safely within and between work areas, observing relevant codes and traffic management requirements 4.3 Assist loading and unloading machine from float/trailer as required by workplace procedures
5. Conduct housekeeping activities	5.1 Clear work area and dispose of or recycle materials according to workplace procedures 5.2 Manage and/or report hazards to maintain a safe working environment 5.3 Complete and file or distribute documentation in a manner that complies with workplace practices

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Identifies and interprets information from workplace procedures, documentation, legislation and regulations
Numeracy	<ul style="list-style-type: none"> Uses equipment operating capacity schedule to confirm safe weight load limits

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RIIMPO324F Conduct civil construction grader operations (Release 2)	RIIMPO324F Conduct civil construction grader operations (Release 1)	Editorial corrections.	Equivalent unit

Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIMPO324F Conduct civil construction grader operations

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.
Release 2	Editorial corrections.
Release 3	Minor change to performance evidence.
Release 4	Editorial and other amendments made to clarify requirements in Application and Performance Criteria 4.3.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements and performance criteria of this unit.

The candidate must demonstrate completion of grader operations that safely, effectively and efficiently follows workplace procedures to meet carry out work activity on at least two occasions, and include:

- conducting prestart checks prior to commencing operations and shutdown procedures on completion of operations
- driving and operating the equipment to site conditions
- completion of operations to specification using at least two different material types including:
 - cutting and maintaining drains
 - forming/upgrading/maintaining roads
 - mixing/ spreading materials
 - scarifying and ripping
 - cutting and trimming of batters
 - trimming of road sub-grades and pavements
 - site clean-up
 - form and carry a windrow
- selecting, fitting, testing, using and removing at least two attachments, the attachment must be certified and approved in line with workplace procedures
- assisting with loading and unloading unit plant type from float/trailer
- parking and securing of equipment.

In the course of the above the candidate must also:

- locate and apply relevant documentation, policies and procedures
- select and wear personal protective equipment required for work activities
- carry out vehicle refuelling requirements and procedures where applicable
- apply safe work practices, identifying and reporting all potential hazards, risks and environmental issues
- apply problem solving and troubleshooting techniques when operating equipment
- monitor and manage equipment performance using indicators and alarms
- identify common equipment faults
- establish weight of load
- apply levelling techniques
- apply cut and fill techniques
- conduct towing of equipment/plant where required
- select and use the required tools and equipment
- apply methods of changing machine attachments
- use a range of communication techniques and equipment essential to the safe completion of work activity, including hand, audible and other signals
- meet written and verbal reporting requirements and procedures associated with equipment operations
- organise work activities to meet all task requirements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

Key policies and procedures, legislation and established requirements for grader operations, including those relating to:

- isolation requirements
- fires, accidents and emergencies
- work health and safety, including signs of operator fatigue and how it should be managed
- site isolation and traffic control responsibilities and authorities
- project quality requirements
- chain of responsibility for loading and unloading of equipment
- operational, maintenance and basic diagnostics
- personal protective equipment
- recyclable materials
- housekeeping activities
- machine guidance systems and laser levelling equipment

Key factors affecting work activities described in performance evidence above, including:

- equipment processes, technical capability and limitations
- drawings and sketches
- ground conditions

- materials characteristics, including density and viscosity

Key features associated with civil construction works, including:

- civil construction terminology
- basic principles of material technology and material compaction for civil works
- basic earthworks calculations
- civil construction activity sequences of road construction, earthworks and drainage.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - unit plant type
 - materials to be shifted
 - personal protective equipment
- be conducted in a safe environment; and,
- be assessed in context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor Requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements.

This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces

- demonstrating the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 Year
	2	2 Years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 Years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors, assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and, where no industry standard is specified, should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the RII implementation guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a Unit of Competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIMPO335E Conduct skid steer loader operations without attachments

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.
Release 2	Editorial and other amendments made to clarify requirements in Application and Performance Criteria 4.3.

Application

This unit describes the skills and knowledge required to operate and shift materials using skid steer loaders with the standard bucket attachment.

This unit applies to those working in operational roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors, and must be sourced from state jurisdictions prior to applying this unit.

This unit alone does not provide sufficient skill to independently load and unload equipment. To perform this activity safely, personnel must either complete or be assisting someone who has completed RIIHAN308F Load and unload plant or equivalent.

Unit Sector

Coal mining

Extractive

Metalliferous mining

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for skid steer loader	1.1 Access, interpret and apply skid steer loader operations documentation

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
operations	<p>1.2 Obtain, interpret, clarify and confirm work requirements</p> <p>1.3 Identify hazards and environmental issues, assess the risk and implement control measures in line with workplace policies</p> <p>1.4 Select and wear personal protective equipment required for work activities</p> <p>1.5 Obtain, identify and implement traffic signage requirements according to standard operating procedures and safe work practices</p> <p>1.6 Select required skid steer loader equipment and confirm suitability for work activities</p> <p>1.7 Obtain and interpret emergency procedures for skid steer loader, and be prepared for fires, accidents and emergencies</p> <p>1.8 Coordinate and communicate planned activities with others at the site prior to commencement of work activity</p>
2. Operate skid steer loader in line with established requirements	<p>2.1 Carry out prestart and start-up checks in line with workplace procedures</p> <p>2.2 Identify faults or defects and rectify or report within scope of own responsibility and according to workplace procedures</p> <p>2.3 Drive and operate skid steer loader using techniques suited to equipment capabilities, site and work conditions, and according to workplace procedures</p> <p>2.4 Monitor hazards and risks during operations, and ensure safety of self, other personnel, plant and equipment</p> <p>2.5 Monitor and manage equipment performance using indicators and alarms</p>
3. Load, carry and place materials to complete work activity	<p>3.1 Establish weight of load and ensure it is within safe operational limits of the machine</p> <p>3.2 Position machinery to ensure stable and effective shift of materials according to work requirements</p> <p>3.3 Shift materials safely and effectively, using hand, audible and communication signals, in line with workplace procedures</p> <p>3.4 Park up, shut down, secure and carry out post operational inspection of equipment in line with workplace procedures</p>
4. Relocate the skid steer loader	4.1 Prepare skid steer loader for relocation according to workplace procedures

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>4.2 Move skid steer loader safely between worksites, observing relevant codes and traffic management requirements</p> <p>4.3 Assist loading and unloading machine from float/trailer as required by workplace procedures</p>
5. Conduct housekeeping activities	<p>5.1 Clear work area and dispose of or recycle materials according to workplace procedures</p> <p>5.2 Manage and/or report hazards to maintain a safe working environment</p> <p>5.3 Complete and file or distribute documentation in a manner that complies with workplace practices</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skill	Description
Reading	<ul style="list-style-type: none"> Identifies and interprets information from workplace procedures, documentation, legislation and regulations
Numeracy	<ul style="list-style-type: none"> Uses equipment operating capacity schedule to confirm safe weight load limits

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RIIMPO335E Conduct skid steer loader operations without attachments (Release 1)	RIIMPO335D Conduct skid steer loader operations without attachments (Release 3)	Minor updates to reflect changes to operator maintenance and relocation activities	Equivalent unit

Links

Companion Volume Implementation Guides are available from VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIMPO335E Conduct skid steer loader operations without attachments

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.
Release 2	Editorial and other amendments made to clarify requirements in Application and Performance Criteria 4.3.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements and performance criteria of this unit.

The candidate must demonstrate completion of skid steer loader operations without attachments that safely, effectively and efficiently follows workplace procedures to carry out work activity on at least two occasions, and include:

- conducting prestart checks prior to commencing operations and shutdown procedures on completion of operations
- driving and operating skid steer loader, and adjusting techniques to suit site conditions
- shifting loads to the correct location, carrying them as close to the ground as possible
- performing at least one of the following skid steer loading tasks on each occasion (i.e. two different tasks in total):
 - stripping and spreading materials
 - backfilling
 - loading vehicles
 - excavations
 - mixing materials
 - site clean up
 - lifting and carrying materials
 - using communication methods to confirm activity, direction of travel, and process to safely move and transport load
 - shifting and placing materials
- assisting with loading and unloading skid steer loader from float/trailer
- park up, shut down and prepare machine for maintenance

In the course of the above work the candidate must also:

- locate and apply relevant documentation, policies and procedures
- select and wear personal protective equipment required for work activities
- carry out vehicle refuelling requirements and procedures where applicable
- apply safe work practices and identify and report potential hazards and environmental issues, and assess risks
- monitor and manage equipment performance using indicators and alarms
- identify common equipment faults
- apply problem solving and troubleshooting techniques when operating equipment
- select and use required tools and equipment
- inspect and prepare work area
- manage changes in the loads centre of gravity during transportation
- use a range of communication techniques and equipment essential to the safe completion of work instruction, including hand, audible and other signals
- meet written and verbal reporting requirements and procedures associated with skid steer loader operations

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

Key policies and procedures, legislation and established requirements for skid steer loader operation without attachments, including those relating to:

- materials handling using safety data sheets
- environmental protection
- fire, accident and emergency
- work health and safety, including signs of operator fatigue and how it should be managed
- site isolation and traffic control responsibilities and authorities
- project quality requirements
- maintenance and basic diagnostics
- housekeeping activities
- personal protective equipment
- chain of responsibility for loading and unloading of equipment
- machine guidance systems

Key factors affecting work activities described in performance evidence above, including:

- technical capabilities and limitations
- equipment specifications
- ground conditions
- type and weight of load
-

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - a skid steer loader
 - materials to be shifted
 - personal protective equipment
- be conducted in a safe environment; and,
- be assessed in context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 Year
	2	2 Years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 Years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the RII Implementation Guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a Unit of Competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

Links

Companion Volume Implementation Guides are available from VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIWH202D Enter and work in confined spaces

Modification History

Release	Comment
1	The unit replaces RIIOHS202A Enter and work in confined spaces.
2	Editorial corrections.
3	Amended Application field.
4	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to enter and work in confined spaces in the Resources and Infrastructure Industries.

This unit is appropriate for those working in operational roles undertaking work in confined spaces.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors. Relevant information must be sourced prior to application of the unit.

Note: The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State/Territory OHS legislative requirements.

Elements and Performance Criteria

1 Plan and prepare for working in confined space	<p>1.1 Access, interpret and apply procedures for confined space entry and the environmental management plan and ensure the work activity is compliant</p> <p>1.2 Obtain, confirm, clarify and apply work instructions and agreed procedure</p> <p>1.3 Obtain, confirm, clarify and apply safety requirements</p>
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	<p>1.4 Obtain and confirm authorisation (entry permit) meets regulatory requirements</p> <p>1.5 Confirm the emergency response procedure is with the stand-by person and understood</p> <p>1.6 Identify, obtain and implement signage and barrier requirements</p> <p>1.7 Select tools and equipment for the tasks, check for serviceability and rectify or report any faults</p> <p>1.8 Identify, confirm and apply the environmental protection requirements</p> <p>1.9 Position rescue equipment by the entry permit</p>
2 Work in confined space	<p>2.1 Gain access to confined space</p> <p>2.2 Ensure that the atmosphere is tested and monitored for harmful elements</p> <p>2.3 Correctly apply tagging and lock-out procedures</p> <p>2.4 Enter the confined space correctly</p> <p>2.5 Maintain ongoing communication with the stand-by person</p> <p>2.6 Comply with entry permit requirements</p> <p>2.7 Monitor and adhere to allocated entry time</p>
3 Exit confined space	<p>3.1 Exit confined space correctly</p> <p>3.2 Recover tools, equipment and materials</p> <p>3.3 Conduct inspection of the confined space</p> <p>3.4 Secure access to the confined space</p> <p>3.5 Remove tagging and lock-out</p> <p>3.6 Accurately complete confined space entry permit</p>
4 Clean up	<p>4.1 Clear work area and dispose of or recycle materials</p> <p>4.2 Clean, check, maintain and store tools and equipment</p> <p>4.3 Remove, clean and store barriers and signs</p>

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIIOHS202A Entering and working in confined spaces

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIWHS202D Enter and work in confined spaces

Modification History

Release	Comment
1	The unit replaces RIIOHS202A Enter and work in confined spaces.
2	Editorial corrections.
3	Amended Application field.
4	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant documentation, policies and procedures
- demonstrates completion of entering and working in confined spaces that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - obtain appropriate entry permit and instructions for performing work in confined space
 - interpreting and applying safe work method statements
 - apply tagging and lock out
 - selecting, wearing and caring for personal protective equipment applicable to all tasks and environment identified
 - entering the confined space
 - using atmospheric monitoring devices prior to entering the confined space
 - working in the confined space
 - using atmospheric monitoring devices during confined space activity
 - applying safe materials handling methods
 - exiting the confined space
 - remove tagging and lock out

Knowledge Evidence

The candidate must demonstrate knowledge of enter and work in confined spaces through:

- identifying areas that constitute confined spaces
- complying with site and equipment safety requirements
- complying with the entry and exit procedures, risks and regulations
- types of air contaminants and toxic gases
- identifying the limitations of breathing apparatus
- identifying equipment types, characteristics, technical capabilities and limitations
- complying with site isolation and site control responsibilities and authorities
- locations of safety data sheets (SDS) information and application
- using confined space and Industry terminology

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit is best assessed in the context of this sector's work environment;
- where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years
Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors assessor and/or Industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.	

*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIWH202E Enter and work in confined spaces

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.
Release 2	Minor amendment to Knowledge Evidence to correct typographical error.

Application

This unit describes the skills and knowledge required to enter and work in confined spaces in the resources and infrastructure industries.

It applies to those working in operational roles. They generally work under supervision to undertake a prescribed range of functions involving known routines and procedures and take responsibility for the quality of work outcomes.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories and industry sectors. Users must check requirements with relevant body before applying the unit.

Note: The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State/Territory OHS legislative requirements.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare for working in confined space	1.1 Obtain, interpret and confirm work requirements 1.2 Access, interpret and apply documentation required to enter and work in confined spaces 1.3 Identify and address potential risks, hazards and environmental issues, and implement control measures according to workplace procedures 1.4 Obtain and confirm authorisation of a confined space entry permit

ELEMENT	PERFORMANCE CRITERIA
	<p>that meets regulatory requirements</p> <p>1.5 Select and wear appropriate personal protective equipment for planned work activities</p> <p>1.6 Obtain and interpret emergency procedures with the stand-by person, and be prepared for emergency situations</p> <p>1.7 Identify, obtain and implement signage and barrier requirements according to workplace procedures</p> <p>1.8 Select tools and equipment for the tasks, check for serviceability and rectify or report any faults to relevant personnel</p> <p>1.9 Position rescue equipment by the entry permit</p>
2. Work in confined space	<p>2.1 Gain access to confined space</p> <p>2.2 Test and monitor the atmosphere for harmful elements according to workplace procedures</p> <p>2.3 Correctly apply tagging and lock-out procedures</p> <p>2.4 Enter the confined space according to workplace procedures</p> <p>2.5 Maintain ongoing communication with the stand-by person</p> <p>2.6 Comply with entry permit requirements</p> <p>2.7 Monitor and adhere to allocated entry time</p>
3. Exit confined space	<p>3.1 Exit confined space according to workplace procedures</p> <p>3.2 Recover tools, equipment and materials</p> <p>3.3 Conduct inspection of the confined spaces according to workplace procedures</p> <p>3.4 Remove tagging and lock-out procedures</p> <p>3.5 Complete confined space entry permit requirements according to workplace procedures</p>
4. Clean up	<p>4.1 Clear work area and dispose of materials according to workplace procedures</p> <p>4.2 Remove, clean and store barriers and signs</p> <p>4.3 Conduct equipment inspections to identify faults according to manufacturer specifications and workplace procedures and report to relevant personnel</p> <p>4.4 Conduct routine operational servicing, lubrication and housekeeping activities according to workplace procedures</p> <p>4.5 Process written maintenance records according to workplace procedures</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Identifies and interprets information from workplace procedures, documentation and regulations
Writing	<ul style="list-style-type: none"> Produces and completes written documents required for workplace procedures
Self-management	<ul style="list-style-type: none"> Monitors and minimises own exposure to worksite risks and hazards during activities
Oral communication	<ul style="list-style-type: none"> Uses a range of communication techniques and systems to communicate with others

Unit Mapping Information

Supersedes and is equivalent to RIIWHS202D Entering and working in confined spaces.

Links

Companion Volume Implementation Guide is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIWHS202E Enter and work in confined spaces

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.
Release 2	Minor amendment to Knowledge Evidence to correct typographical error.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- enter and work in confined spaces on at least two occasions, including:
 - obtaining the required entry permit and instructions for performing work in confined spaces
 - interpreting and applying workplace procedures
 - applying tagging and lock out procedures
 - selecting, wearing and caring for personal protective equipment
 - using atmospheric monitoring devices prior to entering the confined space
 - entering the confined space
 - working in the confined space
 - using atmospheric monitoring devices during confined space activity
 - applying safe materials handling methods
 - exiting the confined space
 - removing tagging and lock out.

During the above, the candidate must:

- locate and apply relevant legislation, documentation, policies and procedures and confirm that the work activity is compliant
- implement the requirements, procedures and techniques for entering and working in confined spaces
- work effectively with others to enter and work in confined spaces in a way that meets all required outcomes

- communicate clearly and concisely with others to receive and clarify work instructions and to determine coordination requirements prior to commencing and during work activities.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key legislation relevant to enter and work in confined spaces
- key policies, procedures and documentation required to enter and work in confined spaces, including:
 - entry and exit procedures, risks and regulations
 - site and equipment safety requirements
 - site isolation and site control responsibilities and authorities
 - safety data sheets
 - incidents and emergency response documentation
- principles and techniques for identifying and responding to:
 - areas that constitute confined spaces
 - types of air contaminants and toxic gases
 - limitations of breathing apparatus
 - relevant hazards and emergencies
- equipment types, characteristics, technical capabilities and limitations
- principles and techniques for using confined space and industry terminology
- techniques for coordinating and communicating job activities with others.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - equipment related to entering and working in confined spaces
 - relevant documentation
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert	

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
		experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.

*Guidance on simulated environments has been stipulated in the Companion Volume Implementation Guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

Links

Companion Volume Implementation Guide is found on VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIWH204D Work safely at heights

Modification History

Release	Comments
1	This unit replaces RIIOHS204A Work safely at heights.
2	Formatting corrections.
3	Inserted Application information.
4	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to work safety at heights in the Resources and Infrastructure Industries.

This unit is appropriate for those working in operational roles where they are required to perform work at heights.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors. Relevant information must be sourced prior to application of the unit.

Note: The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State/Territory OHS legislative requirements.

Elements and Performance Criteria

1. Identify work requirements	<p>1.1 Access, interpret and apply height safety procedures and ensure the work activity is compliant</p> <p>1.2 Inspect site to determine layout and physical condition, condition of structures, prevailing weather conditions, equipment requirements and potential hazards</p>
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	<p>1.3 Adhere to WHS requirements</p> <p>1.4 Identify, select and check safety equipment for serviceability</p> <p>1.5 Identify, manage and report potential risks and hazards</p>
2. Identify work procedures and instructions	<p>2.1 Consult with authorised personnel to select materials, tools and equipment and check for serviceability</p> <p>2.2 Select, wear and care for personal protective equipment</p> <p>2.3 Inspect/install fall protection and perimeter protection equipment</p> <p>2.4 Identify approved methods of moving tools and equipment to work area and minimise potential hazards associated with tools at heights</p> <p>2.5 Ensure safety system has been installed correctly</p> <p>2.6 Select and install appropriate signs and barricades</p>
3. Access and install equipment	<p>3.1 Consult with authorised personnel to ensure anchor fall protection and associated equipment is correctly fitted and adjusted</p> <p>3.2 Ensure all required equipment is installed</p> <p>3.3 Use recommended methods to access work area for people, tools and equipment</p> <p>3.4 Locate tools and materials to eliminate or minimise the risk of items being knocked down</p>
4. Perform work at heights	<p>4.1 Check access from ground to work area and ensure it is safe</p> <p>4.2 Keep fall equipment in place and adjusted appropriately for movement during work</p> <p>4.3 Undertake manual handling of materials and equipment</p> <p>4.4 Locate materials and equipment ensuring that they are safely secured and distributed</p> <p>4.5 Check safety system periodically for compliance</p> <p>4.6 Monitor risk control measures to ensure that they are effective and appropriate</p> <p>4.7 Reassess risk control measures, as required, in accordance with changed work practices and/or site conditions and undertake alterations</p>
5. Clean up work area	<p>5.1 Consult with authorised personnel to ensure safety system is dismantled and removed</p> <p>5.2 Clear work area and dispose of or recycle materials</p> <p>5.3 Clean, check, maintain and store tools and equipment</p>

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIIOHS204A Working safely at heights

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIWHS204D Work safely at heights

Modification History

Release	Comments
1	This unit replaces RIIOHS204A Work safely at heights.
2	Formatting corrections.
3	Inserted Application information.
4	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant documentation, policies and procedures
- demonstrates completion of working safely at heights that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - accessing, interpreting and applying technical and safety information for working at heights
 - assessing hazards and risk associated with working at heights and implement control methods
 - selecting wearing and caring for personal protective equipment
 - identifying required safety systems including fall protection and associated equipment
 - checking that fitting, adjusting and anchoring of fall protection and associated equipment is correct
 - performing work safely at heights

Knowledge Evidence

The candidate must demonstrate knowledge of the following when working safely at heights:

- names and functions of equipment, components and materials

- complying with equipment manufacturer's instructions and specifications
- safe shifting and handling of tools and materials
- adhering to statutory and regulatory authority requirements
- the nature of work undertaken at heights
- complying with heights safety systems
- the processes of providing for safe working practices
- using safety equipment/systems and considerations to facilitate working safely at heights
- complying with safe work methods

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit is best assessed in the context of this sector's work environment;
- where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years

Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years
Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors assessor and/or Industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.	

*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIWH204E Work safely at heights

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to work safely at heights in the resources and infrastructure industries.

It applies to those working in operational roles. They generally work under supervision to undertake a prescribed range of functions involving known routines and procedures and take responsibility for the quality of work outcomes.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories and industry sectors. Users must check requirements with relevant body before applying the unit.

Note: The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State/Territory OHS legislative requirements.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify work requirements	1.1 Obtain, interpret and confirm work requirements 1.2 Access, interpret and apply documentation required to work safely at heights 1.3 Identify and address potential risks, hazards and environmental issues, and implement control measures according to workplace procedures 1.4 Inspect worksite to determine layout and physical condition, condition of structures and equipment requirements 1.5 Adhere to legislative requirements

ELEMENT	PERFORMANCE CRITERIA
	<p>1.6 Select appropriate plant, tools and equipment for the job, inspect them for serviceability and rectify or report any faults prior to commencement of work activities</p> <p>1.7 Select and wear personal protective equipment appropriate for work activities</p> <p>1.8 Obtain and interpret emergency procedures, and be prepared for emergency situations</p>
2. Identify work procedures and instructions	<p>2.1 Consult with relevant personnel to select materials, tools and equipment required for the work activities</p> <p>2.2 Inspect and install fall protection and perimeter protection equipment</p> <p>2.3 Identify methods of moving tools and equipment to the work area according to workplace procedures</p> <p>2.4 Ensure the safety system has been installed according to workplace procedures</p> <p>2.5 Select and install appropriate signs and barricades according to workplace procedures</p>
3. Access and install equipment	<p>3.1 Consult with relevant personnel to ensure anchor fall protection and associated equipment is fitted and adjusted according to workplace procedures</p> <p>3.2 Ensure all required equipment is installed according to workplace procedures</p> <p>3.3 Access work area for people, tools and equipment according to workplace procedures</p> <p>3.4 Locate tools and materials to eliminate or minimise the risk of items being knocked down</p>
4. Perform work at heights	<p>4.1 Check access from ground to work area and ensure it is safe according to workplace procedures</p> <p>4.2 Keep fall equipment in place and adjusted appropriately for movement during work</p> <p>4.3 Undertake manual handling of materials and equipment according to workplace procedures</p> <p>4.4 Locate materials and equipment ensuring that they are safely secured and distributed according to workplace procedures</p> <p>4.5 Check safety system periodically for compliance</p> <p>4.6 Monitor risk control measures to ensure that they are effective and appropriate according to workplace procedures</p> <p>4.7 Reassess risk control measures, as required, in accordance with workplace procedures and undertake alterations</p>
5. Clean up work area	<p>5.1 Consult with relevant personnel to ensure safety system is dismantled and removed according to workplace procedures</p> <p>5.2 Clear work area and dispose of materials</p>

ELEMENT	PERFORMANCE CRITERIA
	5.3 Clean and maintain the plant and equipment, inspect for ensure serviceability and rectify or report any faults or issues to relevant personnel 5.4 Process written maintenance records according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	<ul style="list-style-type: none"> Identifies and interprets information from workplace procedures, documentation and regulations
Self-management	<ul style="list-style-type: none"> Monitors and minimises own exposure to worksite risks and hazards during activities
Oral communication	<ul style="list-style-type: none"> Uses a range of communication techniques and systems to communicate with others

Unit Mapping Information

Supersedes and is equivalent to RIIWHS204D Working safely at heights.

Links

Companion Volume implementation guides is found on VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIWHS204E Work safely at heights

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- work safely at heights on at least two occasions, including:
 - accessing, interpreting and applying technical and safety information for working at heights
 - assessing hazards and risks associated with working at heights and implementing control methods
 - selecting, wearing and caring for personal protective equipment
 - identifying required safety systems including fall protection and associated equipment
 - checking the correct fitting, adjusting and anchoring of fall protection and associated equipment
 - performing work safely at heights.

During the above, the candidate must:

- locate and apply relevant documentation, policies and procedures and confirm that the work activity is compliant
- implement the requirements, procedures and techniques for working safely at heights
- work effectively with others to work safely at heights in a way that meets all required outcomes
- communicate clearly and concisely with others to receive and clarify work instructions and to determine coordination requirements prior to commencing and during work activities.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key legislation required to work safely at heights

- key policies, procedures and documentation required to work safely at heights, including:
 - statutory and regulatory authority requirements
- principles and techniques for work safely at heights, including:
 - heights safety systems
 - safe work methods
- principles and techniques for identifying names and functions of equipment, components and materials
- principles and techniques for complying with equipment manufacturer instructions and specifications
- safe shifting and handling of tools and materials
- principles and techniques for identifying relevant hazards and emergencies
- techniques for coordinating and communicating job activities with others.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - equipment related to working safely at heights
 - relevant documentation
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment

- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the Companion Volume Implementation Guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

Links

Companion Volume implementation guides is found on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIWH5205E Control traffic with stop-slow bat

Modification History

This unit replaces RIIWH5205D Control traffic with slow-stop bat. Significant endorseable amendments have been made to Elements, Performance Criteria, Foundation Skills, Performance Evidence and Knowledge Evidence to better reflect current industry practices and clarify training outcomes.

Application

This unit describes the skills and knowledge required to control vehicle and pedestrian traffic using stop-slow bats, hand signals and approved communication devices in the resources and infrastructure industries.

It applies to those working in operational roles. They generally work in teams in live traffic environments under some degree of supervision.

Note: The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented registered training organisations are advised to contextualise the unit of competency by referring to the existing state/territory OHS legislative requirements

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to control traffic	1.1 Select and wear personal protective equipment required for work activities 1.2 Access, interpret and confirm work instructions and plan work 1.3 Access, interpret and apply required workplace policies, procedures, jurisdictional safety and environmental protection requirements 1.4 Obtain and interpret site emergency procedures and prepare for accidents and emergencies 1.5 Select tools and equipment, check for serviceability, and rectify faults and report according to workplace policies and procedures
2. Control traffic and operate	2.1 Adjust approved communication devices according to site

communication devices	<p>requirements</p> <p>2.2 Direct traffic using hand held stop-slow bat and visibly clear and unobstructed hand signals as required</p> <p>2.3 Monitor traffic, make adjustments for changing traffic conditions and position waiting vehicles as required</p> <p>2.4 Communicate messages to other personnel, confirm recipient understanding and clarify as required</p> <p>2.5 Check and perform maintenance on approved communication devices according to requirements</p> <p>2.6 Check communications contact after nominated period of non-contact</p> <p>2.7 Report traffic offenders according to workplace policies and procedures</p>
3. Conduct housekeeping activities	<p>3.1 Confirm and remove signs and devices in line with job requirements and cover as required</p> <p>3.2 Clean, check and store tools and equipment</p> <p>3.3 Report environmental damage and potential for future damage as required</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Numeracy	<ul style="list-style-type: none"> Applies basic mathematical problem solving processes, including simple addition, subtraction, multiplication and division
Oral communication	<ul style="list-style-type: none"> Listens to short, explicit instructions for work procedures and asks questions to clarify and confirm
Reading	<ul style="list-style-type: none"> Identifies and interprets information from workplace procedures, documentation, legislation and regulations
Technology	<ul style="list-style-type: none"> Identifies purposes, specific functions and key features of common digital systems and tools and operates them as required
Writing	<ul style="list-style-type: none"> Produces and completes workplace reports using appropriate vocabulary, grammatical structures and conventions

Unit Mapping Information

Supersedes and is equivalent to RIIWHS205D Control traffic with stop-slow bat.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIWHS205E Control traffic with stop-slow bat

Modification History

This unit replaces RIIWHS205D Control traffic with slow-stop bat. Significant endorseable amendments have been made to Elements, Performance Criteria, Foundation Skills, Performance Evidence and Knowledge Evidence to better reflect current industry practices and clarify training outcomes.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- Control traffic with a stop-slow bat according to traffic guidance schemes in a manner that is safe and follows workplace policies and procedures on at least two occasions, including:
 - directing pedestrian traffic, including at least one of the following:
 - ~ pedestrians with mobility issues
 - ~ pedestrians with prams
 - ~ cyclists
 - using approved communication devices to transmit message and report traffic offenders, including the use of at least one of the following devices:
 - ~ hand held radios
 - ~ telephones.

During the above, the candidate must:

- coordinate operations with pilot vehicle in a shuttle flow work arrangement
- participate in risk assessment and management processes
- identify the type and scope of hazards and their impact and recommend risk control measures
- identify key environmental protection issues and describe required solutions
- locate and complete at least one incident report
- complete housekeeping requirements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- risk assessment processes and hierarchy of control
- work instructions and procedures for planning work
- jurisdictional safety requirements relevant to temporary traffic management

- environmental protection requirements
- site emergency procedures
- site and equipment safety requirements
- traffic control requirements and procedures for directing the following pedestrian traffic groups:
 - pedestrians with mobility issues
 - pedestrians with prams
 - cyclists
- traffic guidance scheme and traffic management plan compliance
- communication device operations, including:
 - hand held radios
 - telephones
- traffic control equipment types, characteristics, technical capabilities and limitations
- operational and maintenance procedures for equipment
- site isolation and traffic control responsibilities and authorities
- the effects of travel speed and vehicle mass on stopping distances.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - stop-slow bat
 - personal protective equipment
 - hand held radio or telephone
- be conducted in a safe environment; and
- be assessed in context of this sector's work environment on a real live road setting under supervision; and
- be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and
- confirm consistent performance can be applied in a range of relevant workplace circumstances

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor Requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence as outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 year
	2	2 years
Drilling, Coal Mining and Extractive (Quarrying), Metalliferous Mining and Civil Construction	3-6	3 years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any	

	relevant regulation.
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*Guidance on simulated environments has been stipulated in the RII Companion Volume Implementation Guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

RIIWHS302D Implement traffic management plan

Modification History

Release	Comment
1	The unit replaces RIIOHS302A Implement traffic management plan.
2	Editorial corrections.
3	Amended Application field.
4	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit develops a participant's skills and knowledge required to implement a traffic management plan in Civil construction.

This unit is appropriate for those working in supervisory roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors. Relevant information must be sourced prior to application of the unit.

Note: The terms Occupational Health and Safety (OHS) and Work Health and Safety (WHS) are equivalent and generally either can be used in the workplace. In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise the unit of competency by referring to the existing State/Territory OHS legislative requirements.

Elements and Performance Criteria

1 Plan and prepare to implement traffic management plan	<p>1.1 Access, interpret and apply traffic management documentation and ensure the work activity is compliant</p> <p>1.2 Obtain, read, interpret, clarify and confirm work requirements</p> <p>1.3 Identify, address and report potential risks, hazards and environmental issues and implement control measures</p> <p>1.4 Select and wear personal protective equipment appropriate for the work activity</p>
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	<p>1.5 Identify, obtain and implement traffic control signage and devices</p> <p>1.6 Select, and check for faults, tools and equipment to carry out tasks</p> <p>1.7 Identify, confirm and apply environmental protection requirements</p> <p>1.8 Check the designated traffic controllers' training and qualifications for currency</p> <p>1.9 Advise traffic controllers of the traffic flow requirements</p>
2 Set out the traffic guidance scheme	<p>2.1 Select traffic guidance scheme to suit site conditions, traffic volumes and work activities</p> <p>2.2 Determine and ensure adherence to work schedule, maximum traffic delays, signals and site communications</p> <p>2.3 Ensure signs and devices are correctly positioned on the approaches to the work area</p> <p>2.4 Ensure that signs and devices are positioned and displayed on each approach</p> <p>2.5 Ensure signs and devices are positioned and displayed laterally</p> <p>2.6 Ensure traffic is controlled effectively to protect the work crew</p>
3 Monitor traffic guidance scheme	<p>3.1 Ensure traffic flow is monitored and effectiveness of guidance scheme determined</p> <p>3.2 Monitor work activities and provide guidance to adjust scheme</p> <p>3.3 Apply process for dealing with traffic controllers who fail to adhere to approved procedures</p> <p>3.4 Apply procedures to deal with offending motorists</p>
4 Close down traffic guidance scheme	<p>4.1 Ensure traffic is controlled to protect work crew removing traffic control devices</p> <p>4.2 Ensure signs are removed in sequence to provide maximum warning during removal</p> <p>4.3 Ensure guidance scheme details are recorded and reported as required</p> <p>4.4 Ensure incidents are recorded and reported as required</p>
5 Clean up	<p>5.1 Ensure work area is appropriately cleared</p> <p>5.2 Ensure tools and equipment are cleaned, checked, maintained</p>

	and stored
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Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIIOHS302A Implement traffic management plan

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIWHS302D Implement traffic management plan

Modification History

Release	Comment
1	The unit replaces RIIOHS302A Implement traffic management plan.
2	Editorial corrections.
3	Amended Application field.
4	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant documentation, policies and procedures
- works effectively with others to undertake and complete the traffic management plans that meet all of the required outcomes including:
 - complying with written and verbal reporting requirements and procedures
 - communicating clearly and concisely with others to receive and clarify work instructions
 - communicating clearly and concisely with others to resolve coordination requirements prior to commencing and during work activities
- demonstrates completion of implementing traffic management plans that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - complying with State/Territory regulations on three separate live traffic projects, and
 - completing one (1) project controlling site construction vehicles
 - identify and select traffic guidance scheme according to conditions
 - identify and select traffic guidance scheme according to conditions select and implement signage and device requirements, position and display according to site plan

- monitor and adjust scheme according to variances in requirements
- apply procedures to deal with non-compliant crew and motorists

Knowledge Evidence

The candidate must demonstrate knowledge of implementing a traffic management plan through:

- accessing, interpreting and applying legislative, organization and site requirements and procedures for:
 - JSAs/JSEA/Safe work method statement
 - potential hazards and risks
 - controlling traffic
 - basic signalling
 - signs and devices
 - radio operations
- identifying equipment types, characteristics, technical capabilities and limitations
- identifying site isolation and traffic control responsibilities and authorities
- identifying quality requirements
- applying civil construction terminology

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit is best assessed in the context of this sector's work environment;
- where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,

- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years
Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors assessor and/or Industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.	

*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

SFICRO302 Conduct crocodile surveys

Modification History

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to plan and conduct crocodile field surveys in natural crocodile habitats.

The unit applies to individuals who work under broad direction to collect information about crocodile activity in Australian waterways.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, biosecurity and environmental regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication. Licences or permits may be required for the use of firearms or restricted drugs on crocodiles or if operating vehicles.

Pre-requisite Unit

Nil

Unit Sector

Crocodile (CRO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan crocodile field survey activity	1.1 Determine crocodile management program aims and the importance of records 1.2 Determine crocodile field survey objectives and site location(s)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>1.3 Plan logistic and supply requirements according to location, duration and size of crocodile surveying field trip</p> <p>1.4 Access maps, photographs or global positioning system (GPS) or other available data</p> <p>1.5 Determine crocodile field survey activity incorporating teamwork, humane treatment of crocodiles and waterway safety procedures</p> <p>1.6 Determine legislation and regulations, biosecurity and environmental standards, and risks and contingencies associated with crocodile survey activity</p> <p>1.7 Select and prepare equipment and supplies according to field survey objectives</p>
2. Carry out crocodile field survey activity	<p>2.1 Prepare vehicle(s) and load equipment and supplies</p> <p>2.2 Locate crocodile field survey site and conduct survey activity according to timeframes and crocodile waterway safety procedures</p> <p>2.3 Communicate with team members while conducting designated roles</p> <p>2.4 Maintain accurate raw data, including accurate crocodile size estimates during field survey activity</p> <p>2.5 Minimise environmental impact and biosecurity risks during crocodile field survey activity</p>
3. Finalise crocodile field survey activity	<p>3.1 Unload, clean and check equipment for faults</p> <p>3.2 Report any faults to appropriate personnel and store as per workplace requirements</p> <p>3.3 Complete required documentation according to field survey requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret technical information relating to crocodile species
Writing	<ul style="list-style-type: none"> Use appropriate technical information to document survey findings relating to crocodile species
Oral communication	<ul style="list-style-type: none"> Communicate clearly, concisely and in a culturally sensitive manner

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
SFICRO302 Conduct crocodile surveys	Not applicable	Unit has been created to address an emerging skill required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

Assessment Requirements for SFICRO302 Conduct crocodile surveys

Modification History

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- planned and conducted at least three crocodile survey activities
- documented data relating to crocodile survey activities on at least three occasions.

In doing the above, there must also be evidence that the individual has:

- worked effectively in a team
- followed crocodile risk and safety standards
- treated crocodiles humanely
- complied with legislation and regulation associated with crocodiles
- complied with biosecurity and environmental standards.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- crocodile survey data on:
 - population
 - habitat
 - nesting
 - sizes of crocodiles
- resources required to scope crocodile data:
 - data collection equipment
 - cyber tracking devices
 - global positioning system (GPS)
 - suitable software applications to record crocodile data
 - cyber tracking devices

- drones
- crocodile waterway safety procedures
- risk factors working with crocodiles and around crocodiles
- appropriate action if confronted by an aggressive crocodile
- culturally sensitive communication protocol
- team protocol during collection of data via survey:
 - roles of team members
 - importance of interaction between team members
 - the use of appropriate communication methods
- crocodile management program or policy aims, including:
 - maintenance of a healthy population of saltwater crocodiles in their natural habitat
 - promotion of the saltwater crocodile as a natural resource that has economic use and benefit if used sustainably
 - respect for the cultural values of the Indigenous population's crocodile management
 - management of concentrated numbers in areas where there is a high risk to people, livestock and pets
 - provision for crocodile awareness and information in parks, reserves and conservation areas
 - working with other government groups, business and industry to make locals and visitors aware of crocodiles
 - encouragement for everyone to be responsible in activities near the natural environment of crocodiles
- state and territory legislation, regulations and codes of practice associated with crocodile habitats and crocodile activity
- key features of biosecurity guidelines for crocodile waterways, including not contaminating waterways:
 - survey data documenting and processing methods.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to crocodile waterways
 - equipment and supplies to undertake field survey in crocodile habitats
- specifications:
 - crocodile safety documentation, policies and procedures
- relationships:
 - team members.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

SFICRO305 Prepare to work with crocodiles

Modification History

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to prepare to work with crocodiles.

The unit applies to individuals who prepare for work with crocodiles on farms, research facilities, wildlife parks or in crocodile habitats. While this unit relates mostly to saltwater crocodiles, it also entails comparisons with other crocodile species.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, biosecurity and environmental regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication. Licences or permits may be required for the use of firearms or restricted drugs on crocodiles or if operating vehicles.

Pre-requisite Unit

Nil

Unit Sector

Crocodiles (CRO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify key features of crocodile anatomy and physiology	1.1 Determine the key physical characteristics of saltwater and freshwater crocodiles

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Identify the key features and functions of crocodile anatomy 1.3 Source information about common crocodile health issues
2. Identify behavioural patterns of different crocodile species	2.1 Identify the key drivers that affect crocodile behaviour 2.2 Identify key behavioural characteristics of saltwater and freshwater crocodiles
3. Determine and follow safety requirements in crocodile habitats	3.1 Source information about features of crocodile habitats 3.2 Identify key risk factors in crocodile habitats 3.3 Use appropriate communication method to inform relevant personnel and/or members of the public to obey crocodile warning signs and follow safety procedures
4. Access information about crocodile operations in controlled environments	4.1 Determine the reasons for crocodile farming and the importance of crocodile skin quality 4.2 Identify reasons for crocodile research and the functions of a crocodile research facility 4.3 Determine the reasons for caring for crocodiles in a wildlife park 4.4 Identify crocodile handling requirements when working with crocodiles in controlled environments
5. Identify legislation, regulations and management programs relating to the protection of crocodiles	5.1 Determine appropriate crocodile and animal protection legislation/regulation and codes of practice 5.2 Identify and observe crocodile management program aims 5.3 Determine biosecurity issues associated with working with crocodiles in controlled environments and in the wild

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Communicate clearly, concisely and in a culturally sensitive manner

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
SFICRO305 Prepare to work with crocodiles	Not applicable	Unit has been created to address an emerging skill required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

Assessment Requirements for SFICRO305 Prepare to work with crocodiles

Modification History

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- observed crocodile operational and safety requirements on farms, wildlife parks, research facilities or crocodile habitats on at least five different occasions.

In doing the above, there must be evidence that the individual has:

- identified the differences in crocodile species
- identified risks associated with working with crocodiles
- followed legislation/regulation and codes of practice associated with crocodiles
- followed biosecurity guidelines
- located and applied required documentation, policies and procedures
- communicated appropriately and respectfully with others.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- species of crocodylians around the world, including:
 - Indo-Pacific/estuarine/saltwater crocodiles – *Crocodylus porosus*
 - freshwater crocodiles – *Crocodylus johnstoni*
 - alligators and caimans
 - gharials
- the characteristics of saltwater crocodiles and freshwater crocodiles
- key features of crocodile anatomy
- crocodile behavioural patterns
- key drivers that affect crocodile behaviour
- crocodile health issues, including:

- diseases
- thermal stress – where the animal is unable to thermoregulate correctly
- capture stress – when the animal is caught and handled
- social stress – arising out of competition and the inability of adults to establish a territory (e.g. enclosure too small, densities too high)
- low temperatures causing impediments to food digestion
- environmental hygiene
- risk factors working with crocodiles and around crocodiles
- crocodile waterway safety procedures
- the use of appropriate communication methods
- culturally sensitive communication protocol
- crocodile management program or policy aims, including:
 - ecological maintenance of a large and healthy population of saltwater crocodiles living in their natural habitat
 - promotion of the saltwater crocodile as a natural resource that has economic use and benefit if used sustainably
 - respect for the cultural values of the Indigenous population with regard to crocodile management
 - management of concentrated numbers in areas where there is a high risk to people, livestock and pets
 - provision for crocodile awareness and information in parks, reserves and conservation areas
- reasons for crocodile farming:
 - crocodile skin/leather to produce goods with emphasis on skin quality
 - crocodile meat
- crocodile research facility purposes:
 - to expand knowledge about crocodiles as a species
 - to assist with the profitability and sustainability of commercial crocodile production
- reasons for caring for crocodiles in wildlife parks:
 - education
 - conservation
 - research
 - tourism
- state and territory legislation, regulations and codes of practice associated with crocodile waterways and crocodile welfare
- biosecurity guidelines for Australian waterways and crocodile-controlled environments.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to a crocodile farm, wildlife park, research facility or crocodile habitat
- specifications:
 - crocodile safety documentation, policies and procedures
- relationships:
 - relevant personnel.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

SFICRO306 Work safely in crocodile habitats

Modification History

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to work safely in crocodile habitats.

The unit applies to individuals who work in various industries, capacities and roles where crocodiles are found.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, biosecurity and environmental regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication. Licences or permits may be required for the use of firearms or restricted drugs on crocodiles or if operating vehicles.

Pre-requisite Unit

Nil

Unit Sector

Crocodiles (CRO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify crocodile species and habitat	1.1 Determine the key characteristics of various crocodile species 1.2 Identify key features of natural crocodile habitats

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Access information about crocodile behaviour in the wild	2.1 Determine behavioural patterns of saltwater crocodiles in the wild, and compare to other crocodile species 2.2 Source information about the key drivers that affect crocodile behaviour in the wild
3. Conduct allocated work procedures and meet safety requirements in crocodile habitats	3.1 Participate in safe crocodile habitat procedures while meeting allocated work requirements 3.2 Access information about humane treatment of crocodiles and risk factors in crocodile habitats 3.3 Observe and adhere to all safety and biosecurity requirements in crocodile habitats according to relevant legislation/regulation, codes of practice and crocodile habitat safety procedures 3.4 Carry communication equipment when in crocodile habitats and use as required

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Communicate in a clear, concise and culturally sensitive manner

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
SFICRO306 Work safely in crocodile habitats	Not applicable	Unit has been created to address an emerging skill required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

Assessment Requirements for SFICRO306 Work safely in crocodile habitats

Modification History

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has followed safe crocodile habitat procedures on at least two occasions.

In doing the above, there must also be evidence that the individual has:

- identified the differences in crocodile species
- treated crocodiles humanely
- adhered to all crocodile risk and safety standards and notices
- observed legislation and regulations associated with crocodiles
- complied with biosecurity guidelines.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- the existence of different ‘crocodilian’ species, including:
 - Indo-Pacific/estuarine/saltwater crocodiles – *Crocodylus porosus*
 - freshwater crocodiles – *Crocodylus johnstoni*
- the characteristics of saltwater crocodiles and freshwater crocodiles
- crocodile behavioural patterns
- key drivers that affect crocodile behaviour
- use of communication equipment
- culturally sensitive communication protocol
- state and territory legislation, regulations and codes of practice associated with crocodile habitats and crocodile welfare and activity
- environmental biosecurity guidelines
- crocodile habitat safety procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - access to crocodile habitats
- specifications:
 - crocodile safety material.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

SFICRO401 Manage minor crocodile incidents in the wild

Modification History

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to manage minor incidents relating to human interactions with crocodiles. This does not include managing incidents with human fatalities. It includes working with various agencies in relation to the incidents.

The unit applies to individuals who work with crocodiles in crocodile habitats. While this unit relates mostly to saltwater crocodiles, it may also entail incidents with other crocodile species.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, biosecurity and environmental regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication. Licences or permits may be required for the use of firearms or restricted drugs on crocodiles or if operating vehicles.

Pre-requisite Unit

Nil

Unit Sector

Crocodile (CRO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Evaluate crocodile incident	1.1 Investigate nature of incident from eyewitness reports or own inspection 1.2 Make assessment of key factors that may impact an appropriate response, including victim care, public and personal health and safety, crocodile care, biosecurity and environmental factors 1.3 Collect information to determine action according to the chain of command and workplace procedures 1.4 Interview informants to determine details of the incident
2. Respond to crocodile incident	2.1 Contact appropriate agencies to report the incident and seek medical assistance if required 2.2 Establish communications necessary to manage the situation 2.3 Transport resources and personnel to site and, if required, instruct personnel to establish physical barriers to keep the public away from the incident site 2.4 Establish site procedures and implement emergency plans according to the nature of the incident and health and safety requirements 2.5 Implement measures that minimise risk to the public, habitats, species and communities
3. Coordinate response to crocodile incident	3.1 Inform the general public and media of the nature of the incident and agency decisions according to workplace procedures 3.2 Brief volunteers or personnel on workplace health and safety hazards, preventative measures, the use of personal protective equipment (PPE) and reporting requirements 3.3 Manage immediate media response in calm, factual and logical manner
4. Complete crocodile incident management action	4.1 Follow incident management processes for debrief of the incident 4.2 Document incident and action taken, and determine if follow-up procedures are required

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	<ul style="list-style-type: none"> Complete incident documentation using appropriate technical terminology
Oral communication	<ul style="list-style-type: none"> Address the general public and media using clear factual language Provide brief and clear instructions to manage incident processes Communicate in a culturally sensitive manner

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
SFICRO401 Manage minor crocodile incidents in the wild	Not applicable	Unit has been created to address an emerging skill required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

Assessment Requirements for SFICRO401 Manage minor crocodile incidents in the wild

Modification History

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has:

- managed at least five simulated minor crocodile incidents
- conducted at least one simulated media interview.

In doing the above, there must also be evidence that the individual has:

- complied with crocodile risk and safety standards
- treated crocodiles humanely
- complied with biosecurity and health and safety guidelines
- communicated with relevant parties.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- risk factors in crocodile habitats
- types of potential incidents involving crocodiles
- potential hazards and risks at the site of a crocodile incident:
 - crocodile weight and size (if it is still at the scene or in the vicinity)
 - other crocodiles in the vicinity
 - unpredictable behaviour
 - environmental hazards and contamination
 - peoples' actions
- basic features of incident management system, including:
 - roles of team members, including medical personnel
 - chain of command and communication
 - sequence of action to be followed

- incident zones – hot, warm, cold
- incident barricade procedures
- briefing and debriefing processes
- media communication:
 - getting background information about the interview/key areas of focus/the interviewer
 - preparing by mapping out key message(s)
 - staying factual in information delivery, not speculating
 - explaining events in a manner that can be understood by the audience
 - remaining even-tempered
 - not answering hypothetical questions
- agency liaison, including:
 - medical
 - government
 - national parks
- safe working practices, including:
 - personal protective equipment (PPE)
 - hygiene and biosecurity procedures
 - basic manual handling techniques
- biosecurity guidelines for crocodile habitats, including not contaminating waterways
- culturally sensitive communication protocol.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources:
 - policies relating to media interviews
- specifications:
 - crocodile safety documentation, codes of practice, policies and procedures
- relationships:
 - relevant parties.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

SFICRO403 Capture, transport and release crocodiles

Modification History

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to use recognised manual manipulation techniques to capture, transport and release a crocodile working in a team. While this unit relates mostly to saltwater crocodiles, it may also entail incidents with other crocodile species

The unit applies to individuals who work as team members to assist in crocodile operational activity.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety, biosecurity and environmental regulations, legislation and standards that apply to the workplace and the capture and release of crocodiles.

Licences or permits may be required for the use of firearms or restricted drugs on crocodiles or if operating vehicles.

Pre-requisite Unit

Nil

Unit Sector

Crocodiles (CRO)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for capture, transport and release of a crocodile	1.1 Identify appropriate legislation/regulation and codes of practice for safe and humane capture, transport and release of crocodiles 1.2 Discuss the different methods of capture, transport and release

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>depending on the crocodile's size with relevant personnel</p> <p>1.3 Discuss team roles for capturing, transporting and releasing crocodiles with relevant personnel</p> <p>1.4 Select and fit appropriate personal protective equipment (PPE) and check first aid kit is complete</p> <p>1.5 Prepare operational equipment required for the capture, transport and release of crocodiles, incorporating safety, biosecurity, environmental and regulatory requirements</p> <p>1.6 Conduct a full rehearsal of the operation and establish the required communication processes according to workplace procedures</p>
2. Capture a crocodile	<p>2.1 Prepare the crocodile trap or device to be used for crocodile capture</p> <p>2.2 Locate crocodile to be captured and estimate its length</p> <p>2.3 Monitor crocodile behaviour and consult with appropriate personnel to determine if chemical restraint is required</p> <p>2.4 Capture the crocodile according to standard operating procedures (SOPs)</p> <p>2.5 Restrain the crocodile's jaw according to SOPs to prevent the animal from striking or lunging</p> <p>2.6 Cover the crocodile's eyes to limit sight and calm the animal</p> <p>2.7 Load the crocodile according to workplace procedures and safe work practices</p>
3. Transport a crocodile	<p>3.1 Prepare crocodile for transport according to workplace transport and biosecurity SOPs</p> <p>3.2 Monitor crocodile behaviour and vitals at all stages and maintain situational awareness to ensure safety of self, others and crocodile, and report any abnormal conditions or crocodile behaviour to appropriate personnel</p> <p>3.3 Maintain transport environment in a manner that is conducive to crocodile welfare and according to the appropriate crocodile code of practice</p>
4. Use manual manipulation techniques to move a crocodile	4.1 Safely manoeuvre the crocodile to the agreed location using appropriate equipment and physical effort in a haul team when required

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.2 Cooperate and communicate with team members to ensure safety and minimal stress to the crocodile
5. Release a crocodile	5.1 Remove crocodile constraints according to SOPs, maintaining safe work practices and avoiding unnecessary stress to the crocodile 5.2 Reposition crocodile in a planned location and monitor during recovery phase
6. Review and debrief information relating to crocodile capture, transport and release	6.1 Participate in crocodile capture, transport and release debrief session 6.2 Discuss processes and identify possible procedural improvements with team members or appropriate personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	<ul style="list-style-type: none"> Provide brief and clear procedural information Communicate in a culturally sensitive manner

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
SFICRO403 Capture, transport and release crocodiles	Not applicable	Unit has been created to address an emerging skill required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

Assessment Requirements for SFICRO403 Capture, transport and release crocodiles

Modification History

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 2.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has worked in a team:

- capturing, transporting and releasing at least five crocodiles.

In doing the above, there must also be evidence that the individual has:

- complied with crocodile risk and safety standards
- treated crocodiles humanely
- worked in a team environment
- used appropriate equipment correctly
- complied with regulation associated with crocodile care
- complied with biosecurity guidelines and environmental standards
- communicated with relevant parties.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- types of equipment and how to use, including:
 - vehicles
 - rescue straps/webbing, ropes, slings
 - harpoons
 - glide mats or similar improvised equipment
 - head/eye protection for crocodiles
 - wooden dowel
 - first aid kit
 - tape
 - traps, cages or other crocodile relocation devices

- key features of crocodile anatomy and physiology, including:
 - different crocodile species size
 - the animal's sensory organs
 - the animal's muscular jaw
 - the animal's muscular tail
- techniques involved in the manoeuvring of crocodiles, including:
 - roles of team members, including first aiders
 - communication
 - sequence of action to be followed
- variations to methods in crocodile capturing techniques depending on the size of the crocodile
- ways to restrain crocodiles, including:
 - using a crocodile trap with a gate that is secured and is appropriate for a large crocodile
 - working in a team that enables operators to restrain a crocodile and secure its jaws
 - covering the crocodile's eyes to limit sight so as to calm the animal
 - hauling the crocodile into the transport vehicle using the appropriate haulage methods for a large crocodile
 - when to seek advice from appropriate personnel regarding the use of chemical restraint
- crocodile habitat safety procedures, including:
 - never swimming or wading through any water in northern Australian waterways
 - only crossing rivers at shallow water sites or rocky areas in the narrowest section, no more than 30 cm (knee deep)
 - carrying some form of communication equipment
 - being careful when walking through long grass and when near banks
- appropriate action if confronted by an aggressive crocodile:
 - maintain sight of crocodile while retreating as rapidly as possible
 - raise the alarm and identifying location of crocodile to others
 - ensure all team members are accounted for and uninjured
 - use communication systems to inform others
- state and territory regulations and codes associated with crocodile habitats and crocodile activity
- biosecurity guidelines for crocodile habitats:
 - not contaminating waterways
 - observing standard operating procedures (SOPs)
- culturally sensitive communication protocol.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - crocodiles
 - equipment required for manual manipulation techniques
- specifications:
 - crocodile safety documentation, codes of practice, policies and procedures
- relationships:
 - team members.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

SIRRV001 Receive and handle retail stock

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to receive and store retail stock. It requires the ability to check stock quality and quantity against order requirements; store or present stock correctly; and maintain cleanliness of stock-handling areas.

This unit applies to all retail sectors and business sizes from large format stores to small independents. It applies to frontline personnel who have limited autonomy and work under close supervision and guidance of others in frontline operational roles. However; in smaller retail businesses, senior personnel also undertake this function.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Inventory

Unit Sector

Retail

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Maintain stock handling and storage

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1.Maintain cleanliness of stock handling and storage areas.
- 1.2.Ensure correct environmental conditions for storage of

- areas. perishable and other stock to prevent loss or damage as required.
- 1.3. Remove and dispose of waste to minimise safety risks and environmental impacts.
 - 1.4. Report hazards and potential hazards to relevant personnel to minimise safety risks.
2. Accept stock delivery.
 - 2.1. Check incoming stock quantities against order documentation.
 - 2.2. Inspect incoming stock quality, and accurately report quality issues or damage to relevant personnel.
 - 2.3. Record stock delivery, and report discrepancies with orders as required.
 - 2.4. Unpack and handle stock according to manufacturer instructions and safe manual handling techniques to avoid personal health risk and stock damage.
 - 2.5. Store or display stock promptly in designated location.
 3. Replenish stock levels.
 - 3.1. Rotate, replenish and present stock according to organisational requirements for stock levels.
 - 3.2. Record stock waste or shrinkage according to organisational procedures.
 - 3.3. Maintain optimal stock levels on retail shop floor.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

- Reading skills to:
- interpret:
 - plain English documents that outline organisational policies and procedures for stock control
 - basic order and delivery documentation and stock labels.
- Numeracy skills to:
- calculate stock levels.
- Planning and organising skills to:
- complete stock control activities in a logical and time efficient sequence.
- Technology skills to:
- use stock control technology to aid stock control processes.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRRINV001 Receive and handle retail stock

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- follow organisational policies and procedures, safe work practices and manufacturer instructions to perform each of the following stock control procedures:
 - receive and process incoming stock
 - store retail stock
 - maintain retail stock levels
 - maintain stock delivery records
- follow organisational stock control policies and procedures to process stock in each of the following situations:
 - stock quality is poor
 - stock quantity errors
 - incorrect stock is delivered
- maintain stock handling and storage areas, according to organisational policies and procedures, when completing the above stock control activities.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in the elements and performance criteria of this unit:

- principles of stock control procedures:
 - rotation and replenishment
 - product life cycle
- organisational stock control policies and procedures for:
 - receiving stock from suppliers
 - recording incoming stock
 - recording and reporting stock discrepancies and quality issues
 - recording stock waste and shrinkage
 - stock quality standards
 - unpacking, storage and display of stock
 - damaged or missing stock

- key features of retail products that relate to handling and storage:
 - handling techniques to minimise damage
 - general care
 - optimum storage conditions
 - features of damaged or spoiled stock
 - correct disposal methods
- safe manual handling techniques for moving and storing retail stock
- relevant legislation and standards relevant to receiving and storing retail stock.

Assessment Conditions

Skills must be demonstrated in a retail environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure use of:

- manufacturer instructions for stock handling and storage
- organisational policies and procedures for stock handling and control
- retail stock display areas
- range of retail stock
- stock control documentation
 - delivery dockets
 - orders
 - reporting documentation
- stock receiving bay or area
- stock storage areas
- assessment activities that allow the individual to:
 - work within commercial speed, timing and productivity
 - manage tasks and contingencies in the context of the job role.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRRINV002 Control stock

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to process stock orders, maintain stock levels, minimise stock losses, manage stocktakes and maintain all documents that relate to the administration of any type of stock.

This unit applies to individuals responsible for stock control. They work within organisational systems and procedures, but make decisions about stock administration and may have responsibility for others.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Inventory

Unit Sector

Retail

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Monitor stock receipt and dispatch.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Implement organisational policies and procedures for receipt, dispatch and secure storage of stock.
- 1.2. Allocate tasks and monitor staff to ensure organisational procedures are followed, and documentation is completed

- correctly.
- 1.3. Confirm that stock quantity and quality inspections on receipt meet organisational standards.
 - 1.4. Act on variations to quantity and quality of delivered stock.
 - 1.5. Supervise safe stock handling and storage.
2. Maintain stock records.
 - 2.1. Monitor stock and maintain stock at required levels.
 - 2.2. Maintain, monitor and adjust stock reorder cycles as required.
 - 2.3. Provide clear information to team members about individual stock recording responsibilities.
 - 2.4. Maintain stock storage and movement records.
 - 2.5. Record and report stock discrepancies.
 - 2.6. Monitor stock performance and identify and report fast and slow-selling items.
3. Process and follow up orders.
 - 3.1. Process and raise stock orders according to organisational procedures.
 - 3.2. Monitor delivery of stock to ensure agreed deadlines and inventory requirements are met.
 - 3.3. Liaise with suppliers to ensure continuity of supply.
 - 3.4. Resolve routine supply problems or refer to appropriate personnel for action.
 - 3.5. Distribute stock within the organisation according to required allocations.
 - 3.6. Handle routine supply problems or refer to management as required by store policy.
4. Minimise stock losses.
 - 4.1. Regularly check storage of stock and ensure its protection.
 - 4.2. Identify, record and report stock losses.
 - 4.3. Identify avoidable losses and establish reasons for them.
 - 4.4. Recommend solutions and implement procedures to prevent future losses.
5. Coordinate stocktake or cyclical count.
 - 5.1. Explain procedures for stocktake and cyclical counts to team members.
 - 5.2. Allocate stocktaking tasks to individual team members ensuring effective use of staff resources to complete task.
 - 5.3. Provide team members with clear directions for performance of each task.
 - 5.4. Produce accurate reports for management on stocktake data, including discrepancies.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none">interpret supplier purchasing agreements, purchase orders, records of incoming stock and organisational policies and procedures for stock control.
Numeracy skills to:	<ul style="list-style-type: none">calculate:<ul style="list-style-type: none">supplier costs and complex order costscomplex details of stock on hand and stock losses and produce complex numerically-based reportsreconcile incoming stock and invoices against purchase orders.
Technology skills to:	<ul style="list-style-type: none">use business technology for inventory management.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRRINV002 Control stock

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- maintain and order stock across one stock cycle according to organisational procedures using all of the following stock processes:
 - receipt
 - dispatch
 - ordering
 - stock level monitoring
 - records maintenance
- produce three different stock control reports
- organise and coordinate one stocktake or cyclical count
- provide clear and correct information to team members involved in stock control processes.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational policies and procedures for:
 - receipt and dispatch of goods, including inspection for quantity and quality
 - stock ordering and reordering
 - stock replenishment
 - stock rotation
 - reporting of stock discrepancies, damage and loss
 - safe transport, handling and storage of goods
 - stock control
 - stocktaking and cyclical counts
 - pricing, labelling and packaging
 - stock security
- key aspects of legislation and codes of practice relevant to stock control:
 - Australian Consumer Law
 - Work Health and Safety (WHS)

- manual handling
- licensing for mechanical movement of stock
- principles of stock control:
 - rotation and replenishment
 - product life cycle
- impact of business planning and sales forecasts on stock control
- types of stock control systems used in the sector
- reasons for stock loss and damage and methods to control these and protect stock.

Assessment Conditions

Skills must be demonstrated in a retail environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- current plain English regulatory documents distributed by government regulators outlining key aspects of legislation and codes of practice relevant to stock control as listed in Knowledge Evidence
- a computerised stock control system
- stock for use in stock control activities
- organisational policies and procedures for stock control
- team members; these can be:
 - individuals in an industry workplace, or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRRMER001 Produce visual merchandise displays

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to display retail merchandise. It requires the ability to prepare, produce and maintain merchandise displays in accordance with visual merchandising requirements.

This unit applies to all businesses that sell retail merchandise. It applies to frontline personnel who have limited autonomy and work under close supervision and guidance of others in frontline operational roles. However; in smaller businesses, senior personnel might also undertake this function.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Merchandising

Unit Sector

Retail

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Prepare to produce visual merchandise display.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Review visual merchandising display guidelines, and seek clarification as required.
- 1.2. Obtain merchandise, materials and equipment required for

- the display.
- 1.3. Prepare product labels and price tickets from in-house documents and according to organisational requirements.
 - 1.4. Unpack merchandise according to manufacturer instructions.
2. Display merchandise.
- 2.1. Produce display following visual merchandising display guidelines.
 - 2.2. Ensure merchandise is displayed according to manufacturer instructions where specific requirements for display and storage exist.
 - 2.3. Display merchandise labels and price tickets according to organisational requirements.
 - 2.4. Handle and move stock and equipment according to safe manual handling guidelines to prevent injury to self.
 - 2.5. Promptly return excess stock to storage area, and store according to organisational requirements.
 - 2.6. Check and ensure area around the display remains clear of debris.
3. Maintain display.
- 3.1. Review displays against visual merchandising display guidelines, and refine as required.
 - 3.2. Maintain clear and correct product and pricing information for merchandise.
 - 3.3. Identify damaged or out of date stock, and remove from display as required.
 - 3.4. Rotate and replenish merchandise to maintain optimum stock levels.
 - 3.5. Monitor the display regularly to maintain appearance and cleanliness of display and display area.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

- Reading skills to:
- interpret plain English documents that outline organisational policies and procedures related to display of merchandise.
- Numeracy skills to:
- estimate dimensions of display areas and appropriate size of displays from display documentation.
- Planning and organising skills to:
- prepare for display and complete display activities in a logical and time-efficient sequence.
- Technology skills to:
- prepare product labels and price tickets.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRRMER001 Produce visual merchandise displays

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- follow merchandising display guidelines and organisational procedures to prepare and produce three merchandise displays, from the following list, of varying sizes and complexities:
 - an existing merchandise range
 - a new merchandise range
 - a seasonal merchandise range
 - a promotional event
 - discounted merchandise
- maintain each of the above displays and display area, adequate stock level and appearance of display.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- basic principles of visual merchandising as they relate to producing retail visual merchandise displays
- visual merchandise display guidelines and how they are used in creating a retail displays
- organisational procedures for:
 - correct manual handling techniques for protection of self and merchandise
 - correct storage of merchandise and equipment
 - damaged or out of date stock
 - maintenance of display areas
 - merchandise rotation and replenishment
 - product labelling and pricing
 - unpacking merchandise.

Assessment Conditions

Skills must be demonstrated in a retail environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- a range of retail merchandise
- display areas
- retail display equipment and props
- product labels and price tickets
- ticketing and pricing equipment
- organisational visual merchandise display guidelines
- organisational procedures for:
 - manual handling techniques for protection of self and merchandise
 - storage of merchandise and equipment
 - damaged or out of date stock
 - maintenance of display areas
 - merchandise rotation and replenishment
 - product labelling and pricing
 - unpacking merchandise
- assessment activities that allow the individual to:
 - work within commercial speed, timing and productivity
 - manage tasks and contingencies in the context of the job role.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRRMER003 Coordinate visual merchandising activities

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to coordinate store visual merchandising activities and ensure adherence to organisational standards, policies and procedures for the display of merchandise.

It applies to individuals working in frontline roles in a diverse range of retail industry sectors and business contexts that display retail products for sale. They operate with independence and under limited supervision and guidance from others, and within established organisational policies and procedures.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Merchandising

Unit Sector

Retail

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Coordinate visual merchandise requirements.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Access and interpret organisational visual merchandising guidelines, and policies and procedures.
- 1.2. Communicate visual merchandising standards and display

- requirements to team members.
- 1.3. Plan appropriate timing for producing and dismantling visual merchandise displays.
 - 1.4. Communicate roles and responsibilities for visual merchandising to team members.
 - 1.5. Plan and coordinate promotional and special event displays as directed by management.
2. Supervise visual merchandise activities.
 - 2.1. Supervise construction and maintenance of displays to achieve balance and visual impact.
 - 2.2. Ensure display information accurately depicts product or service being promoted.
 - 2.3. Ensure displays are completed with minimum disruption to customer service and traffic flow.
 - 2.4. Ensure displays meet organisational standards and visual merchandise guidelines.
 - 2.5. Regularly monitor replenishment of merchandise and rotation of stock and take action to ensure optimal stock levels as required.
 3. Review impact of visual merchandise activities.
 - 3.1. Evaluate promotions or special event displays and determine impact on sales results.
 - 3.2. Report on visual merchandising activities to relevant personnel and make suggestions for improvements as required.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS

DESCRIPTION

Problem solving skills to:

- overcome difficulties relevant to the display of merchandise.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRRMER003 Coordinate visual merchandising activities

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- follow merchandising display guidelines, and organisational policies and procedures to coordinate visual merchandise activities for two of the following:
 - an existing merchandise range
 - a new merchandise range
 - a seasonal merchandise range
 - a promotional event
 - discounted merchandise
- for each of the above visual merchandising activities:
 - communicate requirements with team members
 - monitor visual merchandising displays and standards
- report on the effectiveness of the above merchandising activities.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational policies and procedures for:
 - merchandise labelling and pricing
 - required stock levels
 - merchandise rotation and replenishment
- organisational visual merchandise standards and guidelines and their application to visual merchandising activities
- key aspects of relevant industry codes of practice, legislation and statutory requirements for coordinating merchandise presentation:
 - Australian Consumer Law
 - Work Health and Safety (WHS)
- objectives and use of visual merchandise displays
- interpretation of scaled versions of store design, layout and fixture placements
- techniques for creating effective visual merchandise displays:
 - types of displays and their impact

- display location
- display lighting
- display signage
- fundamental elements and principles of visual design and their use in the display and merchandise of products
- commercial impact of incorrect pricing both favourable and unfavourable:
 - customer complaints
 - profitability
- safe work practices for displaying merchandise with particular emphasis on:
 - safe use of equipment
 - safe manual handling techniques for bending, lifting and shifting heavy items
- product knowledge relevant to visual merchandise activities:
 - price
 - features
 - benefits.

Assessment Conditions

Skills must be demonstrated in a retail environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- retail merchandise
- display areas
- retail display equipment and props
- product labels and price tickets
- ticketing and pricing equipment
- relevant documentation:
 - organisational visual merchandise display guidelines
 - organisational policies and procedures for:
 - merchandise labelling and pricing
 - required stock levels
 - merchandise rotation and replenishment
 - relevant industry codes of practice, legislation and statutory requirements for coordinating merchandise presentation:
 - Australian Consumer Law
 - Work Health and Safety (WHS)
- team members; these can be:
 - individuals in an industry workplace, or

- individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRRRTF001 Balance and secure point-of-sale terminal

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to balance and reconcile a register or terminal in a retail environment, clear registers, count money, calculate non cash transactions, and reconcile and record takings.

It applies to individuals working in frontline operational roles in a diverse range retail industry sectors and business contexts. They operate with some independence under general supervision and guidance from others, and within established organisational policies and procedures.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Retail Financials

Unit Sector

Retail

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Balance and secure takings.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1.Perform register or terminal balance at designated times.
- 1.2.Separate cash float from takings prior to balancing and secure takings.

- 1.3. Supply change to register or terminal and accurately record.
 - 1.4. Obtain and interpret register or terminal reading or print-out.
 - 1.5. Secure cash and non cash documents according to organisational procedures.
2. Reconcile takings.
 - 2.1. Count cash accurately.
 - 2.2. Calculate non cash documents accurately.
 - 2.3. Determine balance between register or terminal reading and sum of cash and non cash transactions.
 - 2.4. Investigate or report discrepancies between register or terminal reading and sum of cash and non cash transactions to relevant personnel.
 - 2.5. Record takings and file records according to organisational procedures.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRRRTF001 Balance and secure point-of-sale terminal

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- consistently apply organisational policies and procedures to:
 - balance a register or terminal on three occasions with complete accuracy
 - reconcile three different sets of takings comprising both cash and non-cash with complete accuracy
 - identify and resolve three different types of balancing discrepancies
 - process three different types of takings according to organisational policies and procedures.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- role and importance of the balancing process
- techniques for identifying and resolving discrepancies
- functions and procedures for operating point-of-sale equipment:
 - opening and closing
 - balancing
 - clearance of terminal and transference of tender
 - recording takings
 - consumables required by system
 - security
- cash handling procedures:
 - counting cash
 - handling cash floats
 - change required, denominations of change and tendering change
 - security
- organisational policies and procedures for non-cash transactions:
 - credit cards
 - EFTPOS

- vouchers
- organisational policies and procedures for:
 - exchanges
 - refunds
 - lay-by
 - cash handling
 - cash float
 - operation of point-of-sale equipment
 - register or terminal balance
 - security of cash and non cash transactions.

Assessment Conditions

Skills must be demonstrated in a retail environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- organisational policies and procedures related to point-of-sale
- point-of-sale equipment and consumables
- financial transaction documentation for non-cash sales
- cash
- assessment activities that allow the individual to work with commercial speed, timing and productivity.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRXCEG001 Engage the customer

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to interact and communicate with a diverse range of customers to assist with basic enquiries and contribute to a service culture.

It applies to individuals working in frontline customer service roles in a diverse range of industry sectors and business contexts. They operate with some independence under general supervision and guidance from others, and within established organisational policies and procedures.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Customer Engagement

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Engage customers.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1. Greet customers in a polite and friendly manner within designated response times and make them a priority over other workplace duties.

- 1.2. Clearly communicate with customers using appropriate verbal and non-verbal communication.
- 1.3. Adapt communication style to appropriately communicate with customers from diverse backgrounds.
2. Assist customers.
 - 2.1. Identify and act on opportunities to assist customers and be available to assist customers when needed.
 - 2.2. Question and actively listen to customers to determine their needs.
 - 2.3. Resolve routine customer problems according to individual responsibility level and organisational policies and procedures.
 - 2.4. Address general customer enquiries and provide accurate information in a clear and courteous manner.
3. Contribute to a service culture.
 - 3.1. Act in line with organisational service standards to ensure quality customer service.
 - 3.2. Show interest in customer's needs and maintain a welcoming customer environment free of complacency.
 - 3.3. Seek assistance from relevant personnel when customer's needs are beyond scope of own responsibility.
 - 3.4. Identify and take opportunities to improve customer service standards.
 - 3.5. Refer customer service issues and feedback to relevant personnel for action.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRXCEG001 Engage the customer

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- contribute to a customer service culture by providing customer service, in line with organisational service standards, across four different customer interactions
- for the above four customer interactions, individually or cumulatively involve:
 - customers from diverse backgrounds
 - resolution of two routine customer problems
 - provision of accurate information to address two general customer enquiries
 - referral of unresolved customer enquiry
 - use of effective communication techniques and positive body language.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational service standards and procedures for:
 - designated customer service response times
 - interacting with customers
 - solving routine customer problems
 - providing information to customers
- basic principles for achieving positive customer service
- verbal and non-verbal communication
- techniques for effective communication:
 - open and closed questioning
 - paraphrasing
 - effective listening
 - voice tonality and volume
- body language and its role in customer service
- effective communication strategies for interacting with customers of diverse backgrounds
- commercial impact of:
 - positive customer service
 - poor customer service

- organisational information and sources of information to assist customer with customer enquiries.

Assessment Conditions

Skills must be demonstrated in a services industry environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- relevant documentation:
 - organisational service standards and procedures for:
 - designated customer service response times
 - interacting with customers
 - solving routine customer problems
 - providing information to customers
- customers from a diverse range of backgrounds; these can be:
 - individuals in an industry workplace, or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRXCEG003 Build customer relationships and loyalty

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to build customer relationships and foster customer loyalty.

It applies to individuals working in frontline customer service roles in a diverse range of industry sectors and business contexts. They operate with independence and under limited supervision and guidance from others, and within established organisational policies and procedures.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Customer Engagement

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Develop relationships with customers.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Provide personalised service to customers in a professional manner that promotes repeat business.
- 1.2. Identify repeat business and acknowledge customer return.
- 1.3. Provide tailored recommendations for products and services

- based on known individual customer needs.
2. Generate customer loyalty.
 - 2.1. Convert customers to brand advocates through exemplary customer service.
 - 2.2. Inform customers of benefits associated with promotions and loyalty programs as required.
 - 2.3. Identify trends in customer demands for products and services and communicate with relevant personnel to ensure availability.
 3. Deal with escalated customer complaints.
 - 3.1. Clarify information regarding escalated customer complaints referred from team members.
 - 3.2. Take action to pacify customer maintaining a calm and professional manner.
 - 3.3. Identify source of customer dissatisfaction and seek appropriate solutions in consultation with the customer.
 - 3.4. Ensure the customer is satisfied with solutions and offer compensation in line with level of responsibility.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none"> • interpret plain English documents that outline organisational policies and procedures relevant to customer service.
Initiative and enterprise skills to:	<ul style="list-style-type: none"> • identify and act on opportunities to enhance a customer's experience.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRXCEG003 Build customer relationships and loyalty

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- provide current, accurate and relevant information and assistance to four different customers regarding the following to build customer brand loyalty:
 - promotional activities
 - products and services
 - brand or business customer benefits
- identify trends in customer purchasing patterns and make recommendations that enhance customer service and loyalty
- take appropriate action to resolve two escalated customer complaints.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- techniques for:
 - providing personalised extemporaneous customer service
 - anticipating customer preferences, needs and expectations throughout the service experience
 - building customer loyalty
 - resolving escalated customer complaints
 - pacifying dissatisfied customers
- commercial benefits of building customer relationships and loyalty
- industry and organisational:
 - professional service standards
 - attitudes and attributes expected when engaging with customers
 - different customer service needs and expectations
 - types of customer benefits
 - essential features and use of customer databases
- key aspects of Australian consumer and privacy law as relevant to customer interactions.

Assessment Conditions

Skills must be demonstrated in a services industry environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- relevant documentation:
 - industry and organisational:
 - professional service standards
 - attitudes and attributes expected when engaging with customers
 - different customer service needs and expectations
 - types of customer benefits
- current plain English regulatory documents distributed by government regulators for:
 - Australian Consumer Law
 - privacy law
- customers; these can be:
 - individuals in an industry workplace, or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRXIND002 Organise and maintain the store environment

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to organise, clean and maintain the work environment to ensure optimal workplace appearance and safety.

It applies to individuals working in frontline operational roles in a diverse range of industry sectors and business contexts. They operate with some independence under general supervision and guidance from others, and within established organisational policies and procedures.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Working in Industry

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes

1. Clean the store environment.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1.Clean work areas according to work health and safety requirements and organisational procedures.
- 1.2.Use and store cleaning products and equipment according to manufacturer instructions.

- 1.3. Complete cleaning tasks safely and efficiently with minimum inconvenience to customers and team members.
2. Maintain the store environment.
 - 2.1. Store products and equipment in designated storage areas to minimise hazards and maintain the store appearance.
 - 2.2. Sort, recycle, and dispose of waste according to organisational procedures.
 - 2.3. Ensure customer services and point of sale areas are adequately stocked to minimise disruption when serving customers.
 - 2.4. Identify and remove potential workplace hazards within scope of responsibility, and report any unresolved hazards to relevant personal.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none"> • interpret manufacturers' instructions, warning labels and instructions for the use of chemicals and hazardous substances.
Numeracy skills to:	<ul style="list-style-type: none"> • follow simple dilution ratios for cleaning products.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRXIND002 Organise and maintain the store environment

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- organise and maintain a designated work area, within a store environment, during three shifts
- correctly use cleaning products and equipment to perform two cleaning tasks within the store environment.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- common cleaning product labels that identify chemicals and hazardous substances and their meaning
- organisational policies and procedures relevant to the organisation and maintenance of the store environment:
 - work health and safety (WHS)
 - general housekeeping
 - personal hygiene
 - reporting problems and faults
 - point of sale stock requirements
 - use, maintenance and storage of cleaning products and equipment
 - use of hazardous cleaning substances
 - waste disposal, recycling and environmental protection.

Assessment Conditions

Skills must be demonstrated in a services industry environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- organisational policies and procedures for:

- work health and safety
- general housekeeping
- personal hygiene
- reporting problems and faults
- point of sale stock requirements
- use, maintenance and storage of cleaning products and equipment
- use of hazardous cleaning substances
- waste disposal, recycling and environmental protection
- cleaning products and equipment
- manufacturer instructions for use of cleaning equipment, cleaning materials and hazardous substances
- workplace waste for disposal
- work areas to be maintained
- assessment activities that allow the individual to work with commercial speed, timing and productivity.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRXINV004A Buy merchandise

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to buy merchandise in a retail environment. It involves analysing the market, planning the product range, establishing supplier relationships, negotiating supply of goods, introducing the product range, maximising profit and rationalising stock.

Application of the Unit

Application of the unit

This unit requires the consistent application of store policy and legislative requirements in regard to market analysis, planning merchandise and service ranges, procurement and rationalisation of stock, maintenance of supplier relations, quality control and staff merchandise training. The team member is required to recognise known and unknown loss and how it affects buying and ordering patterns, and to interpret and apply market trends to the store situation to create opportunities to improve sales and service while maximising profits.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units

Nil

Prerequisite units Nil

Employability Skills Information

Employability skills The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Analyse market.	<p>1.1 Identify and analyse <i>store merchandise and marketing policy and procedures</i>.</p> <p>1.2 Monitor <i>customer requirements</i> formally and informally in order to evaluate market trends and customer needs.</p> <p>1.3 Research new products and services.</p> <p>1.4 Identify, evaluate, implement and review opportunities to improve sales.</p> <p>1.5 Monitor <i>merchandise range</i> to identify the demand for individual items and seasonal variations.</p> <p>1.6 Monitor market competition.</p>

ELEMENT	PERFORMANCE CRITERIA
2 Analyse factors affecting stock levels and range requirements.	2.1 Apply mathematical calculations to measure analyse and report on existing and potential stock loss and dissipation and its <i>impact on business operations</i> . 2.2 Analyse store or department sales figures to determine contribution rates of product lines. 2.3 Determine store or department space requirements and brand product mix according to store policy. 2.4 Determine future directions for merchandise ranges according to store policy.
3 Plan merchandise ranges.	3.1 Develop and implement buying plan according to outcomes of analysis and store policy. 3.2 Determine future directions for merchandise ranges according to store policy. 3.3 Liaise with <i>relevant personnel</i> to coordinate promotional and marketing activities. 3.4 Analyse store or department sales figures to determine contribution rates of product lines. 3.5 Determine investment levels with reference to previous years' sales figures, predicted demand and projected gross profit. 3.6 Identify and act upon contribution improvement opportunities. 3.7 Determine store or department space requirements and brand product mix according to store policy. 3.8 Determine stock levels according to peak seasons, special events and supplier lead time. 3.9 Analyse, evaluate and amend merchandise range and sources of supply according to management, staff and customer <i>feedback</i> .
4 Establish supplier relations.	4.1 Develop cooperative relationships with supplier representatives according to store policy. 4.2 Continuously review existing suppliers in regard to quality, profitability, service and delivery status. 4.3 Identify new suppliers and delete existing suppliers according to <i>performance indicators</i> .

ELEMENT	PERFORMANCE CRITERIA
5 Negotiate supply of goods.	<p>5.1 <i>Negotiate</i> and implement arrangements with suppliers according to store policy and procedures, and communicate to relevant personnel.</p> <p>5.2 Authorise special <i>pricing arrangements</i> and customer payment agreements and communicate to relevant staff and management personnel according to store policy.</p> <p>5.3 Monitor records of suppliers and stock for accuracy and legibility and take appropriate action where necessary.</p> <p>5.4 Identify <i>market factors</i> affecting supply and communicate to relevant personnel.</p> <p>5.5 Convey complete and accurate records of negotiations and agreements to relevant personnel within designated timelines.</p> <p>5.6 Take immediate corrective action where potential or actual problems with supply are indicated.</p> <p>5.7 Identify and develop new suppliers to maintain and improve sales and service delivery.</p> <p>5.8 Analyse, evaluate and amend stock range and source of supply according to management, staff and customer feedback.</p>
6 Monitor quality control.	<p>6.1 Establish merchandise quality standards with suppliers according to <i>legal requirements</i>, customer requirements and store policy.</p> <p>6.2 Monitor and ensure quality of merchandise during supply, manufacture and delivery processes.</p> <p>6.3 Record and analyse stock return figures against target figure.</p>
7 Introduce product ranges.	<p>7.1 Inform relevant personnel of new product ranges and advise on preferred location of merchandise.</p> <p>7.2 Implement <i>staff training</i> in product knowledge to introduce product range.</p> <p>7.3 Demonstrate or display new ranges to <i>staff</i> according to store merchandising plan.</p>

ELEMENT	PERFORMANCE CRITERIA
8 Maximise profit.	<p>8.1 Calculate or estimate individual product range contributions against budget and targets.</p> <p>8.2 Develop and implement product range assessment checks against budget and targets.</p> <p>8.3 Calculate or estimate overall selling space contributions according to store merchandising plan.</p> <p>8.4 Maximise profit margins in negotiations with suppliers.</p> <p>8.5 Determine store pricing policies according to stated net profit margin in store merchandising plan and consumer law.</p> <p>8.6 Negotiate specifications for <i>terms of trade</i>.</p>
9 Rationalise stock.	<p>9.1 Review and update stock range at regular intervals.</p> <p>9.2 Identify stock lines to be <i>deleted</i> and take action to minimise adverse effect on profit.</p> <p>9.3 <i>Consolidate stock</i> as required to maximise sales potential.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- evaluating and analysing:
 - market trends and projections
 - sales figures and investment levels
 - space requirements
- negotiation skills
 - interpersonal communication skills to:
 - liaise with relevant personnel
 - establish supplier relationships, negotiate supply of goods
 - provide information and training on product range
 - provide feedback and coaching through clear and direct communication

REQUIRED SKILLS AND KNOWLEDGE

- ask questions to identify and confirm requirements
- give instructions
- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication
- group presentation skills
- report writing
- using and applying technology, including electronic data interchange
- literacy and numeracy skills in relation to:
 - developing pricing policies
 - calculating and estimating product range contributions
 - calculating the cost of stock loss and dissipation
 - analysing stock figures.

The following knowledge must be assessed as part of this unit:

- store policy and procedures in regard to:
 - marketing
 - buying
 - profit margins
 - quality control
 - stock inventory levels: current and future
 - stock location and allocated areas
- staff product knowledge training
- industry and store information, including:
 - market needs
 - range of merchandise available
 - market competition
 - existing and possible new suppliers
 - channels of distribution
- relevant legislation and statutory requirements
- relevant industry codes of practice
 - pricing procedures, including GST requirements.

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- consistently applies store policy and procedures, industry codes of practice, statutory requirements and regulations in regard to buying, merchandising and marketing practices
- applies market analysis, planning, procurement and rationalisation of stock and merchandise and service ranges, maintenance of supplier relations and quality control
- interprets market trends and applies these to the store situation to create opportunities to improve sales and services, while maximising profits
- analyses market and plans the introduction of a product and service range
- identifies suppliers, negotiates supply of goods, rationalises stock and monitors quality control
- trains and communicates information to and from staff or team members in regard to stock and merchandise and service range.

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant information and documentation, including:
 - store policy and procedures
 - legislation and statutory requirements
 - industry codes of practice
 - merchandise and supplier data.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback

EVIDENCE GUIDE

- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Store merchandise and marketing policies may include:

- store culture
- current market position
- target market.

Customer requirements may be monitored by:

- questionnaires
- surveys
- observation.

Merchandise range may include:

- existing stock
- new stock.

RANGE STATEMENT

Impact on business operations may include:

- buying
- ordering patterns
- planning
- budgeting.

Relevant personnel may include:

- frontline staff
- relevant managers
- supervisor
- team leader
- specialist staff.

Feedback may be sought and given:

- verbally
- in writing
- in groups
- individually.

Performance indicators may include:

- price
- quality
- performance
- supply reliability
- merchandise range.

Negotiation process may include:

- face-to-face
- correspondence
- meetings
- telephone or electronic media.

Pricing arrangements may include:

- cash on delivery (COD)
- cheque
- credit card
- invoice
- GST.

Market factors may include:

- fashion trends

RANGE STATEMENT

- product availability
 - sales performance.
- Legal requirements* may include:
- sale of second-hand goods
 - Trade Practices and Fair Trading Acts
 - licence, patent or copyright arrangements
 - pricing procedures, including GST requirements.
- Staff training* may include:
- on-the-job
 - off-the-job
 - one-on-one coaching
 - any combination of the above.
- Staff* may include:
- full-time, part-time, casual or contract staff
 - people from a range of social, cultural and ethnic backgrounds
 - people with varying degrees of language and literacy levels.
- Terms of trade* may include:
- special buys
 - payment terms
 - promotional deals with supplier.
- Stock lines may be *deleted* due to:
- changes in store policy and culture
 - sales performance
 - customer requirements
 - fashion trends
 - product availability
 - problems with supply.
- Methods to *consolidate stock* may include:
- movement of stock between departments or stores.

Unit Sector(s)

Sector Cross-Sector

Competency field

Competency field Inventory

SIRXMKT002 Use social media to engage customers

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to manage the use of social media platforms to interact with customers and promote products and services.

It applies to individuals working in customer service management roles in a diverse range of industry sectors and business contexts that have a social media presence. They operate independently with some responsibility for decision making, and within established organisational policies and procedures.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Marketing

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Prepare to use social media.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Review organisational social media requirements and policies and procedures.
- 1.2. Research various social media platforms, and identify and compare their audience, functionality and reach.

- 1.3. Research emerging trends in social media platform use.
- 1.4. Select social media platforms that meet brand needs and reach target customer.
- 1.5. Source information and content from internal and external sources for use on social media platforms
- 1.6. Develop content in line with target audience, brand cultures and social media requirements as required.
- 1.7. Source or create a social media calendar.
2. Use social media to enhance customer engagement.
 - 2.1. Create opportunities to attract and promote user-generated content.
 - 2.2. Respond to customers in a timely manner, directing them to relevant information as required.
 - 2.3. Identify potential brand damage, and take action to prevent escalation.
 - 2.4. Promptly respond to customer complaints and issues according to social media policies and procedures.
 - 2.5. Adhere to legal and ethical practices for social media use.
3. Promote products and services.
 - 3.1. Identify social media marketing opportunities and curate and post content to promote products and services.
 - 3.2. Use social media to promote special offers, events and promotions as required.
 - 3.3. Post content according to social media policies and procedures.
4. Review social media use.
 - 4.1. Track social media activity using monitoring tools.
 - 4.2. Identify opportunities to improve customer experience, and recommend to relevant personnel.
 - 4.3. Update the look and feel of the social media account to maximise effectiveness.
 - 4.4. Report on social media engagement and reach to relevant personnel.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS

DESCRIPTION

- Reading skills to:
- interpret technical terminology relevant to the use of social media platforms.

- Writing skills to:
- use correct spelling and grammar in social media posts.
- Technology skills to:
- upload images, text files, PDF files, audio files, video files and link associated files
 - import and export software functions
 - conduct online research for appropriate content
 - compare social media platform functionality.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRXMKT002 Use social media to engage customers

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- research four social media platforms and select two platforms for use, appropriate to business needs and target customer
- use the above two social media platforms to engage the customer by:
 - curating and posting written and visual content appropriate to the target customer
 - promote one organisational marketing activity
 - respond to two of the following types of customer social media posts:
 - customer reviews
 - user generated content
 - questions
 - complaints
 - troll
- review effectiveness of social media platform across a one month period by:
 - reporting on social media activity
 - making at least one recommendation for continuous improvement of social media use.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational policies and procedures for social media use
- rules and regulations and terms of use of specific social media platforms:
 - privacy
 - spamming
 - copyright
 - creative commons
- social media trends:
 - trending platforms
 - consumer behaviour
 - trending content

- various social media platforms:
 - demographic of primary users
 - key features and uses
 - integration into business activity
 - useability
 - privacy and security features
 - costs
- legal and ethical practices for use of social media:
 - responsible use of platforms
 - responsible marketing practices
 - fair competition guidelines
 - duty of care
 - bullying and harassment policy
- types of social media users and their impacts:
 - troll
 - angry customer
 - misguided customer
 - unhappy customer
 - complimentary customers
 - brand advocates
- techniques for:
 - marketing the business using social media platforms:
 - promoting products
 - promoting special events
 - creating brand awareness
 - responding to customer posts on social media:
 - customer reviews
 - user generated content
 - questions
 - complaints
 - troll
- social media tools, and their use, for:
 - monitoring
 - scheduling social media content
 - capturing engagement and reach data
- commercial impact of social media platform both favourable and unfavourable:
 - importance of consumer reviews and user generated content
 - value of building a community of advocates on a social media platform
 - types of crisis issues or conflicts that can arise on social media locally, nationally and internationally

- sources and types of social media content:
 - product information
 - images and photos
 - links to other websites
 - videos
 - text and graphics
 - current trends
 - Internet.

Assessment Conditions

Skills must be demonstrated in:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- relevant documentation:
 - organisational policies and procedures for social media use
 - legal and ethical use of social media
- social media content calendar that details:
 - key events and promotions
 - milestones and relevant dates
 - content for release
- files for use across social media platforms:
 - image files
 - text files
 - PDF files
 - audio files
 - video files
 - link associated files
- computer or mobile device with Internet access
- social media monitoring tools
- social media platforms
- customer postings on social media platforms
- assessment activities that allow the individual to work with commercial speed, timing and productivity.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRXPDK001 Advise on products and services

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to develop product and service knowledge and provide information to customers.

This unit applies to individuals working in frontline customer service and sales roles in a diverse range of industry and business contexts. They operate with some independence under general supervision and guidance from others, and within established organisational policies and procedures.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Product Knowledge

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Develop product and service knowledge.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Identify and access sources of information on products and services.
- 1.2. Interpret information about availability, features and benefits of products and services.

- | | |
|----------------------------------|--|
| | 1.3. Compare products and services based on product information. |
| | 1.4. Identify and use opportunities to update knowledge for the product and service range. |
| 2. Respond to customer requests. | 2.1. Answer customer questions about products and services with current and accurate information. |
| | 2.2. Use questions to clarify customer information needs. |
| | 2.3. Explain product and service details using clear communication. |
| | 2.4. Source additional information when answer to customer request is unknown or refer to relevant colleagues. |
| 3. Enhance information provided. | 3.1. Identify situations where additional information may assist the customer. |
| | 3.2. Advise on alternative products or services that may meet customer needs when requested item is not available. |
| | 3.3. Recommend complementary products, specials, new lines and promotions to customers according to their needs. |

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS

DESCRIPTION

Numeracy skills to:

- interpret pricing information.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRXPDK001 Advise on products and services

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- access and interpret sources of information on four different products or services
- respond to four different customer inquiries for product or service information that individually or cumulatively require provision of information on all of the following:
 - features and benefits
 - price
 - alternative products or services
 - complementary products or services.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational policies and procedures for:
 - interactions with customers
 - product or service pricing
- basic key aspects of legislation that impact provision of information for the product or service range:
 - Australian Consumer Law
 - product or service specific legislation
- interpersonal communication techniques:
 - active listening and questioning
 - communication methods which convey information clearly and concisely
- product and service information for the product or service range:
 - features and benefits
 - price
 - care and handling of products
 - availability
 - storage requirements, shelf life and use by date
 - warranties

- ingredients or materials contained in product
- origins
- alternative products and services
- complementary products and services.

Assessment Conditions

Skills must be demonstrated in a services industries environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- a product or service range
- sources of product information
- relevant documentation:
 - current plain English regulatory documents distributed by government regulators outlining factors that impact provision of information for the product or service range
 - price lists
 - organisational policies and procedures relevant to product and service advice
- customers; these can be:
 - customers in an industry workplace, or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRXRSK002 Maintain store security

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to maintain store security in a retail environment.

It applies to individuals working in frontline management roles in a diverse range of industry sectors and business contexts. They operate independently with some responsibility for others and decision making, and within established organisational policies and procedures.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Risk Management and Security

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Monitor and maintain store security.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1. Implement organisational policies and procedures to ensure store security is maintained.

1.2. Monitor and review security procedures continually and act on opportunities to improve store security.

1.3. Maintain security of merchandise, cash, points of sale and

- keys.
- 1.4.Ensure store security equipment is used and in correct working order.
 - 1.5.Report matters impacting store security to relevant personnel.
 - 1.6.Document breaches of security as required.
2. Facilitate security awareness.
 - 2.1.Inform team members of organisational policies and procedures for security.
 - 2.2.Provide team members with feedback on their implementation or non-implementation of security procedures.
 - 2.3.Provide team members with ongoing supervision and training to facilitate security awareness.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRXRSK002 Maintain store security

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- maintain store security over three different work shifts by:
 - monitoring adherence to organisational security policies and procedures
 - responding to two occurrences of non-adherence to security policies and procedures
 - communicating security policies and procedures to one team member
 - ensuring security equipment is utilised and in correct working order
 - reporting on opportunities for improved store security.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational policies and procedures for:
 - use of security equipment
 - suspicious customer behaviour
 - suspicious team member behaviour
 - armed robbery
 - cash and non-cash security
 - merchandise security
 - theft
 - responding to security breaches
 - reporting security risks and breaches
 - surveillance of merchandise
 - personal security
 - general store security
 - team members' security training
 - security for opening and closing premises
 - reporting problems and faults
 - security of visitors, sales representatives, contractors and vendors
 - security risks likely to endanger customers or team members

- legislation as relevant to store security and own level of responsibility:
 - privacy laws
 - Australian Consumer Law
 - reporting procedures
- impacts of security breaches on individuals and organisation:
 - emotional distress
 - financial loss
 - commercial impacts
- common security risks within the retail workplace and techniques to:
 - identify risk
 - minimise risk
- types of store alarms and security systems used in industry.

Assessment Conditions

Skills must be demonstrated in a services industry environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- relevant equipment:
 - alarm systems
 - surveillance equipment
 - point-of-sale equipment
 - communication equipment
- relevant documentation:
 - current plain English regulatory documents distributed by government regulators legislation as relevant to store security and own level of responsibility as listed in Knowledge Evidence
 - organisational policies and procedures as listed in the Knowledge Evidence
- customers and team members; these can be:
 - individuals in an industry workplace, or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRXSL001 Sell to the retail customer

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to deliver quality customer service and sell to retail customers. It requires the ability to determine customer needs, match products and services to their needs, and facilitate a sale.

This unit applies to all retail sectors and business sizes from large format stores to small independents. It applies to retail personnel at all levels who play a role in engaging with customers with the purpose of selling.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Sales

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Establish customer needs.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Connect with the customer within designated response times and establish rapport.
- 1.2. Use questioning and active listening to facilitate effective two-way communication.

- 1.3. Observe and determine appropriate level of interaction based on customer verbal and non-verbal cues.
- 1.4. Determine and clarify customer preferences, needs and expectations.
2. Provide advice on products and services.
 - 2.1. Use product and service knowledge to tailor options to specific customer needs, and offer alternatives when product is unavailable.
 - 2.2. Clearly explain and promote product and service features and benefits where relevant.
 - 2.3. Advise on promotional events where relevant.
 - 2.4. Provide additional information to address customer questions and objections.
 - 2.5. Offer comparisons to competitor product or service range as required.
 - 2.6. Collaborate with the customer to determine product or service option most suited to their needs.
 - 2.7. Take opportunities to upsell and cross sell products and services that enhance customer request and maximise profitability of sale.
3. Facilitate the sale of products and services.
 - 3.1. Select and use appropriate techniques to close sale.
 - 3.2. Direct the customer to designated point-of-sale and process sale, as required, according to organisational procedures.
 - 3.3. Farewell customer on leaving, and invite to return.
 - 3.4. Provide any required after sales service according to organisational procedures.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

- Reading skills to:
- interpret:
 - detailed in-house and supplier product information documents
 - plain English documents that outline organisational customer service policy and procedures.
- Numeracy skills to:
- interpret basic fee information from in-house documents and complete basic pricing calculations.
- Problem-solving skills to:
- respond to customer objections and provide appropriate solutions to satisfy customer needs.
- Technology skills to:
- use technologies equipped with search functionality and information systems to source product and service information.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRXSL001 Sell to the retail customer

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- interact with four different retail customers to initiate and close the sale of different retail products or services
- demonstrate the following during the above customer interactions:
 - appropriate communication
 - establishment and clarification of customer needs, wants and expectations
 - product and/or service knowledge
 - appropriate sales approach to sell benefits and features of products and/or services
 - overcome objections and close sales
 - upsell and/or cross sell additional products and/or services that complement the sale
 - promotion of customer loyalty and repeat sales.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- appropriate body language for customer service
- basic principles of positive customer service and sales
- open and closed questioning techniques related to the sale of product and services
- verbal and non-verbal cues indicating customer understanding of information
- techniques for effective communication with customers of diverse backgrounds:
 - cultural diversity
 - special needs
- sales techniques:
 - opening techniques
 - recognising buying signals
 - strategies to focus customer on specific products and services
 - selling add-ons and complementary products
 - overcoming customer objections
 - closing techniques

- primary components of consumer protection laws that relate to selling products and services, especially organisational responsibility for supplying products and services as described or substituting suitable products and services when unable
- primary components of privacy law, and actions that retail business must take to protect privacy of customer information
- for the specific retail sector:
 - professional service standards and protocols for retail industry personnel
 - attitudes and attributes expected by the retail industry to work with customers
 - different customer service needs and expectations
- for the particular retail organisation:
 - product and service knowledge:
 - product and service range offering
 - product specifications, features and benefits
 - designated response times for providing customer service
 - customer service procedures including recording of and storing customer details.

Assessment Conditions

Skills must be demonstrated in a retail environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- relevant documentation:
 - organisational policies and procedures for:
 - customer service
 - sale of products and services
 - resolving customer complaints
 - collection and storage of customer details
 - organisational product information and price lists
 - supplier brochures, information sheets and price lists
 - promotional activity information
 - current plain English regulatory documents distributed by government regulators for:
 - consumer protection law
 - privacy law
- customers with whom the individual can interact to sell products and services; these can be:
 - individuals in an industry workplace, or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment operated within a training organisation

- assessment activities that allow the individual to:
 - work within commercial speed, timing and productivity
 - manage tasks and contingencies in the context of the job role.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SIRXSL002 Follow point-of-sale procedures

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to follow point-of-sale work systems, process transactions and complete sales.

It applies to individuals working in frontline operational roles in a diverse range of industry sectors and business contexts. They operate with some independence under general supervision and guidance from others, and within established organisational policies and procedures.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Sales

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Follow point of sale work systems.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1.Open and close point-of-sale terminal at designated times and according to organisational procedures.
- 1.2.Clear point-of-sale terminal and transfer cash.
- 1.3.Handle cash according to organisational policies and

- procedures.
- 1.4.Maintain supplies of change at agreed levels in point-of-sale terminal to agreed levels.
 - 1.5.Maintain adequate supplies of consumables.
2. Process point-of-sale transactions.
 - 2.1.Identify transaction type and required procedure to be followed.
 - 2.2.Correctly interpret sale price information.
 - 2.3.Make accurate calculations for pricing and collection of payment.
 - 2.4.Enter accurate sale information into point-of-sale equipment.
 - 2.5.Confirm price to customer and check customer payment against sale value.
 - 2.6.Provide correct change for cash payments.
 - 2.7.Identify transaction errors, follow procedures for resolution and complete accurate records.
 3. Complete sales.
 - 3.1.Generate and complete documentation associated with the sale.
 - 3.2.Confirm and process any purchase follow up activities.
 - 3.3.Acknowledge and thank customer in line with organisational policy.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Numeracy skills to:	<ul style="list-style-type: none"> • interpret numerical information from various sources and calculate accurately with or without the use of a calculator. • measure or estimate quantities to calculate costs. • calculate percentage discounts.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

Assessment Requirements for SIRXSL002 Follow point-of-sale procedures

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- follow procedures for set up, maintenance and close of point-of-sale area/terminal on three different occasions
- perform three point-of-sale transactions for each of the following:
 - cash sales
 - non-cash sales
- perform three point-of-sale transactions for each of the following:
 - refunds
 - exchanges
- make six accurate financial calculations relating to product pricing that individually or cumulatively involve:
 - multiple products
 - products of varying prices
 - products with percentage discounts
- follow procedures to complete four sales that require post purchase activity.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational policies and procedures for:
 - exchanges
 - refunds
 - lay-by
- basic key aspects of legislation that impact point-of-sale activities:
 - Australian Consumer Law
- features of products sold by the organisation
- functions and procedures for operating point-of-sale equipment:
 - opening and closing
 - clearance of terminal and transference of tender

- recording takings
- consumables required by system
- security
- cash handling procedures:
 - counting cash
 - handling cash floats
 - change required, denominations of change and tendering change
 - security
- procedures for non-cash transactions:
 - credit cards
 - EFTPOS
 - vouchers
- types of purchase follow up activities and associated organisational policies and procedures:
 - placing of orders
 - delivery
 - issuing of invoices
 - issuing of receipts
 - wrapping and packing.

Assessment Conditions

Skills must be demonstrated in a service industries environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- organisational policies and procedures for point-of-sale activities
- current plain English regulatory documents distributed by government regulators outlining key aspects of legislation that impact point-of-sale activities as listed in the Knowledge Evidence
- point-of-sale equipment and consumables
- financial transaction documentation for non-cash sales
- cash
- assessment activities that allow the individual to work with commercial speed, timing and productivity.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ca051b1b-5101-4ec2-ac1c-49699303188d>

SISOSCB001 SCUBA dive in open water to a maximum depth of 18 metres

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to plan and complete recreational SCUBA dives to a maximum depth of 18 metres and to respond to problematic and emergency situations involving self and dive buddy. It also requires the ability to assemble and disassemble equipment and to complete basic maintenance at the water's edge.

It applies to dive leaders, usually known as divemasters, or instructors and to assistant instructors who use these skills when leading participants in SCUBA diving activities. Leadership skills are provided in complementary units.

This unit applies to any type of organisation that delivers SCUBA diving activities and dive instruction including commercial, not-for-profit and government organisations.

In order to procure air, equipment, and other services to engage in recreational open water diving without supervision, divers must hold certification (C-Card) issued by an industry authorised organisation. That industry certification may or may not be issued concurrently with an Australian Qualification Framework (AQF) qualification or Statement of Attainment identifying achievement of competency in this unit. C-Card certification would be required to gain employment as a divemaster or instructor.

Those delivering training and assessment to support this unit should consult the relevant industry bodies to determine any partnership arrangements for courses, trainers and assessors that can lead to joint AQF and industry regulated C-Card certification.

Pre-requisite Unit

Nil

Competency Field

SCUBA Diving

Unit Sector

Outdoor Recreation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes

1. Plan dives.

2. Prepare for the dive.

3. Complete dives.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1. Determine site, depth and duration of dives.

1.2. Identify hazards and medical problems and assess risks associated with use of equipment, site, depth and duration of dives.

1.3. Prepare dive plans for single and repetitive dives according to industry technical and safety criteria.

1.4. Calculate no decompression limits and maximum operating depth.

1.5. Use dive computer or dive tables, as required, to plan requirements.

2.1. Select and assemble dive equipment suited to conditions and dive requirements, and check for safe working condition.

2.2. Utilise dive computers or dive tables, as required, to finalise details of dive, according to industry technical and safety criteria.

2.3. Confirm activity safety and emergency response procedures to ensure compliance during activities.

2.4. Confirm protocols for communications between divers buddy and activity leaders.

2.5. Fit and adjust equipment and exposure suit to self, in conjunction with buddy, to ensure comfort and safety.

2.6. Complete buddy cross checks for all equipment.

2.7. Participate in pre-dive roll call.

3.1. Utilise techniques to enter and exit the water according to conditions and own ability.

3.2. Execute controlled descents and ascents with buddy and equalise at appropriate times.

3.3. Adjust and maintain positive, neutral and negative buoyancy at appropriate times during dive.

3.4. Control underwater swimming and navigate a basic course.

3.5. Monitor depth and time throughout dive, according to

- planned dive tables or use of dive computer data.
- 3.6. Monitor air supply, check pressure gauges regularly and communicate supplies with buddy.
 - 3.7. Use techniques that minimise damage to the diving environment throughout all activities.
 - 3.8. Participate in post-dive roll call and ensure dive log is completed.
 - 3.9. Disassemble SCUBA gear on completion of dive.
4. Maintain safety and complete rescues.
 - 4.1. Safely approach, and negotiate obstacles and hazards to minimise risk of injury.
 - 4.2. Maintain buddy contact, cooperation and communication throughout dive.
 - 4.3. Identify problematic or emergency situations promptly, and assist buddy with rescues.
 - 4.4. Self-rescue from problematic or emergency situations.
 - 4.5. Use an alternate air source and make controlled air sharing ascents.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none"> • interpret detailed and familiar organisational safety and emergency response procedures.
Oral communication skills to:	<ul style="list-style-type: none"> • use clear and unambiguous verbal and non-verbal communications to make intent known with diving buddy and support crew.
Numeracy skills to:	<ul style="list-style-type: none"> • interpret and calculate numerical data involving pressures, percentages and depths.
Teamwork skills to:	<ul style="list-style-type: none"> • work in harmony with a buddy diver to plan and complete safe dives.
Planning and organising skills to:	<ul style="list-style-type: none"> • manage own timing to complete activities within planned timeframes.
Self-management skills to:	<ul style="list-style-type: none"> • critically analyse all circumstances and implications to provide a prompt and considered response to rescue requirements.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume Implementation Guides -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>

Assessment Requirements for SISOSCB001 SCUBA dive in open water to a maximum depth of 18 metres

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- plan and complete four open water dives each for different parameters
- prior to each dive, and at the water's edge:
 - assemble own diving equipment
 - inspect all equipment for safety and serviceability
 - fit and adjust equipment to self, including appropriate weights, in conjunction with buddy
 - complete a BWRAF (buoyancy, weights, releases, air, final) check in conjunction with buddy
- during each dive, use effective techniques to control:
 - entry and exit
 - descent and ascent
 - underwater swimming
 - buoyancy both underwater and at the surface
 - mouthpiece clearing for both snorkel and regulator
 - exchanges between regulator and snorkel, in-water at the surface
 - swimming at the surface using snorkel; fully geared
 - buddy contact, cooperation and communication, using correct signals for communication
 - navigation of a basic course with an underwater compass
- across all dives, collectively participate in simulations to respond to problematic and emergency situations and:
 - clear partially and fully flooded masks
 - remove and replace mask underwater
 - remove and replace SCUBA system in-water at the surface
 - remove and replace weight system and SCUBA kit in water too deep in which to stand
 - use an alternate air source to provide air to and receive air from a diver, and make controlled air sharing ascents
 - provide buddy assistance for two situations
- after each dive, disassemble SCUBA gear.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational safety and emergency response procedures for diving activities
- factors to consider when planning a dive:
 - dive location
 - objectives
 - abilities of self and buddy
 - depth and duration of dive
 - contingencies
- features of diving environments, particularly those relevant to local conditions, sufficient to understand the impacts on diving activities and locations:
 - water conditions:
 - temperature and thermocline
 - visibility
 - movements, currents, waves, tides
 - density of fresh and salt water
 - topography; bottom and shoreline
 - aquatic life; animals and plants
 - weather conditions
 - hazards and techniques used to safely negotiate these:
 - surface hazards
 - overhead obstructions
 - entanglement and entrapment in natural and constructed features
 - special environmental features, including any cultural and heritage features, minimal impact techniques specific to diving environments, and why these are important to conservation
 - any local regulations specific to diving
- how to use dive computers to
 - determine no-decompression limits for single and repetitive dives
 - properly plan and execute a dive
- features, function and operation of dive computers, and advantages of dive computers over dive tables when planning and completing dives
- the physics of diving; the physical principles of matter and their application to diving activities and hazards:
 - sound
 - light
 - buoyancy
 - pressure and gas laws
 - temperature

- for the following medical problems related to diving, the causes, prevention, symptoms, first aid and treatment:
 - direct effects of pressure during descent, types of squeezes and barotrauma:
 - mask
 - suit
 - ears
 - sinuses
 - lungs
 - teeth
 - direct effects of pressure during ascent:
 - gas expansion – ears, sinuses, lungs, stomach, intestines and teeth
 - lung over pressurization and overexpansion injuries
 - vertigo
 - indirect physiological effects of pressure:
 - decompression illness
 - nitrogen narcosis
 - carbon dioxide excess and relationship to overexertion
 - oxygen toxicity
 - shallow water blackout and relationship to hyperventilation
 - issues related to contaminated air
 - other physiological and psychological problems:
 - drowning and secondary drowning
 - carotid sinus reflex
 - inadequate ventilation (hypoventilation)
 - atmospheric issues – hypothermia, hyperthermia, sunburn
 - bite and sting injuries from aquatic animals and plants
 - issues related to use of medication, drugs and alcohol
 - fatigue and exhaustion
 - stress and panic
 - over confidence
- for the following diving equipment, identifying features, functions, operation and, where relevant, how to fit and adjust for comfort and safety:
 - fins
 - face masks
 - snorkels
 - buoyancy control devices
 - exposure suits, booties and gloves of different grades suited to different conditions
 - weight ballast systems
 - cylinders and valves, cylinder support systems
 - regulators

- submersible pressure gauges
- alternative air sources of different types
- timing devices
- depth gauges
- underwater compasses
- floats and flags
- lights
- emergency equipment carried by dive operators:
 - signalling devices, acoustical and visual
 - first aid kits
 - oxygen kits
- for all of the above equipment, how to inspect for safety and serviceability
- the purpose and importance of pre and post-dive roll calls
- inclusions of personal diving log books and the importance of completing after each dive
- communication protocols used between divers, buddies and activity leaders:
 - hand signals
 - noise signals such as rapping on cylinder
 - use of slates
 - use of signalling devices, acoustical and visual
- dive buddy systems and procedures used to:
 - cross check gear
 - maintain contact and cooperation
 - maintain common safety
- techniques used to:
 - enter and exit the water
 - descend and ascend using safety stops
 - swim underwater and at the surface in diving gear
 - maintain buoyancy both underwater and at the surface
 - use an alternate air source to provide air to and receive air from a diver, and make controlled air sharing ascents
 - rescue self and buddy from problematic and emergency situations.

Assessment Conditions

Skills must be demonstrated in an open water site during daylight hours. Dives can be completed from either a boat or from the shore.

During assessment:

- direct vertical access to the surface must be possible; aquatic plants are not considered an overhead obstruction

- the first two of the four required open water dives must include at least 20 minutes at a depth between 5 and 12 metres
- the last two of the four required open water dives must include at least 20 minutes at a depth between 5 to 18 metres
- no more than three dives can be completed in any one day
- the following resources must be available to replicate industry conditions of operation and also for the purpose of assessing the candidate's ability to identify features and operational use:
 - first aid equipment
 - oxygen equipment
 - communication equipment for emergency response
 - diver flags of a type and size that meet local maritime regulator requirements.

Assessment must ensure use of:

- a diving buddy with whom the candidate can dive
- fins
- masks
- snorkels
- cylinders and valves
- buoyancy control devices with low pressure inflators
- regulators with submersible pressure gauges
- alternative air source
- weight ballast systems
- exposure suits suitable for conditions
- timing devices
- depth gauges
- underwater compasses
- signalling devices, acoustical and visual
- dive computers
- organisational safety and emergency response procedures for diving activities.

Assessors must satisfy the Standards for Registered Training Organisations requirements for assessors, and:

- be an individual who is currently certified and sanctioned by an industry authorised organisation to teach and assess open water diving skills and to authorise the issuance of C-Card certification.

Links

Companion Volume Implementation Guides -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>

SISOSCB006 Perform diver rescues

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to both lead, and complete diver rescues using a range of dive specific techniques. It requires the ability to fully assess the situation, determine a response and complete rescues using methods and equipment appropriate for the situation. It also covers the administration of in-water rescue breathing, and oxygen.

This unit does not require the provision of first aid, which is covered in other units, but does require the recognition and assessment of common diving related illnesses and injuries.

It applies to dive leaders, usually known as divemasters or instructors who work independently in the field using discretion and judgement to manage problems and emergencies when they arise.

This unit applies to any type of organisation that delivers SCUBA diving activities and dive instruction including commercial, not-for-profit and government organisations.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

SISOSCB001 SCUBA dive in open water to a maximum depth of 18 metres

Competency Field

SCUBA Diving

Unit Sector

Outdoor Recreation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes

1. Determine rescue requirements and prepare for rescue.
2. Rescue divers.
3. Use supplemental oxygen.
4. Debrief and complete

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Identify divers in need of rescue and determine their condition.
- 1.2. Assess situation, identify hazards promptly, assess risks and manage to avoid injury to self and others.
- 1.3. Determine appropriate rescue methods and techniques for situation, according to degree of urgency and condition of divers in need of rescue.
- 1.4. Select rescue equipment according to requirements.
- 1.5. Assess abilities, establish a chain of command and allocate roles and responsibilities to others.
- 1.6. Provide clear and concise instructions and confirm rescue crew understanding of roles, communication protocols and rescue actions.
- 1.7. Implement rescue operations according to organisational policies and procedures for emergency response.
- 2.1. Use equipment and rescue techniques appropriate to situation.
- 2.2. Provide reassurance and clear and concise instructions to divers being rescued.
- 2.3. Rescue divers on surface, using techniques appropriate to situation.
- 2.4. Assist responsive divers to surface and to reach boat or shore.
- 2.5. Bring unresponsive divers to the surface, provide in-water rescue breathing, and tow to boat or shore.
- 2.6. Maintain safety of self, others and rescuees throughout rescue operations.
- 2.7. Evaluate and monitor condition of rescued divers and determine need for first aid, medical treatment or evacuation.
- 2.8. Utilise underwater search patterns to locate missing divers.
- 3.1. Assess diver casualty to identify need for supplemental oxygen.
- 3.2. Administer oxygen, as authorised by organisation and allowed under local law.
- 4.1. Participate in incident management debrief and identify

reports.

future response improvements.

4.2. Complete required incident reports according to organisational procedures.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none"> interpret detailed familiar organisational policies and procedures for emergency response.
Writing skills to:	<ul style="list-style-type: none"> record detailed and accurate factual information about rescue responses.
Oral communication skills to:	<ul style="list-style-type: none"> use clear and unambiguous verbal and non-verbal communications to make intent known.
Teamwork skills to:	<ul style="list-style-type: none"> pro-actively and cooperatively direct and work within teams to coordinate rescue logistics, solve arising problems and effect efficient rescues.
Self-management skills to:	<ul style="list-style-type: none"> critically analyse all circumstances and implications to coordinate a considered response to rescue requirements.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume Implementation Guides -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>

Assessment Requirements for SISOSCB006 Perform diver rescues

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and complete a range of simulated rescue operations:

- collectively cover responses to all of the following diver issues:
 - panicked diver at the surface and underwater
 - over exerted diver at the surface and underwater
 - vertigo
 - cramping
- complete two surface non-swimming assisted rescues and collectively use reach and extension techniques
- complete two surface swimming assisted rescues while consistently entering the water without losing sight of the diver in need and:
 - establish diver's buoyancy
 - execute rescues with and without floatation devices
 - execute towing with and without equipment removal
 - use two towing techniques
- complete two underwater rescues while consistently maintaining buoyancy of self and rescued diver both underwater and at the surface:
 - use an alternate air source to provide air to a diver, and make a controlled air sharing ascent
 - bring an unresponsive diver to the surface
- provide one surface in-water rescue, using two of the following breathing techniques while consistently controlling an open airway:
 - mouth-to-pocket mask
 - mouth-to-mouth
 - mouth-to-nose
- assist divers to exit the water as follows:
 - one responsive diver without assistance
 - one responsive diver with assistance from team members
 - one unresponsive diver without assistance
 - one unresponsive diver with assistance from team members
- for at least one simulated rescue bring together multiple elements of rescue operations to include:
 - bringing an unresponsive diver to the surface

- establishing buoyancy both underwater and at the surface
- providing on surface in-water rescue breathing
- towing diver
- assisting diver to exit the water
- set up oxygen equipment on one occasion
- administer oxygen using a pocket mask on one occasion (where not prohibited by local legal requirements)
- complete one underwater search for missing divers using a search pattern to be chosen from the following list:
 - linear
 - circular
 - U pattern
 - jack stay
 - expanding square
- for each rescue operation:
 - consistently negotiate hazards safely and effectively
 - establish a chain of command, allocate and communicate roles and responsibilities to team members and participants to effectively complete rescues
 - participate in a debrief and complete an incident report.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational policies and procedures for emergency response
- principles of a chain of command as relevant to dive rescue operations
- roles and responsibilities that can be allocated to team members and participants to effectively complete a diver rescue
- communication protocols for dive rescue operations:
 - hand signals
 - calls
 - whistles
- diver issues that can occur during SCUBA diving activities:
 - panicked diver
 - over exerted diver
 - drowning
 - vertigo
 - cramping
 - temperature related problems including hypothermia and hyperthermia
 - pressure related injuries including decompression sickness, arterial gas embolism and other lung overexpansion injuries

- stings or bites from marine animals
- diver low or out of air
- equipment related problems including over weighting
- missing diver
- for the above issues:
 - signs that indicate need for rescue and or first aid
 - how they affect choice of rescue techniques
 - appropriate actions and communications with the rescued diver
 - risks related to the rescue diver
 - first aid treatments for those that relate to illness or injury
- for surface non-swimming assisted rescues, features, functions and techniques used with rescue equipment:
 - reach equipment
 - throw bags, lifebuoys and slings
 - throw ropes
- for surface swimming assisted rescues, techniques for:
 - entering water without losing sight of diver in need
 - using floatation equipment
 - removing equipment from rescued diver and considerations for doing this
 - towing with and without equipment removed
- for underwater rescues, techniques used for:
 - establishing and maintaining buoyancy of rescued diver, both underwater and at the surface
 - using an alternate air source to provide air to a diver, and making controlled air sharing ascents
 - assisting responsive divers to the surface
 - bringing unresponsive divers to the surface while controlling buoyancy
- techniques for providing in-water rescue breathing:
 - removing equipment
 - opening the airway
 - mouth-to-pocket mask
 - mouth-to-mouth
 - mouth-to-nose
- techniques for:
 - assisting responsive divers to exit the water, with and without assistance from team members
 - exiting unresponsive divers from the water, with and without assistance from team members
- for oxygen administration:
 - situations that require the use of oxygen and benefits to divers
 - features, functions and operation of oxygen delivery systems, pocket masks

- appropriate flow rates
- hazards associated with the administration of oxygen and methods used to manage these
- team members that are authorised to administer oxygen and any legal requirements applicable in the local state or territory
- options that are available post rescue, when these might be used and how to contact authorities to assist:
 - assisted treatment via remote communications
 - emergency evacuation and medical treatment
 - hyperbaric chamber
- underwater search patterns used to locate lost divers, advantages and disadvantages of each:
 - linear
 - circular
 - U pattern
 - jack stay
 - expanding square
- format, inclusions and use of incident reports.

Assessment Conditions

Skills must be demonstrated in an open water site during daylight hours. Dives can be completed from either a boat or from the shore.

Assessments, for rescues, can only be completed through simulated activities. Simulations must incorporate time critical requirements.

During assessment:

- direct vertical access to the surface must be possible; aquatic plants are not considered an overhead obstruction
- surfacing an unresponsive diver can only be completed at a maximum depth of 9 metres
- the following resources must be available to replicate industry conditions of operation:
 - first aid equipment
 - communication equipment for emergency response
 - diver flags of a type and size that meet local maritime regulator requirements.

Assessment must ensure use of:

- people who act as team members, participants and rescuees with whom the individual interacts during simulated rescues
- fins

- masks
- snorkels
- cylinders and valves
- buoyancy control devices with low pressure inflators
- regulators with submersible pressure gauges
- alternative air source
- weight ballast systems
- exposure suits suitable for conditions
- timing devices
- depth gauges
- underwater compasses
- rescue equipment:
 - reach equipment
 - throw bags, lifebuoys or slings
 - throw ropes
- oxygen equipment:
 - oxygen delivery systems
 - pocket masks or other barrier devices
- template incident reports
- organisational policies and procedures for emergency response.

Assessors must satisfy the Standards for Registered Training Organisations requirements for assessors, and:

- be an individual who is currently certified and sanctioned by an industry authorised organisation to teach and assess diver rescues.

Links

Companion Volume Implementation Guides -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>

SISXRES001 Conduct sustainable work practices in open spaces

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to plan and conduct work in open spaces while upholding sustainable practices. This unit requires the ability to conduct research of the current land condition, capability, uses and practices, and develop and implement strategies to achieve sustainable practices for outdoor programs and activities.

This unit applies to operation or program managers who are responsible for planning, implementing and evaluating sport, recreation or fitness programs and activities across a range of activity areas. They work autonomously with responsibility for management of resources and upholding of sustainable work practices.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Resource Management

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes

1. Plan sustainable

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Determine opportunities and options for using open space

- activities for work in open spaces.
- within the local community.
- 1.2 Review and document relevant codes of practice and local government requirements for use of open space.
 - 1.3 Consult with colleagues and other stakeholders about issues of responsibility for environmental and social sustainability.
2. Conduct minimal impact activities.
 - 2.1 Select and use minimal impact techniques and procedures appropriate to the area.
 - 2.2 Conduct activities using positive sustainable outcomes for local communities and environments.
 - 2.3 Advise clients of appropriate behaviours in open space environments and address any unacceptable behaviours.
 3. Monitor impacts and changes.
 - 3.1 Monitor and record changes in the natural environment using appropriate technology.
 - 3.2 Collect environmental information on behalf of environmental agencies or local government as required.
 - 3.3 Advise appropriate authorities of environmental and social change promptly.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none"> • analyse data on conservation strategies • research usage and potential usage.
Writing skills to:	<ul style="list-style-type: none"> • develop a plan to improve efficiency while drawing on data analysis.
Learning skills to:	<ul style="list-style-type: none"> • maintain currency of information related to sustainable practices in open spaces.
Problem-solving skills to:	<ul style="list-style-type: none"> • assess threats and opportunities • compare conservation strategies and select appropriate strategies • monitor and evaluate the effectiveness of strategies and develop alternative strategies where appropriate • identify current use of resources • develop strategies to maximise efficiency of resource use.
Planning and organising skills to:	<ul style="list-style-type: none"> • work within identified timeframes and budgets • plan, implement and monitor strategies for optimal resource use

- establish criteria to evaluate open spaces.
 - apply sustainable work practices on an ongoing basis.
- Self-management skills to:

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>

Assessment Requirements for SISXRES001 Conduct sustainable work practices in open spaces

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- plan and conduct at least three sessions in two or more open space environments to minimise environmental impacts of sport, fitness or recreation activities
- for each of the sessions incorporate:
 - local government requirements
 - industry codes of practice
 - provision of advice to clients regarding the use of open spaces
 - management of client behaviour in open spaces
- provide feedback on the environmental impact of at least five sport, fitness or recreation activities conducted in open spaces.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- legislation, regulations and land management requirements and guidelines:
 - permits in national parks or on land under control of traditional owners
 - restrictions on camp site operations and use of open fires
- global environmental issues, in particular a layperson understanding of the science associated with:
 - climate change
 - energy
 - land management
 - waste and consumption
 - water
- environmental and social impacts of sport, fitness or recreation industry in relation to global environmental issues in particular sites and communities
- practical sustainability considerations for sport, fitness or recreation operations, incorporating those related to:
 - environmentally or culturally sensitive areas and associated minimal impact practices
 - handling and disposal of waste, including human waste

- industry codes of practice
- use of water sources
- minimal impact techniques and procedures in relation to:
 - activity-specific guidelines
 - energy use
 - group size
 - interaction with wildlife
 - local customs and courtesies
 - noise
 - setting of camps
 - souveniring
 - use of tracks
 - waste disposal
- biophysical and socio-cultural elements in an environment and the relationship between them
- information collection techniques for monitoring environmental and social impact, including what is observed and measured and how specific data is recorded.

Assessment Conditions

Skills must be demonstrated in:

- an outdoor space that could be used for sport, recreation or fitness work purposes.

Assessment must ensure access to:

- areas or locations containing natural systems or components of these systems
- resources and information relevant to the natural system
- relevant information impacting on conservation of natural systems
- relevant stakeholder and local government information regarding the use of open spaces
- industry code of ethical practice
- organisational documentation relevant to open space planning.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>

SITTGDE001 Interpret aspects of local Australian Indigenous culture

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to share information about a specific local Australian Indigenous culture. It is this localised focus that distinguishes this unit from SITTGDE007 Research and share information on Australian Indigenous cultures.

The unit recognises that there is no single Australian Indigenous culture and emphasises the importance of local cultural knowledge, appropriate behaviour and local community consultation.

This unit applies to those people who are able to share local Australian Indigenous cultural knowledge with others. They may work at many different levels, as cultural knowledge has no direct relationship with organisational levels of responsibility.

The local Australian Indigenous cultural knowledge necessary to achieve competency in this unit may only be accessible to those individuals who identify as elders or who are authorised by local elders on behalf of their communities.

There are many different Indigenous language groups in Australia, therefore the focus of cultural interpretation will vary and should ultimately be decided in consultation with elders on behalf of the local community.

Tour guides, residing anywhere in Australia, are required to undertake training and assessment prescribed by Parks Australia to guide within Kakadu and Uluru–Kata Tjuta National Parks in the Northern Territory.

When working in Queensland, all guides, regardless of their place of residence, are subject to the Queensland Tourism Services Act 2003.

No other occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Guiding

Unit Sector

Tourism

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Consult with local Australian Indigenous community.
2. Share information about local Australian Indigenous culture.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1.Liaise with community members regarding tourism activities, and ways in which cultural information can be used to make these activities authentic to the local area.
- 1.2.Prepare for and conduct activities according to the needs and wishes of the local Australian Indigenous community.
- 1.3.Identify potential conflicts with the local Australian Indigenous community and seek solutions.
- 2.1.Share an appropriate level of information about aspects of Australian Indigenous culture with customers.
- 2.2.Advise customers about culturally appropriate behaviour.
- 2.3.Show respect for Australian Indigenous cultures and values through appropriate behaviour during activities.
- 2.4.Show customers traditional and contemporary practices when appropriate.
- 2.5.Use local language and share with customers when appropriate.
- 2.6.Invite customers to actively participate and share in the Australian Indigenous cultural experience when appropriate.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Writing skills to:	<ul style="list-style-type: none">• make notes about Australian Indigenous culture, to share with others.
Learning skills to:	<ul style="list-style-type: none">• develop own knowledge and understanding of Australian Indigenous cultures.
Teamwork skills to:	<ul style="list-style-type: none">• work effectively with the local Australian Indigenous community or with those who are authorised by elders on behalf of the community with regard to the preparation of appropriate information and activities.

Unit Mapping Information

SITTGDE101 Interpret aspects of local Australian Indigenous culture

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

Assessment Requirements for SITTGDE001 Interpret aspects of local Australian Indigenous culture

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- liaise with local Australian Indigenous community elders or persons approved by relevant local Indigenous community elders on at least three occasions and in a culturally appropriate manner to identify acceptable protocols for sharing aspects of local Indigenous culture with others
- share information on aspects of local Australian Indigenous culture with customers on at least three different occasions and at three different sites.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- culturally acceptable practices and protocols within a specific local Australian Indigenous community that address:
 - the type of information that can be shared
 - who can give information
 - who can receive the information
 - what activities are appropriate
 - who should be involved in activities
- aspects of a specific local Australian Indigenous culture as appropriate to specific community:
 - art
 - bush foods and medicine
 - dance
 - music
 - storytelling
 - tools and implements
- copyright and intellectual property issues associated with providing information about local Australian Indigenous cultures.

Assessment Conditions

Skills must be demonstrated in an Australian Indigenous tourism environment. This can be:

- an industry workplace where research is conducted and shared on Australian Indigenous cultures
- a simulated activity involving the researching and sharing of information on Australian Indigenous cultures.

Assessment must ensure access to:

- sites where Indigenous cultural experiences take place:
 - cultural centre
 - gallery
 - natural setting
- involvement of relevant local Indigenous community elders or persons approved by relevant local Indigenous community elders in the assessment process
- customers with whom the individual can interact; these can be:
 - customers in an industry workplace who are assisted by the individual during the assessment process; or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment operated within a training organisation.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors; and:

- have worked in the tourism industry for at least three years where they have applied the skills and knowledge of this unit of competency.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

SITTGDE002 Work as a guide

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to work effectively as a guide. It covers key legal, ethical, safety, environmental and professional development issues that guides must consider in their day-to-day work.

This unit applies to guides who may work across multiple industry sectors as employees, volunteers, or independent contractors. They may operate within a single site, or in a particular city, region or tourist precinct, but often move across sites, cities and regions.

Guides apply discretion and judgement within established organisational procedures, and when guiding a tour or activity they take a lead role without supervision. Sometimes guides are the owner-operators of small tour operations.

Tour guides, residing anywhere in Australia, are required to undertake training and assessment prescribed by Parks Australia to guide within Kakadu and Uluru–Kata Tjuta National Parks in the Northern Territory.

When working in Queensland, all guides, regardless of their place of residence, are subject to the Queensland Tourism Services Act 2003.

No other occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Guiding

Unit Sector

Tourism

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Plan guiding activity.

2. Communicate with tourism industry operators.

3. Guide tours or activities.

4. Develop guiding skills and knowledge.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1. Identify key guide information sources and contacts.

1.2. Review required roles and responsibilities for prospective guiding activity.

1.3. Plan resource, labour and logistical aspects of the guiding activity.

1.4. Use industry knowledge and guide networks to enhance the quality of guiding services provided to customers.

2.1. Liaise with internal and external stakeholders to organise all aspects of the guiding activity.

2.2. Achieve mutual understanding and agree on details relevant to guiding activities.

2.3. Provide accurate information and explanations about customer requirements and special requests.

2.4. Identify nature and key facts of operational problems and provide appropriate solutions in consultation with tourism operator.

3.1. Conduct guiding activities according to legal, industry and safety requirements.

3.2. Actively participate in risk assessment as an integral part of work activities.

3.3. Take account of ethical considerations for particular contexts.

3.4. Support sustainable work practices.

4.1. Identify and use opportunities to update knowledge and skills required by guides.

4.2. Maintain knowledge of technologies used by guides.

4.3. Identify and access sources of guide support when required.

4.4. Share knowledge with colleagues to enhance quality of service provided to customers.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none">• read and interpret industry codes of practice and regulations.
Writing skills to:	<ul style="list-style-type: none">• complete risk assessment documentation.
Problem-solving skills to:	<ul style="list-style-type: none">• evaluate legal, ethical, safety and sustainability issues and requirements for guiding activities• make decisions on appropriate behaviours and actions.
Initiative and enterprise skills to:	<ul style="list-style-type: none">• make contingency plans when required, to deal with unexpected circumstances.
Teamwork skills to:	<ul style="list-style-type: none">• work effectively with industry operators.

Unit Mapping Information

SITTGDE301 Work as a guide

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

Assessment Requirements for SITTGDE002 Work as a guide

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- plan and conduct three guiding activities with different customers or groups which involve:
 - liaising with one or more tourism industry operators
 - identifying potential operational problems and appropriate solutions
 - incorporating client requirements and special requests
- undertake a full risk assessment for each of the above guiding activities that:
 - identifies inherent risks
 - identifies hazards
 - reports on hazards
- demonstrate how legal, ethical, safety and sustainability requirements have been met in the planning of each of the above guiding activities.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- interrelationship between tour operations and wholesaling sectors and the role of guiding in the tourism industry
- cultural considerations in dealing with industry colleagues, customers, suppliers and local communities
- roles and responsibilities for guides, and the specific roles of each of these guides:
 - adventure guides
 - city hosts
 - driver guides
 - meet and greet guides
 - site guides
 - tour guides
 - tour managers
- roles and services provided to guides by peak guiding bodies and industry associations to assist in developing guiding knowledge
- industry and legal compliance requirements that affect guiding operations:

- consumer protection laws
- occupational licensing and industry accreditation
- contents of various guiding codes of conduct or practice and the impacts of non-compliance
- public liability and the guide's duty of care
- environmental laws
- permit requirements for operating in protected areas
- Queensland Tourism Services Act 2003 requirements for guides when working in Queensland
- work health and safety
- different types of technologies and their uses:
 - presentation technologies
 - radio-frequency identification (RFID) codes for handheld devices
 - social networking
- opportunities to update own knowledge as a guide:
 - familiarisation tours
 - industry seminars
 - participation in industry accreditation schemes
 - participation or membership in professional guide associations
 - research
 - social networking
 - training courses
- tourism operators that work in collaboration with guides:
 - inbound tour operators
 - other guides
 - retail outlets:
 - factory outlets
 - opal or souvenir outlets
 - tax free stores
 - suppliers of any tourism product or service that is a component of the touring itinerary:
 - accommodation providers
 - airlines
 - attraction or theme parks
 - coach companies
 - cultural sites
 - event venues
 - food and beverage outlets
 - tour operators and cruise operators
- safety issues that affect guiding operations in particular contexts, particularly those related to customer safety in different environments

- ethical considerations for guides:
 - compliance with industry codes of conduct
 - cultural considerations
 - dealings with local communities
 - dealings with Indigenous communities
 - provision of services as promoted or confirmed
 - relationships with industry colleagues, customers and suppliers
 - avoiding unconscionable conduct
- sustainable work practices includes considerations for:
 - economic:
 - business profitability
 - environmental:
 - minimal impact practices
 - waste minimisation
 - social:
 - host community interactions
 - Australian Indigenous contexts.

Assessment Conditions

Skills must be demonstrated in an operational guiding environment. This can be:

- a real guiding activity
- a simulated industry environment or activity.

Assessment must ensure access to:

- environments in which guiding activities take place:
 - tourist attractions
 - visitor sites
 - on board various forms of transportation
- organisational specifications:
 - codes of conduct
 - procedures for liaising with tourism industry operators that are involved in the operation of guided activities
 - running sheets for tours and activities
 - incident report templates
 - passenger lists
 - risk assessment template
- microphone
- props and signage

- customer groups of a size and nature that reflect the commercial environment in which the guide operates
- tourism industry operators with whom the individual can interact; these can be:
 - those involved in organising a tour or activity who interact with the individual during the assessment process; or
 - individuals who participate in role plays or simulated activities set up for the purpose of assessment in an operational touring context
- participants undertaking a tour or activity for whom the individual can act as guide; participants can be:
 - those participating in a tour or activity who interact with the individual during the assessment process; or
 - individuals who participate in role plays or simulated activities set up for the purpose of assessment in an operational touring context.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors; and:

- have worked in industry for at least three years where they have applied the skills and knowledge of this unit of competency.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

SITTGDE007 Research and share general information on Australian Indigenous cultures

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to research and share information about Australian Indigenous cultures in an appropriate way. It focuses on information that is widely available to the general community.

The unit recognises that there is no single Australian Indigenous culture and emphasises the importance of culturally appropriate behaviour and local community consultation.

This unit applies across many industry sectors. It is particularly relevant to cultural tourism operations and to individuals who work in customer service and guiding roles with differing levels of responsibility. Information could apply to Australian Indigenous communities and cultures across Australia, or to a specific Australian Indigenous community and culture.

Tour guides, residing anywhere in Australia, are required to undertake training and assessment prescribed by Parks Australia to guide within Kakadu and Uluru–Kata Tjuta National Parks in the Northern Territory.

When working in Queensland, all guides, regardless of their place of residence, are subject to the Queensland Tourism Services Act 2003.

No other occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Guiding

Unit Sector

Tourism

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Research general information on Australian Indigenous cultures.
2. Share general information on Australian Indigenous cultures.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Identify key information sources on Australian Indigenous cultures.
- 1.2. Select and use formal and informal research techniques to access current, accurate and relevant information about Australian Indigenous cultures.
- 1.3. Obtain information in a culturally appropriate way.
- 2.1. Identify and use Australian Indigenous interpreters where possible.
- 2.2. Provide guidance to customers on appropriate behaviour when interacting with Australian Indigenous people.
- 2.3. Share clear and accurate information on Australian Indigenous cultures to enhance cultural awareness, ensuring acknowledgment of the diversity of cultures.
- 2.4. Share information in a manner respectful of local community values and customs.
- 2.5. Answer questions according to community wishes about what information can be shared.
- 2.6. Respond to culturally inappropriate behaviour by customers to minimise the likelihood of causing offence.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS

DESCRIPTION

Writing skills to:

- make notes about Australian Indigenous culture to share with others.

Learning skills to:

- develop own knowledge and understanding of Australian Indigenous cultures.

- Teamwork skills to:
- work respectfully with Australian Indigenous interpreters and Australian Indigenous communities or with those who are authorised by elders on behalf of the community with regard to the preparation of appropriate information and activities.

Unit Mapping Information

SITTGDE306 Research and share general information on Australian Indigenous cultures

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

Assessment Requirements for SITTGDE007 Research and share general information on Australian Indigenous cultures

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- liaise with relevant Australian Indigenous community elders or persons approved by relevant Indigenous community elders in a culturally appropriate manner to identify acceptable protocols for sharing knowledge on local Indigenous culture with others
- using relevant sources of information listed in the knowledge evidence, undertake research on Australian Indigenous culture relevant to the regional context to develop current knowledge of:
 - art and music
 - bushcraft, bush food and bush medicine
 - contemporary Australian Indigenous life and culture
 - cultural centres, galleries and natural sites
 - dance
 - history, pre- and post-European contact
 - land ownership
 - tools and implements
 - traditional life and culture
- share information on aspects of local Australian Indigenous culture with customers on at least three different occasions and using at least three different locations.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- sources of information on Australian Indigenous cultures:
 - artworks
 - events
 - exhibitions
 - experiences (of self or others)
 - films
 - images
 - internet

- music
- performances
- Indigenous people
- traditional owners
- presentations
- professional associations
- printed texts
- protocols for researching and sharing information about Australian Indigenous cultures that address:
 - the type of information that can be shared
 - who can give information
 - who can receive the information
 - what activities are appropriate
 - who should be involved in activities
- fundamental Australian Indigenous intellectual property issues:
 - strong links between intellectual property and cultural heritage
 - issues associated with the reproduction and sale of Indigenous cultural works.

Assessment Conditions

Skills must be demonstrated in an Australian Indigenous tourism environment. This can be:

- an industry workplace where research is conducted and shared on Australian Indigenous cultures
- a simulated activity involving the researching and sharing of information on Australian Indigenous cultures.

Assessment must ensure access to:

- cultural sites, galleries or natural settings
- information sources verified or supported by Indigenous communities
- involvement of relevant local Indigenous community elders or persons approved by relevant local Indigenous community elders in the assessment process
- customers with whom the individual can interact; these can be:
 - customers in an industry workplace who are assisted by the individual during the assessment process; or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment operated within a training organisation.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors; and:

- have worked in industry for at least three years where they have applied the skills and knowledge of this unit of competency.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

SITTGDE008 Prepare specialised interpretive content on flora, fauna and landscape

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to research and critically analyse specialised information on flora, fauna and landscape to develop interpretive themes and messages. It highlights the need for ongoing research to update and expand knowledge.

This unit applies across many industry sectors and has particular application to guides who work in national parks, or who conduct tours with a strong focus on the natural environment. In this context, guides work independently to research and prepare interpretive content.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Guiding

Unit Sector

Tourism

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Research specialised information on

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1. Identify key sources of specialised information

- | | |
|--|--|
| <p>flora, fauna and landscape.</p> | <p>about flora, fauna and landscape.</p> |
| <p>2. Prepare specialised information on flora, fauna and landscape.</p> | <p>1.2.Evaluate credibility and reliability of information sources.</p> <p>1.3.Use formal and informal research techniques to access current, accurate and relevant information.</p> <p>1.4.Determine potential subjects of customer interest and make focus of research activities.</p> <p>2.1.Analyse information and develop interpretive themes and messages to meet customer needs.</p> <p>2.2.Organise information to support ways in which it will be used and presented.</p> |
| <p>3. Update knowledge of specialised information on flora, fauna and landscape.</p> | <p>3.1.Identify and use opportunities to maintain currency of knowledge about specialised topics.</p> <p>3.2.Proactively seek opportunities to enhance and expand own knowledge base.</p> <p>3.3.Incorporate updated and expanded knowledge into work activities.</p> |

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none"> • interpret potentially complex and detailed information on flora, fauna and landscape.
Writing skills to:	<ul style="list-style-type: none"> • make notes from research on flora, fauna and landscape.
Initiative and enterprise skills to:	<ul style="list-style-type: none"> • establish an interpretive framework • evaluate and adapt information for practical workplace purposes • create key messages, themes and storylines for customers.
Technology skills to:	<ul style="list-style-type: none"> • use the internet as a research tool.

Unit Mapping Information

SITTGDE307 Prepare specialised interpretive content on flora, fauna and landscape

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

Assessment Requirements for SITTGDE008 Prepare specialised interpretive content on flora, fauna and landscape

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- prepare three different presentations, with each presentation:
 - using at least four credible and reliable sources of information
 - demonstrating knowledge of flora, fauna and landscape as listed in the knowledge evidence
 - using appropriate ecological terminology and concepts
 - incorporating interpretive themes and messages
 - organising information in a logical and suitable manner for presentation.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- role of interpretation in creating a powerful customer experience
- sources of information on flora, fauna and landscape in the relevant geographic context
- landscapes of interest within a local region and their general characteristics
- key ecological terminology and concepts:
 - biodiversity and abundance
 - biotic and physical factors
 - carbon cycle
 - community relations
 - energy flow
 - food web
 - life cycles
 - nutrient cycle
 - populations
 - succession
 - water cycle
 - zonation
- interrelationships between parts of the ecosystem:

- developmental processes related to the formation of local landscapes:
 - geological formations and history
 - soil composition and its relation to plant and animal life and water catchment areas
- principles of Gondwana theory and the impact of Gondwana on plant and animal communities
- major landscape types and their characteristics:
 - alpine
 - coastal
 - desert
 - outback
 - temperate
 - tropical
- major species of flora and fauna within the local landscape:
 - characteristics
 - commonalities
 - interactions between species and the environment
 - nature of species and where it is found
 - nutrition and life cycles
 - roles of individual species
 - species harmful to humans
- identification techniques for flora and fauna
- environmental influences that affect landscape:
 - climate
 - earthquake
 - fire
 - flood
- human impact on landscape:
 - industrial activity
 - land clearing
 - mining
- management regimes and codes of practice for local landscape
- Australian Indigenous perspective on local landscape
- information sources frequently used by guides:
 - artworks
 - events
 - exhibitions
 - experiences and observations (of self or others)
 - films
 - geological societies, plant study groups or wildlife societies
 - images

- internet
- music
- local experts
- traditional owners
- performances
- presentations
- professional associations
- printed texts.

Assessment Conditions

Skills must be demonstrated in an operational guiding environment. This can be:

- an industry workplace where specialised interpretive content is developed for guiding activities
- a simulated activity involving the development of specialised interpretive content for guiding activities.

Assessment must ensure access to:

- current sources of information as listed in the knowledge evidence
- current interpretive resources
- equipment used to source, record and store information:
 - computer and software
 - internet
 - data storage equipment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors; and:

- have worked in industry for at least three years where they have applied the skills and knowledge of this unit of competency.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

SITTGDE010 Prepare specialised interpretive content on cultural and heritage environments

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to research and critically analyse specialised information on cultural and heritage environments to develop interpretive themes and messages. It highlights the need for ongoing research to update and expand knowledge.

This unit applies across many industry sectors and has particular application to guides who work in cultural centres, museums, galleries or historic sites, or who conduct tours in regions with strong cultural and heritage significance. In this context, guides work independently to research and prepare interpretive content.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Guiding

Unit Sector

Tourism

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the

- element.
1. Research specialised information on cultural and heritage environments.
 - 1.1. Identify key sources of specialised information about cultural and heritage environments.
 - 1.2. Evaluate credibility and reliability of information sources.
 - 1.3. Use formal and informal research techniques to access current and relevant information.
 - 1.4. Determine potential subjects of customer interest and make focus of research activities.
 2. Prepare specialised information on cultural and heritage environments.
 - 2.1. Analyse information and develop interpretive themes and messages to meet customer needs.
 - 2.2. Organise information to support the ways in which it will be used and presented.
 3. Update knowledge of specialised information on cultural and heritage environments.
 - 3.1. Identify and use opportunities to maintain currency of knowledge about specialised topics.
 - 3.2. Proactively seek opportunities to enhance and expand own knowledge base.
 - 3.3. Incorporate updated and expanded knowledge into work activities.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none">• interpret potentially complex and detailed information on cultural and heritage environments.
Writing skills to:	<ul style="list-style-type: none">• make notes on cultural and heritage environments.
Initiative and enterprise skills to:	<ul style="list-style-type: none">• establish an interpretive framework• evaluate and adapt information for practical workplace purposes• create key messages, themes and storylines for customers.
Technology skills to:	<ul style="list-style-type: none">• use the internet as a research tool.

Unit Mapping Information

SITTGDE309 Prepare specialised interpretive content on cultural and heritage environments

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

Assessment Requirements for SITTGDE010 Prepare specialised interpretive content on cultural and heritage environments

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- prepare three different presentations, with each presentation:
 - using at least four credible and reliable sources of information
 - demonstrating knowledge of cultural and heritage environments as listed in the knowledge evidence
 - using appropriate ecological terminology and concepts
 - incorporating interpretive themes and messages
 - organising information in a logical and suitable manner for presentation.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- the role of interpretation in creating a powerful customer experience
- sources of information on cultural and heritage environments
- cultural and heritage environments, natural and built:
 - art galleries
 - cultural centres
 - heritage trails
 - historic localities or regions
 - historic theme parks
 - Indigenous art or occupation sites
 - museums
 - prehistoric and fossil sites
- nature and significance of each cultural or heritage environment:
 - how the environment developed and evolved
 - historically and culturally significant features, details of any exhibits, displays or performances
 - individuals associated with the environment, their roles and impacts
 - role of the environment in the local community, both past and present

- relationship of the environment to past and current Australian culture and history
- information sources frequently used by guides:
 - artworks
 - events
 - exhibitions
 - experiences and observations (of self or others)
 - films
 - images
 - internet
 - music
 - objects
 - local experts
 - traditional owners
 - performances
 - presentations
 - professional associations
 - printed texts, books, journals, magazines, newspapers
 - technical information.

Assessment Conditions

Skills must be demonstrated in an operational guiding environment. This can be:

- an industry workplace where specialised interpretive content is developed for guiding activities
- a simulated activity involving the development of specialised interpretive content for guiding activities.

Assessment must ensure access to:

- current sources of information as listed in the knowledge evidence
- current interpretive resources
- equipment used to source, record and store information:
 - computer and software
 - internet
 - data storage equipment.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors; and:

- have worked in industry for at least three years where they have applied the skills and knowledge of this unit of competency.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

SITTPPD002 Develop interpretive activities

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to develop interpretive activities for different customer groups. It requires the ability to establish educational, interpretive and commercial objectives for an activity; develop operational aspects; and evaluate the success of the activity. The actual presentation of activities is covered in the unit SITTGDE005 Prepare and present tour commentaries or activities.

The unit applies to many industry sectors and has particular relevance in tourism, sport and recreation, and cultural contexts. Interpretive activities take place on historical, cultural, heritage or nature-based tours, in attractions and theme parks, in national parks or in locations such as museums, galleries, libraries, performing arts centres and zoos. Activities could be virtual.

Planning and developing interpretive activities may be for a series of activities in a venue or tour operation or for a one-off activity. It could be the responsibility of the person delivering the activity or be developed by senior operational or supervisory personnel. The planning role applies to those who work independently with limited guidance from others. This could include senior guides, activities coordinators, or owner-operators of small organisations.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Planning and Product Development

Unit Sector

Tourism

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1. Establish need for activities.

1.1. Identify need for interpretive activities, based on customer, organisation and community needs.

1.2. Establish educational, interpretive and commercial objectives in consultation with appropriate colleagues.

2. Create activities.

2.1. Identify and evaluate a range of potential information and resources, including other specialists as required.

2.2. Develop interpretive framework for activities.

2.3. Generate and select ideas for potential messages, themes and storylines.

2.4. Identify relationships between themes, storylines and the site.

2.5. Incorporate interpretive media that matches the site.

2.6. Conduct a risk assessment and incorporate controls into activity development.

2.7. Evaluate and integrate legal, ethical and sustainability considerations.

2.8. Develop resources to support activities.

2.9. Develop activity within budget to meet agreed objectives.

3. Evaluate activities.

3.1. Obtain formal and informal feedback from customers and colleagues during piloting or conduct of activities.

3.2. Modify activities according to feedback received.

3.3. Establish and implement ongoing review mechanisms to ensure continuous improvement of activities in line with its objectives.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS

DESCRIPTION

Reading skills to:

- evaluate wide ranging information and tease out creative themes and messages for activities
- analyse and interpret complex information and communicate it creatively to customers.

Oral communication

- consult with colleagues about development issues for interpretive

skills to: activities.

Numeracy skills to: • calculate costs in order to work within established budgets.

Planning and organising skills to: • coordinate creative and practical aspects of activities.

Technology skills to: • use software to develop products that support the delivery of educational and commercial interpretive activities in both real and virtual contexts.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

Assessment Requirements for SITTPD002 Develop interpretive activities

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- plan and develop one single interpretive activity and one series comprising at least three interpretive activities combined into an overall program, for at least two of the following:
 - attractions
 - guided activities or walks
 - sporting activities
 - theme parks
 - virtual activities
- plan and develop the above interpretive activities using at least two of the following themes:
 - cultural
 - heritage
 - historical
 - nature
- ensure above interpretive activities include key messages that reflect subject matter knowledge and meet the needs of different customer groups and commercial and operational constraints
- identify review mechanisms for above interpretive activities.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- subject matter around which activities are developed
- influential principles and theories of interpretation
- physical and digital interpretive media
- resource considerations for the development of interpretive activities:
 - apps and other digital content
 - costumes
 - guest speakers
 - handouts

- information and communications technology
- natural resources
- props
- professional organisations
- special interest organisations
- specialists:
 - actors and performers
 - creative designers
 - cultural advisers
 - designers
 - environmental educators
 - heritage specialists
 - historians
 - interpretation consultants
 - marketers
 - subject matter experts
 - technical experts
- practical processes that support activity development:
 - budgeting
 - evaluation
 - needs analysis
 - resource development
 - scheduling
- creative communication techniques for interpretive activities:
 - games
 - illustrated talks
 - role-playing
 - sensory awareness exercises
 - storytelling
 - use of apps, podcasts, near response codes, quick response codes
- safety requirements specific to activities
- risk assessment processes:
 - determining overall risk level
 - determining exposure to the risk
 - estimating probability of negative impacts
 - identifying consequences that could result from the identified risk
- legal, ethical and sustainability considerations for activity development:
 - cultural appropriateness
 - duty of care
 - minimal impact

- minimising waste and conserving resources.

Assessment Conditions

Skills must be demonstrated in an operational tourism environment. This can be:

- an industry workplace
- a simulated industry environment set up for the purposes of assessment.

Assessment must ensure access to:

- a real or simulated environment for which interpretive activities can be planned and developed
- information sources on subject matter of interpretive activities, resources and other specialists
- current technology for use in activity development
- customers sufficient in number to reflect different customer, organisational or community needs and locations for interpretive activities; these can be:
 - customers in an industry workplace who are assisted by the individual during the assessment process; or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment operated within a training organisation.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors; and:

- have worked in industry for at least three years where they have applied the skills and knowledge of this unit of competency.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

SITTPPD009 Develop environmentally sustainable tourism operations

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to plan strategically for environmentally sustainable operations. This is subject to a range of regulatory requirements that relate to environmental sustainability at land management agency and federal, state or territory, and local government level. It requires the ability to establish and operate a sustainable operation and to monitor its environmental impact.

The unit applies to those in the tourism industry with managerial responsibilities in strategic planning and product development. Planning may be for a whole region or local area or for a particular venue, organisation, event or product. The unit applies to any operation with a strong focus on environmental sustainability.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Planning and Product Development

Unit Sector

Tourism

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.	demonstrate achievement of the element.
1. Plan for environmental sustainability.	<ol style="list-style-type: none"> 1.1. Make environmental sustainability an integral part of product planning processes. 1.2. Conduct evaluations prior to any decision to establish operation. 1.3. Consult stakeholders and incorporate their views into planning process. 1.4. Investigate methods of managing impact. 1.5. Develop strategies that provide social and economic returns to communities. 1.6. Proactively seek opportunities for new, innovative and more sustainable approaches to conducting operations. 1.7. Develop strategies that balance environmental sustainability and economic viability.
2. Implement environmentally sustainable operations.	<ol style="list-style-type: none"> 2.1. Establish and integrate best practice environmental standards to limit negative environmental impacts. 2.2. Evaluate and use technologies for environmental best practice. 2.3. Develop environmentally-friendly codes of practice for the operation and for customer use. 2.4. Conduct operations according to environmentally sustainable practices, guidelines and legal requirements. 2.5. Promote environmental awareness among stakeholders.
3. Evaluate environmental impact.	<ol style="list-style-type: none"> 3.1. Monitor and assess environmental impacts as part of regular management reviews. 3.2. Monitor compliance with codes of practice and legislative requirements. 3.3. Initiate follow-up action based on assessment of environmental impact and compliance.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS

DESCRIPTION

Reading skills to:	<ul style="list-style-type: none"> • interpret materials describing environmental regulatory requirements and codes of practice.
Writing skills to:	<ul style="list-style-type: none"> • develop plans, systems and procedures for tourism operations.

- Oral communication skills to:
- consult with diverse stakeholders on potentially divisive and nuanced issues.
- Numeracy skills to:
- perform complex calculations to assess profitability considerations.
- Problem-solving skills to:
- respond to complex internal and external management challenges.
- Initiative and enterprise skills to:
- evaluate complex issues and information, and develop strategic responses.
- Planning and organising skills to:
- coordinate interrelated planning and operational processes.

Unit Mapping Information

SITTPPD602 Develop environmentally sustainable tourism operations

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

Assessment Requirements for SITTPD009 Develop environmentally sustainable tourism operations

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- develop a plan for a tourism operation that supports environmental sustainability and provides evidence of:
 - analysis of key environmental issues
 - consultation with key stakeholders
 - evaluation of proposed operation
 - development of strategies and operational approaches that maximise positive impacts
 - integration of current legislation, regulations and industry codes
- implement the above plan, complying with environmentally sustainable practices, guidelines and legal requirements
- monitor and evaluate the environmental impact of the above tourism operation through:
 - community consultation and involvement
 - internal and external education programs
 - implementing sustainable operational initiatives:
 - regularly reviewing optimal group sizes
 - scheduling for optimal weather conditions and seasons
 - selecting most appropriate equipment and transport modes.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- current research trends in the area of ecologically sustainable operations
- current and emerging issues and trends relevant to above operation and the environment
- global environmental issues, in particular a layperson's understanding of the science associated with:
 - climate change
 - energy
 - land management
 - waste and consumption
 - water

- relevance of particular environmental issues to the area or region of work and the specific features and vulnerabilities of the local environment
- methods of environmental evaluation:
 - environmental impact study (EIS)
 - evaluation of organisational capacity to comply with:
 - environmental and community protection laws
 - industry and ecotourism codes of practice
 - social sustainability
 - site studies
- consultation and communication mechanisms used by organisations in the product development process:
 - features
 - nature
 - objectives and outcomes
 - scope
 - time parameters
- strategic frameworks and operational systems and procedures that support environmentally sustainable operations:
 - customers
 - equipment and supplies
 - staff
- ways of balancing ecological sustainability and the economic viability of an operation
- potential negative environmental impacts:
 - disturbance of flora and fauna
 - introduction of exotic and feral species
 - physical damage
 - pollution
 - visual impacts
 - waste issues
- laws, regulations and land management requirements and guidelines:
 - need for permits in national parks or on land under control of traditional owners
 - restrictions on operations in relevant areas.

Assessment Conditions

Skills must be demonstrated in a destination, location, organisation or event for which an environmentally sustainable operation can be established. This can be:

- an industry workplace
- a simulated industry environment set up for the purposes of assessment.

Assessment must ensure access to:

- current information about environmental practices:
 - legislation
 - guidelines
 - industry codes of practice
- current information and communications technology to support the research and planning process
- stakeholders with whom consultations can take place, these can be:
 - consumer representatives
 - host community
 - investors
 - government authorities
 - land management agencies
 - suppliers of environmentally-friendly products; or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment operated within a training organisation.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors; and:

- have worked in industry for at least three years where they have applied the skills and knowledge of this unit of competency.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

SITXCCS002 Provide visitor information

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to access general information on facilities, products and services available in the local area and to provide this to visitors.

The unit applies to frontline service personnel working in a range of tourism, travel, hospitality, entertainment and cultural contexts. Information is often provided face-to-face, but may be by telephone or other remote mechanisms.

It applies to frontline service personnel who routinely respond to visitor requests for general local area information. They may be working independently or with guidance from others in restaurants, hotels, wineries, attractions, entertainment venues, tour operations, visitor information centres and at tour desks.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Client and Customer Service

Unit Sector

Cross-Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|--|---|
| 1. Access and update visitor information. | 1.1. Identify and access sources of visitor information.
1.2. Obtain general information on local facilities, products and services to meet different visitor needs.
1.3. Share information with colleagues to support the efficiency and quality of service.
1.4. Identify and use <i>opportunities to update and maintain local area knowledge</i> . |
| 2. Provide information to visitors. | 2.1. Identify specific information and assistance needs of visitors, including those with special needs.
2.2. Provide appropriate scope and depth of information to meet visitor needs.
2.3. Identify and use opportunities to promote internal products and services. |
| 3. Seek feedback on information provision. | 3.1. Proactively seek visitor feedback to ensure required information has been provided.
3.2. Follow procedures for any formal visitor evaluation.
3.3. Provide information on visitor feedback to relevant colleagues. |

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none"> • interpret sometimes detailed product and local area information • research, sort and use relevant information.
Writing skills to:	<ul style="list-style-type: none"> • record simple notes and basic information on local facilities, products and services for visitors.
Oral communication skills to:	<ul style="list-style-type: none"> • listen and respond to range of visitor requests, asking questions to clarify and confirm.
Learning skills to:	<ul style="list-style-type: none"> • review own knowledge of information required to assist visitors and participate in activities that continuously update it.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the

candidate, accessibility of the item, and local industry and regional contexts) are included.

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Opportunities to update and maintain local area knowledge must include at least four of the following:

- informal discussions with colleagues and visitors
- internal newsletters and external promotional material
- local information centre
- participating in local familiarisation tours
- local media: newspaper, radio and television
- personal observation or exploration
- principal or supplier of the product or service
- staff noticeboards
- team meetings.

Unit Mapping Information

SITXCCS201 Provide visitor information

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

Assessment Requirements for SITXCCS002 Provide visitor information

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- provide current, accurate and relevant information about local area features to three different visitors on three different occasions
- provide above information and assistance in a culturally appropriate manner and according to organisational service standards
- extend personal knowledge of relevant facilities, products and services
- seek formal and informal feedback from visitors on above services.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- sources of information on the available local area facilities, products and services:
 - brochures
 - library
 - local council
 - local people and local identities with specialised knowledge
 - local visitor guide booklets and maps
 - online reservation systems
 - organisation information
 - organisation-designed information systems
 - principal supplier of a product
 - product library
 - room directories
 - social media websites
 - state or territory government tourism authority information systems
 - timetables
- information on the local area features:
 - accommodation options
 - dining options

- entertainment venues
- local attractions
- local personal services facilities
- local shopping facilities
- local transport options
- organisation-specific information
- road conditions
- sporting facilities
- tours, local outings and trips
- travelling routes
- weather conditions
- organisational service procedures and standards:
 - designated response times for acknowledging customers and their enquiry
 - personal presentation and hygiene standards
- awareness of customs and practices of various social and cultural groups of visitors to assist with meeting visitor needs and expectations in regards to:
 - modes of greeting, farewelling and conversation
 - body language and body gestures
 - formality of language
 - clothing
- methods of collecting feedback:
 - formal:
 - surveys
 - interviews
 - structured questioning
 - informal:
 - observation
 - casual discussion
- organisational service procedures and standards.

Assessment Conditions

Skills must be demonstrated in an operational customer service environment in a service based industry such as tourism, travel, hospitality or events where information is sourced and provided to visitors. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- sources of information on the local area facilities, services and general products, and their availability
- organisational specifications for customer service standards
- visitor surveys and feedback forms
- visitors from different cultural backgrounds with whom the individual can interact; these can be:
 - visitors to an industry workplace during the assessment process; or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment operated within a training organisation.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

SITXCCS006 Provide service to customers

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to communicate effectively with and provide quality service to both internal and external customers. It requires the ability to establish rapport with customers, determine and address customer needs and expectations, and respond to complaints.

The unit applies to those frontline service personnel who deal directly with customers on a daily basis and who operate with some level of independence and under limited supervision.

This includes individuals working in a range of tourism, travel, hospitality and events contexts.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Client and Customer Service

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Communicate with internal

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1. Communicate with customers in a professional manner

- and external customers. within designated response times using appropriate verbal and non-verbal communication.
- 1.2. Observe and respond to non-verbal communication of customers.
 - 1.3. Use active listening and questioning to facilitate effective two-way communication.
 - 1.4. Select a *medium of communication* appropriate for the customer and *situation*.
2. Follow defined organisational standards when delivering service.
 - 2.1. Practise high standards of personal presentation and hygiene according to organisational requirements.
 - 2.2. Follow organisational customer service policies and procedures.
 - 2.3. Adhere to professional standards expected of service industry personnel.
 3. Provide service to customers.
 - 3.1. Establish rapport with customer to promote goodwill and trust during service delivery.
 - 3.2. Identify customer needs and expectations, including customers with special needs.
 - 3.3. Promptly meet all reasonable customer needs and requests.
 - 3.4. Identify and anticipate operational problems and take action to minimise the effect on customer satisfaction.
 - 3.5. Recognise and act upon opportunities to deliver additional levels of service beyond customer's immediate request.
 4. Respond to customer complaints.
 - 4.1. Proactively recognise customer dissatisfaction and take swift action to avoid escalation to a complaint.
 - 4.2. Respond to customer complaints in a professional manner.
 - 4.3. Identify solutions in consultation with customer.
 - 4.4. Resolve complaints according to own level of responsibility and organisational policy.
 - 4.5. Escalate complex service issues to higher level staff for action.
 5. Provide internal feedback on customer service practices.
 - 5.1. Provide ongoing internal feedback on service practices, policies and procedures, and suggest improvements.
 - 5.2. Identify individual and recurring complaints and provide internal feedback to avoid future occurrence.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	<ul style="list-style-type: none"> interpret messages, notes, letters, online communications, and policies and procedures.
Writing skills to:	<ul style="list-style-type: none"> record clear and concise messages, notes, emails, faxes and letters.
Self-management skills to:	<ul style="list-style-type: none"> deal with customer enquiries in a logical sequence while accommodating other work commitments.
Technology skills to:	<ul style="list-style-type: none"> use electronic communication media.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Medium of communication must include consideration of:

- assistive technology
- email or other electronic communication
- face-to-face communication
- fax
- written messages for restaurant bookings or phone messages
- standard forms and pro formas
- telephone
- use of interpreters
- two-way communication systems.

Situation must involve consideration of the following factors:

- access of the sender and receiver to necessary equipment and technology
- degree of formality required
- required format
- technical and operational features to fulfil the need
- technical skills required to use the medium
- urgency and timeframes.

Unit Mapping Information

SITXCCS303 Provide service to customers

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

Assessment Requirements for SITXCCS006 Provide service to customers

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- identify customer requirements and provide quality customer service to three different internal and three different external customers to meet requirements
- provide service to above customers in line with organisational customer service standards and within designated organisational response times
- demonstrate procedures to respond to and resolve three different customer complaints according to organisational policies and procedures
- demonstrate effective communication with the above internal and external customers, including any with special needs
- seek formal and informal feedback from customers on above service.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- principles of quality customer service and positive communication
- appropriate non-verbal communication for customer service:
 - body language
 - culturally specific communication customs and practices
 - dress and accessories
 - gestures and mannerisms
 - use of space
 - voice tonality and volume
- methods for enhancing service delivery in response to staff and customer feedback
- specific industry sector:
 - professional service standards expected of service industry personnel
 - attitudes and attributes expected by the service industries to work with customers
 - standards of personal presentation and hygiene
 - different customer service and communication expectations, especially those with special service needs
- particular organisation:

- types of customers
 - external
 - internal
 - new
 - regular or repeat
 - visitors
- designated response times for acknowledging customers and their enquiry
- personal presentation and hygiene standards
- customer service policies and procedures, in particular those for:
 - acknowledging and greeting customers
 - complaint and dispute management
 - empowerment of different levels of personnel to resolve complaints, disputes, service issues and customer compensation
 - loyalty programs
 - presentation standards for customer environment, customer service personnel, and documents and promotional materials
 - pricing guarantees
 - product quality
 - refunds and cancellation fees
 - response times
 - service guarantees
 - training staff for customer service and complaint handling
- awareness of special needs, customs and practices of various social and cultural groups of customers in regards to:
 - modes of greeting, farewelling and conversation
 - body language and body gestures
 - formality of language
 - clothing
- methods of collecting feedback:
 - formal:
 - surveys
 - interviews
 - structured questioning
 - informal:
 - observation
 - casual discussion
- essential features, conventions and usage of different types of communication techniques and equipment.

Assessment Conditions

Skills must be demonstrated in an operational business environment where customers are served. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- organisational policies, procedures and templates relating to:
 - customer service standards
 - designated response times
 - presentation standards
 - procedures for dealing with customer complaints
 - customer surveys and feedback collection
 - recording and reporting customer feedback
- internal and external customers with different cultural backgrounds and special service needs with whom the individual can interact; these can be:
 - customers in an industry workplace during the assessment process; or
 - individuals who participate in role plays or simulated activities, set up for the purpose of assessment, in a simulated industry environment operated within a training organisation.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

SITXCOM004 Address protocol requirements

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to source and access information on protocol requirements to fulfil any sales or operational need. It requires the ability to identify appropriate information sources, access and interpret specific details of protocol requirements, and coordinate the use of protocol.

The unit applies to many tourism, travel, hospitality and event sectors and is particularly relevant to events, function coordination, tour operations and tour guiding.

Protocol affects a broad range of business and government activity and the breadth and depth of protocol knowledge required will vary. This unit does not require in-depth knowledge of protocol requirements, but rather focuses on the ability to collect and interpret protocol information.

This unit applies to a range of people working independently or with limited guidance, including tour and event coordinators and managers, tour guides, and front of house or duty managers.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Communication and Teamwork

Unit Sector

Cross-Sector

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1. Source information on appropriate protocol requirements.

1.1. Assess the need for protocol to be followed for the particular situation.

1.2. Identify relevant sources of protocol information.

1.3. Liaise with customers to determine appropriate protocol.

1.4. Interpret relevant protocol information to inform work practice.

2. Coordinate the use of protocol.

2.1. Identify specific work activities requiring a particular protocol to be observed.

2.2. Provide protocol briefings to staff and suppliers.

2.3. Coordinate the use of correct protocol for the delivery of product or service.

3. Update knowledge of protocol.

3.1. Identify and use opportunities to update protocol knowledge.

3.2. Share updated knowledge with customers and colleagues as required.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS

DESCRIPTION

Reading skills to:

- interpret unfamiliar and complex protocol information.

Writing skills to:

- compose correspondence reflecting correct protocols, when preparing correspondence to dignitaries and officials, invitations, and team briefing papers.

Oral communication skills to:

- liaise with customers, clients, their agents and personal assistants to confirm protocol requirements
- address dignitaries and officials using appropriate language.

Self-management skills to:

- take responsibility for meeting protocol requirements.

Unit Mapping Information

SITXCOM301 Address protocol requirements

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

Assessment Requirements for SITXCOM004 Address protocol requirements

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- source accurate information on protocol requirements for at least two of the following:
 - organising an event or function, such as a meeting, reception or tour
 - organising accommodation
 - issuing marketing materials reflecting correct titles of dignitaries
 - meeting the requirements of dignitaries and officials
 - meeting the requirements of entertainers and masters of ceremony
- integrate protocol requirements into oral and written material for each of the above
- update and integrate knowledge of protocol when organising each of the above.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- main types of civic functions held in Australia
- importance and role of protocol in different business situations
- key sources of information on protocol for:
 - Australian honours system:
 - order of precedence
 - ranks and forms of address
 - wearing of honours and medals
 - involvement of Indigenous Australians and other cultural groups in business activities
 - correct use of national and state symbols:
 - flags
 - anthems
 - military salutes
 - forms of address for different dignitaries and officials, both for written correspondence and in oral communication
- sources of protocol information:
 - Aboriginal Land Councils

- Australia Day Council
- customers, clients, their agents and personal assistants
- federal, state or territory, and local government protocol departments
- internet
- libraries
- Office of the United Nations
- specific work activities impacted by protocol requirements:
 - addressing and introducing dignitaries and officials
 - correspondence to dignitaries and officials
 - issuing invitations
 - liaison with dignitaries and officials
 - preparing:
 - briefing papers
 - marketing materials
 - running sheets
- protocols for the following different situations:
 - invitations to dignitaries and officials
 - arrival procedures, for heads of state or government officials
 - introduction protocols and order of speakers
 - order of precedence for official guests
 - seating arrangements
 - dress styles
- opportunities to update protocol knowledge:
 - informal networking with colleagues
 - internet research
 - reading relevant journals.

Assessment Conditions

Skills must be demonstrated in an operational tourism, travel, hospitality or events environment. This can be:

- an industry workplace
- a simulated industry environment.

Assessment must ensure access to:

- current protocol information relevant to organisation.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=68c40a93-e51d-4e0f-bc06-899dff092694>

TAEASS301 Contribute to assessment

Modification History

Release	Comments
Release 1	This version first released with <i>TAE Training and Education Training Package Version 2.0</i> .

Application

This unit describes the skills and knowledge required to contribute to the assessment process.

It applies to a person with technical or vocational expertise who is in a supervisory or mentoring/coaching work role, and for whom collecting the evidence for assessment is an adjunct to principal work responsibilities. The unit applies to those involved in collecting evidence for assessment against units of competency or accredited courses.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Assessment

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

ELEMENT	PERFORMANCE CRITERIA
1. Clarify role and responsibilities in the assessment process	<p>1.1 Discuss and confirm the purpose of the assessment with relevant people</p> <p>1.2 Discuss and confirm benchmarks for assessment with the qualified assessor</p> <p>1.3 Access, read and clarify assessment plan with the qualified assessor</p> <p>1.4 Discuss and agree with the qualified assessor specific responsibilities in gathering evidence, and the types of evidence to be gathered</p>
2. Confirm organisational arrangements for evidence gathering	<p>2.1 Access and confirm relevant assessment system policies and procedures, organisational, legal and ethical requirements, and other relevant advice on assessment</p> <p>2.2 Clarify the nominated assessment tools and methods for collecting evidence with the qualified assessor, to ensure that the procedures to be followed, and the instruments to be used are clear</p> <p>2.3 Discuss and confirm with the relevant people the assessment context, including the candidate's characteristics and any need for reasonable adjustments</p> <p>2.4 Confirm and arrange resource requirements in consultation with relevant people</p>
3. Collect evidence in accordance with the assessment plan	<p>3.1 Explain the assessment process to the candidate, including the different responsibilities of the parties involved, and refer any candidate issues or concerns to the qualified assessor, prior to undertaking assessment activities</p> <p>3.2 Use assessment instruments to gather quality evidence within the available time and resources, according to organisational, legal and ethical requirements</p>
4. Record and report findings	<p>4.1 Organise and provide evidence to the qualified assessor in a format suitable for analysis according to the assessment system's policies and procedures</p> <p>4.2 Actively seek feedback from the qualified assessor on whether evidence-gathering activities meet the principles of assessment, and whether the evidence collected meets the rules of evidence</p> <p>4.3 Document areas for improvement in collecting evidence for future assessment activities</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Learning	4.2	<ul style="list-style-type: none"> Seeks feedback to build knowledge to improve process and professional practice
Reading	1.3, 2.1, 2.2, 2.4, 3.2	<ul style="list-style-type: none"> Sources and interprets procedural, and compliance information
Writing	1.1, 1.2, 1.3, 2.1, 2.3, 2.4, 3.2, 4.1, 4.3	<ul style="list-style-type: none"> Completes workplace documentation accurately using the appropriate language
Oral Communication	1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 3.1	<ul style="list-style-type: none"> Communicates information and process requirements clearly, based on techniques appropriate to the audience and environment Uses appropriate speaking and listening techniques to obtain specific information, and to support the assessment process
Navigate the world of work	2.1, 2.2, 3.2, 4.1	<ul style="list-style-type: none"> Accesses, confirms and takes responsibility for adherence to policies, procedures, and legal and ethical requirements
Interact with others	4.2	<ul style="list-style-type: none"> Asks questions to clarify understanding, and seeks feedback and further information
Get the work done	3.1, 4.1	<ul style="list-style-type: none"> Organises work according to defined requirements, taking some responsibility for decisions regarding the format of information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
TAEASS301 Contribute to assessment	TAEASS301B Contribute to assessment	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=35337905-785d-4f93-8777-e9991ad4c6c3>

Assessment Requirements for TAEASS301 Contribute to assessment

Modification History

Release	Comments
Release 1	This version first released with <i>TAE Training and Education Training Package Version 2.0</i> .

Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in the elements and performance criteria of this unit, including:

- clarifying the role to be taken during the assessment
- clarifying the assessment plan with the qualified assessor, including agreement about:
 - what evidence will be collected
 - how the evidence will be collected
- carrying out a minimum of three evidence-gathering activities and, on each occasion:
 - document evidence in a clear and concise manner
 - document feedback from others involved in the assessment

reporting findings to the qualified assessor, including an explanation of how the assessment meets the rules of evidence on each of the three occasions.

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge to effectively complete the task outlined in the elements and performance criteria of this unit. This includes knowledge of:

- competency-based assessment
- the principles of assessment
- the rules of evidence
- the different purposes of assessment
- the diversity of assessment contexts
- different types of evidence
- evidence-gathering methods
- the purpose and features of assessment tools, and assessment plans

- potential barriers and processes relating to evidence-gathering procedures, and assessment processes
- the organisational policies and procedures relevant to this unit of competency.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Conditions must be typical of those experienced in the training and assessment environment, and include access to qualified assessors for consultation.

Assessors must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=35337905-785d-4f93-8777-e9991ad4c6c3>

TAEDEL301 Provide work skill instruction

Modification History

Release	Comments
Release 1	This version first released with <i>TAE Training and Education Training Package Version 2.0</i> .

Application

This unit describes the skills and knowledge required to conduct individual and group instruction, demonstrate work skills and assess the success of training and one's own training performance, using existing learning resources in a safe and comfortable learning environment.

It emphasises the training as being driven by the work process and context, and applies to a person working under supervision as a work skill instructor in a wide range of settings not restricted to training organisations,

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Delivery and facilitation

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Organise instruction and demonstration	1.1 Gather information about learner characteristics and learning needs 1.2 Confirm a safe learning environment 1.3 Gather and check instruction, demonstration objectives, and seek assistance if required 1.4 Access and review relevant learning resources and learning

ELEMENT	PERFORMANCE CRITERIA
	<p>materials for suitability and relevance, and seek assistance to interpret the contextual application</p> <p>1.5 Organise access to necessary equipment or physical resources required for instruction and demonstration</p> <p>1.6 Notify learners of details regarding the implementation of the learning program and/or delivery plan</p>
2. Conduct instruction and demonstration	<p>2.1 Use interpersonal skills with learners to establish a safe and comfortable learning environment</p> <p>2.2 Follow the learning program and/or delivery plan to cover all learning objectives</p> <p>2.3 Brief learners on any workplace health and safety (WHS) procedures and requirements prior to, and during, training</p> <p>2.4 Use delivery techniques to structure, pace and enhance learning</p> <p>2.5 Apply coaching techniques to assist learning</p> <p>2.6 Use communication skills to provide information, instruct learners and demonstrate relevant work skills</p> <p>2.7 Provide opportunities for practice during instruction and through work activities</p> <p>2.8 Provide and discuss feedback on learner performance to support learning</p>
3. Check training performance	<p>3.1 Use measures to ensure learners are acquiring, and can use, new technical and generic skills and knowledge</p> <p>3.2 Monitor learner progress and outcomes in consultation with the learner</p> <p>3.3 Review relationship between the trainer/coach and the learner, and adjust to suit learner needs</p>
4. Review personal training performance	<p>4.1 Reflect upon personal performance in providing instruction and demonstration, and document strategies for improvement</p> <p>4.2 Maintain, store and secure learner records, according to organisational and legal requirements</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Learning	4.1	<ul style="list-style-type: none"> Reflects on practice to improve
Reading	1.1, 1.3, 1.4, 2.2	<ul style="list-style-type: none"> Sources and interprets processes and procedures, learning resources and information relevant to providing a work instruction and delivery
Writing	1.4, 1.6, 2.3, 2.6, 2.8, 3.2, 4.1, 4.2	<ul style="list-style-type: none"> Accurately maintains learner records and documentation appropriate to the learning context and audience
Oral Communication	1.1, 1.6, 2.3, 2.4, 2.6	<ul style="list-style-type: none"> Uses appropriate communication strategies to engage, build rapport, provide instruction, monitor progress and provide feedback to individuals or groups
Interact with others	1.2, 1.3, 2.1, 2.5, 2.8, 3.2	<ul style="list-style-type: none"> Recognises the importance of consultation and negotiation while collaborating to confirm strategy and achieve required outcomes Asks questions in order to clarify understanding, and to provide and seek feedback Builds rapport to establish effective working relationships and to achieve effective outcomes
Get the work done	1.1-1.6, 2.1-2.8, 3.1-3.3, 4.1, 4.2	<ul style="list-style-type: none"> Organises and completes work according to defined requirements, taking responsibility for some decisions and sequencing tasks to achieve efficient outcomes Identifies and responds to potential risks, problems and opportunities for improvement and considers options for different approaches

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
TAEDEL301 Provide work skill instruction	TAEDEL301A Provide work skill instruction	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=35337905-785d-4f93-8777-e9991ad4c6c3>

Assessment Requirements for TAEDEL301 Provide work skill instruction

Modification History

Release	Comments
Release 1	This version first released with <i>TAE Training and Education Training Package Version 2.0</i> .

Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in the elements and performance criteria of this unit, including:

- carrying out a minimum of three training sessions, involving demonstrating and instructing particular work skills for at least two different individuals or small groups, with each session addressing:
 - different learning objectives
 - a range of delivery techniques and effective communication skills appropriate to the audience.

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge to effectively complete the task outlined in the elements and performance criteria of this unit. This includes knowledge of:

- learner characteristics and needs
- the content and requirements of the relevant learning program, and/or the delivery plan
- the sources and availability of relevant learning resources and learning materials
- the content of relevant learning resources and learning materials
- training techniques that enhance learning, and when to use them
- introductory knowledge of learning principles and learning styles
- key workplace health and safety (WHS) issues in the learning environment, including:
 - roles and responsibilities of key personnel
 - responsibilities of learners
 - relevant policies and procedures, including hazard identification, risk assessment, reporting requirements, safe use of equipment and emergency procedures
 - risk controls for the specific learning environment.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Conditions must be typical of those experienced in the training and assessment environment and include access to any necessary workplace documents.

Assessors must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=35337905-785d-4f93-8777-e9991ad4c6c3>

TAEDEL404 Mentor in the workplace

Modification History

Release	Comments
Release 1	This version first released with <i>TAE Training and Education Training Package Version 2.0</i> .

Application

This unit describes the skills and knowledge required to establish and develop a professional mentoring relationship with an individual in a workplace.

It applies to workplace supervisors or other work colleagues who work under limited supervision and who have responsibility for mentoring one or more individuals in the workplace. This may include, but is not limited to, those who mentor an apprentice or trainee employed by, or undertaking a work placement within, an organisation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Delivery and facilitation

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Develop a mentoring plan	1.1 Identify scope and boundaries of the mentoring relationship according to organisational procedures 1.2 Document mentoring plan in accordance with organisational requirements 1.3 Establish ground rules and negotiate realistic expectations 1.4 Establish and maintain confidentiality of the relationship in

ELEMENT	PERFORMANCE CRITERIA
	accordance with legislation, policy and procedures
2. Facilitate mentoring relationship	<p>2.1 Develop learner's confidence, self-esteem, respect and trust in the mentoring relationship</p> <p>2.2 Share personal experiences and knowledge with the person being mentored according to agreed objectives</p> <p>2.3 Support the person being mentored to develop and use skills in problem solving and decision making</p> <p>2.4 Use personal and professional networks to assist the person being mentored</p> <p>2.5 Provide information, and guidance to enhance engagement in the workplace</p> <p>2.6 Use techniques for resolving differences without damaging the relationship, and obtain assistance according to organisational policy and procedures</p>
3. Monitor mentoring relationship	<p>3.1 Provide planning assistance and guidance as requested by the person being mentored in a form and style to suit their requirements</p> <p>3.2 Provide feedback to the person being mentored on progress towards achieving the expectations and goals of the mentoring process</p> <p>3.3 Recognise and discuss changes in the mentoring relationship with appropriate stakeholders</p> <p>3.4 Negotiate and manage closure of the mentoring arrangement once objectives have been met</p>
4. Evaluate effectiveness of mentoring	<p>4.1 Establish and discuss benefits gained from the mentoring process</p> <p>4.2 Reflect on and articulate the personal benefits gained from providing mentoring</p> <p>4.3 Identify and report the outcomes of the mentoring arrangement and the benefits to the organisation according to organisational policy and procedures to improve the mentoring system or program</p>

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.4	<ul style="list-style-type: none"> Sources and interprets texts relevant to mentoring context, including organisational policies and learner information
Writing	1.1, 1.3, 2.5, 3.1, 3.2, 4.3	<ul style="list-style-type: none"> Develops content and documents information relevant to mentoring plan
Oral Communication	2.4, 3.3, 4.1, 4.2, 4.3	<ul style="list-style-type: none"> Uses appropriate communication techniques to build rapport, trust, engagement and provide guidance and feedback
Navigate the world of work	1.1, 1.4, 2.6, 4.3	<ul style="list-style-type: none"> Follows legislative requirements, organisational protocols, policies and procedures in workplace mentoring
Interact with others	1.2, 2.1-2.3, 2.5, 2.6, 3.1, 3.2, 3.4	<ul style="list-style-type: none"> Builds rapport using collaboration with others to achieve joint outcomes and effective interaction Provides mentoring and role modelling to achieve agreed outcomes Cooperates and consults with others to clarify understanding and seek feedback
Get the work done	1.1-1.4, 2.1-2.6, 3.1-3.4, 4.1-4.3	<ul style="list-style-type: none"> Plans, organises and completes work according to defined requirements taking responsibility for decisions and sequencing tasks to achieve efficient outcomes Identifies and responds to problems, considering options for different approaches

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
TA EDEL404 Mentor in the workplace	TA EDEL404 A Mentor in the workplace	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=35337905-785d-4f93-8777-e9991ad4c6c3>

Assessment Requirements for TAEDEL404 Mentor in the workplace

Modification History

Release	Comments
Release1	This version first released with <i>TAE Training and Education Training Package Version 2.0</i> .

Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit, including:

- preparing a mentoring plan between the mentor and mentee that sets out clear objectives for a mentoring relationship that will last at least one year
- facilitating at least three mentoring sessions
- documenting information on sessions, including comments and notes from both mentor and mentee.
-

Knowledge Evidence

The candidate must be able to demonstrate essential knowledge to effectively complete the task outlined in the elements and performance criteria of this unit. This includes knowledge of:

- relevant policy, legislation, codes of practice and national standards likely to impact on the provision of workplace mentoring, including training contracts and responsibilities of employer, registered training organisation (RTO) and funding body where they exist
- mentoring methodologies and strategies
- learning theories in relation to mentoring
- strategies for working with a mentee including encouraging self reflection, confidence and the building of rapport
- acceptable behaviour in the mentoring relationship
- equal employment opportunity, equity and diversity principles
- how a mentor can support the mentee's employer to meet its WHS obligations for the mentee.
-

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Conditions must be typical of those experienced in the training and assessment environment and include access to:

- documentation of any existing training plan or contract if applicable to the mentoring relationship.

Assessors must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=35337905-785d-4f93-8777-e9991ad4c6c3>

TLIA0015 Organise receipt and despatch operations

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to organise receipt and despatch operations in accordance with regulations, codes of practice and workplace requirements in the transport and logistics industry.

It includes planning and organising receipt operations, storing received stock, despatching ordered stock and completing documentation and records.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

A – Handling Cargo/Stock

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan and organise receipt and despatch operations

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Product characteristics and workplace procedures are applied to stock analysis

1.2 Resources are identified to match product characteristics

- 1.3 Timeframes are scheduled to enable receipt or despatch of stock according to workplace procedures
 - 1.4 Work processes are planned to meet specified timeframes
- 2 **Organise the storage and despatch of stock**
 - 2.1 Employees, equipment and storage areas are allocated and supervised
 - 2.2 Individuals are informed of work requirements and deadlines
 - 2.3 Work processes are monitored to ensure human resources and equipment are maintained at productive levels in accordance with workplace procedures and work health and safety (WHS)/occupational health and safety (OHS) requirements
 - 2.4 Discrepancies in stocks are noted and reported in accordance with workplace procedures
- 3 **Complete documentation**
 - 3.1 Documentation and records regarding receipt and despatch operations are confirmed
 - 3.2 Documentation and records are completed and proofread
 - 3.3 Documentation and records are processed in accordance with workplace procedures and relevant regulatory requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces but is not equivalent to TLIA3018 Organise despatch operations and TLIA3019 Organise receipt operations.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIA0015 Organise receipt and despatch operations

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying contingency plans in accordance with workplace procedures
- applying relevant legislation and workplace procedures
- communicating and working with others
- estimating size, shape and special requirements of goods and loads
- identifying relevant stock and goods coding and labelling
- monitoring work activities in terms of specified deadlines
- operating and selecting equipment in accordance with operating procedures
- reading, interpreting and following relevant instructions, procedures, labels, information and signs
- selecting and using relevant equipment and communications technology
- selecting and using required personal protective equipment (PPE) and conforming to industry and work health and safety (WHS)/occupational health and safety (OHS) standards.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- discrepancies and appropriate actions to resolve
- documentation and record requirements for receipt and despatch operations
- equipment used for organising receipt and despatch operations including safety precautions and procedures
- housekeeping standards and procedures
- operational work systems, equipment, management and site operating systems for organising receipt and despatch operations
- regulations relevant for organising receipt and despatch operations, or other legislative requirements
- relevant WHS/OHS and environmental protection procedures and guidelines
- site layout and obstacles
- workplace procedures and policies for organising receipt and despatch operations.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include:

- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIA0020 Package goods

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to package goods.

It includes selecting materials, packing, and labelling packaged goods to the required labelling standards and regulatory requirements.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

A – Handling Cargo/Stock

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Select materials and pack goods

1.1 Packaging specifications and order packaging documentation are obtained and interpreted

1.2 Packaging equipment suitable for the goods to be packed is selected and checked for safe operational use

		1.3	Packaging materials are identified and matched to specifications
		1.4	Work plan is followed, materials are used economically, and appropriate packaging is used and secured to minimise loss and damage in transit or storage
		1.5	Work is conducted in accordance with work health and safety (WHS)/occupational health and safety (OHS) requirements
		1.6	Completed packed goods are stacked to minimise damage in accordance with workplace procedures
		1.7	Hazards and control measures are identified and implemented prior to commencing work
2	Label packaged goods	2.1	Workplace labelling standards are identified and followed
		2.2	Appropriate goods handling, labelling and other identification symbols are used
		2.3	Relevant documentation is attached in accordance with workplace procedures
		2.4	Workplace documentation is completed according to workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIA2011 Package goods.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIA0020 Package goods

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, and performance criteria on at least one occasion and include:

- applying safety precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- attaching and completing relevant documentation to goods
- checking and monitoring equipment performance
- checking operation of packaging equipment in terms of service schedule and standard operating procedures
- communicating and working effectively with others when conducting work
- completing documentation related to work activities when packaging goods
- following work activities in terms of planned schedule
- reading and interpreting instructions, procedures and labels
- selecting and using relevant materials
- selecting and using required personal protective equipment (PPE) conforming to industry and work health and safety (WHS)/occupational health and safety (OHS) standards
- working without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- differences in equipment
- documentation requirements for packaging goods such as a workplan
- housekeeping standards and procedures
- operational work systems and equipment for packaging goods problems associated with packaging goods and appropriate action to resolve these problems
- potential problems and possible solutions relating to packaging goods
- relevant legislation, regulations, codes of practice, industry guidelines and workplace policies and procedures for packaging goods
- relevant WHS/OHS and environmental protection procedures and guidelines

- site layout and obstacles
- size, shape and special requirements estimations of goods.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIA2011 Package goods

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to package goods in accordance with regulatory and workplace requirements as part of work activities undertaken within the transport and logistics industry.

It includes selecting materials, packing, and labelling packaged products/loads to the required labelling standards.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

A – Handling Cargo/Stock

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Select materials and pack products

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Packaging specifications and order packaging documentation are correctly interpreted

- 1.2 Packaging technology suitable for the goods to be packed is selected
- 1.3 Packaging materials are identified and matched to specifications
- 1.4 Work plan is followed, materials are used economically and appropriate packaging is used to minimise loss and damage in transit or storage
- 1.5 Work is planned in accordance with work health and safety (WHS)/occupational health and safety (OHS) requirements
- 1.6 Completed packed goods are stacked to minimise damage from within and outside

2 Label packaged products/loads

- 2.1 Workplace labelling standards are identified
- 2.2 Appropriate goods handling, labelling and other identification symbols are used
- 2.3 Invoices and picking slips are attached as required
- 2.4 Workplace documentation is completed

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIA2011A Package goods.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIA2011 Package goods

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, and performance criteria on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- applying relevant legislation and workplace procedures
- checking operation of packaging equipment in terms of service schedule and standard operating procedures
- communicating and working effectively with others when packaging goods
- completing documentation related to work activities when packaging goods
- estimating the size, shape and special requirements of goods and loads
- implementing contingency plans when packaging goods
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring equipment performance when packaging goods
- monitoring work activities in terms of planned schedule
- operating and adapting to differences in equipment in accordance with standard operating procedures
- reading and interpreting instructions, procedures and labels relevant to packaging goods
- selecting and using relevant communications, computing equipment and materials when packaging goods
- selecting and using required personal protective equipment conforming to industry and work health and safety (WHS)/occupational health and safety (OHS) standards
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- Australian and international codes and regulations relevant to packaging goods
- documentation requirements for packaging goods, such as a workplan
- housekeeping standards and procedures
- operational work systems, equipment, management and site operating systems for packaging goods
- problems that may occur when packaging goods and appropriate action that can be taken to resolve these problems
- relevant WHS/OHS and environmental protection procedures and guidelines
- site layout and obstacles
- workplace procedures and policies for packaging goods.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.
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Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIA2014 Use product knowledge to complete work operations

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to use product knowledge to complete work operations in accordance with workplace requirements and relevant regulations, as part of work activities within the transport and logistics industries.

It includes identifying products in a subsection of a warehouse or other storage area, examining quality, reporting on products, as well as using inventory and labelling systems to identify and locate products.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

A – Handling Cargo/Stock

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Identify products in a

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Products are identified against specified criteria in

subsection of a warehouse or other storage area	<p>accordance with workplace procedures</p> <p>1.2 Storage and handling characteristics are identified and applied consistently</p> <p>1.3 Products are described to internal customers identifying features that may affect location, safety or storage requirements</p>
2 Examine quality and report on products	<p>2.1 Products are inspected in accordance with workplace quality assurance procedures</p> <p>2.2 Workplace procedures are followed to replace, return or dispose of stock/products that are not useable</p> <p>2.3 Non-conforming products are recorded/reported in accordance with workplace procedures</p>
3 Use inventory and labelling systems to identify and locate products	<p>3.1 Inventory and labelling systems are used to locate products within the workplace</p> <p>3.2 Goods are physically located and identified</p>

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIA2014A Use product knowledge to complete work operations.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIA2014 Use product knowledge to complete work operations

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- adapting to differences in products and services in accordance with standard operating procedures
- applying relevant legislation and workplace procedures
- communicating and working effectively with others when handling, transporting and storing products and providing information on products and services
- completing documentation related to work activities
- estimating the size, shape and special requirements of goods and loads
- identifying containers and goods coding, Australian Dangerous Goods (ADG) and International Maritime Dangerous Goods (IMDG) markings and where applicable, emergency information panels
- reading and comprehending simple statements in English
- reading, interpreting and following instructions, procedures, information and signs relevant to handling, transporting, storing products and providing information on products and services
- selecting and using relevant communications, computing and load handling equipment
- selecting and using required personal protective equipment conforming to industry and work health and safety (WHS)/occupational health and safety (OHS) standards.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- Australian codes and regulations relevant to products being identified, handled, transported, stacked and/or stored as part of work operations
- categories or groups of products and requirements for special handling, stacking and storage
- documentation requirements including reports and records concerning damaged or contaminated goods
- focus of operation of work systems, equipment, management and site operating systems for packaging goods
- housekeeping standards and procedures
- purpose and use of cataloguing and labelling systems
- site layout and obstacles
- strategies to seek out sources of product knowledge and to use this information to inform work
- types of equipment and storage areas appropriate for different categories of goods including perishable, fragile, dangerous, composition/state goods
- workplace procedures and policies for identifying, handling, stacking and storing particular categories of products.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.
-

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIA3016 Use inventory systems to organise stock control

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to use inventory systems to organise stock control in accordance with relevant regulations and workplace requirements, as part of work activities in the transport and logistics industry.

It includes identifying inventory and stock control systems in use in the workplace, using re-order procedures to maintain stock levels, organising cyclical stock counts and reporting discrepancies or variances.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

A – Handling Cargo/Stock

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Identify inventory

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Workplace inventory and stock control equipment, software

and stock control systems in use in the workplace		and systems are identified
	1.2	Reasons for common database approach to inventory records and documentation in the warehouse are explained
	1.3	Procedures for identifying and reporting discrepancies or variances are identified
2 Use re-order procedures to maintain stock levels	2.1	Stock level maintenance checking is conducted
	2.2	Stock is re-ordered to meet stock level maintenance requirements in accordance with workplace policies and procedures
	2.3	Data is accurately entered and extracted from the inventory/records system using appropriate workplace procedures
3 Organise cyclical stock counts and report discrepancies or variances	3.1	Process for cyclical stock count is planned and work is allocated to team members
	3.2	Clear directions on tasks to be performed are given
	3.3	Stocktake activities are conducted in accordance with workplace procedures
	3.4	Types and causes of record discrepancies are identified
	3.5	Procedures for noting and correcting minor discrepancies are used
	3.6	Major discrepancies are reported in accordance with workplace procedures
	3.7	Workplace documentation is completed
4 Produce reports on record keeping and inventory functions	4.1	Types of reports to be produced from inventory records systems are identified
	4.2	Reports are produced in accordance with workplace procedures and relevant regulatory requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIA3016A Use inventory systems to organise stock control.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIA3016 Use inventory systems to organise stock control

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant legislation and workplace procedures
- communicating effectively with others
- modifying activities depending on operational contingencies, risk situations and environments
- operating and adapting to differences in equipment in accordance with standard operating procedures
- reading, interpreting and following relevant instructions, procedures, information and signs
- reporting and/or rectifying identified problems, faults or malfunctions promptly, in accordance with workplace procedures
- selecting and using relevant communications, computing and office equipment
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- applications of different types of inventory systems and stock management approaches
- Australian codes and regulations relevant for organising stock control
- computer records and documentation requirements for stock control, including forms, checklists and inventory reports
- housekeeping standards and procedures
- operational inventory systems, equipment, management and site operating systems for controlling stock
- principles of operation and functions of inventory systems
- workplace procedures and policies for using inventory systems to organise stock control
- workplace processes for records management and producing inventory reports.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in *the Standards for Registered Training Organisations* current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

- Resources for assessment include:
- a range of relevant exercises, case studies and/or simulations
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in industry.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIA3018 Organise despatch operations

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to organise despatch operations in accordance with codes/regulations and workplace requirements in the transport and logistics industry.

It includes planning and organising despatch operations, organising the storage and despatch of stock, and completing all required documentation and records.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

A – Handling Cargo/Stock

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan and organise despatch operations

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Knowledge of product characteristics and workplace procedures are applied to stock analysis

- 1.2 Resources including manual handling equipment, employee competencies, storage areas and goods management equipment are identified to match product characteristics
 - 1.3 Deadlines are scheduled to meet order requirements
 - 1.4 Work processes are planned to meet deadlines
- 2 Organise the storage and despatch of stock**
- 2.1 Employees, equipment and storage areas are allocated and supervised
 - 2.2 Individuals are informed of work requirements and deadlines
 - 2.3 Work processes are monitored to ensure that human resources and equipment are maintained at productive levels in accordance with workplace procedures and work health and safety (WHS)/occupational health and safety (OHS) requirements
 - 2.4 Stock discrepancies are noted and reported in accordance with company procedures
- 3 Complete documentation**
- 3.1 Required despatch documentation and records are confirmed
 - 3.2 Required despatch documentation and records are completed clearly and proofread
 - 3.3 Required despatch documentation and records are processed in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIA3018A Organise despatch operations.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIA3018 Organise despatch operations

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant legislation and workplace procedures
- communicating and working effectively with others
- estimating size, shape and special requirements of goods and loads
- identifying relevant stock and goods coding and labelling, including Australian Dangerous Goods (ADG) Code and International Maritime Dangerous Goods (IMDG) Code markings
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- operating and adapting to differences in equipment in accordance with operating procedures
- reading, interpreting and following relevant instructions, procedures, information and signs
- reporting and/or rectifying identified problems, faults or malfunctions promptly, in accordance with regulatory requirements and workplace procedures
- selecting and using relevant equipment and communications technology
- selecting and using required personal protective equipment conforming to industry and WHS/OHS standards.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- documentation and record requirements for despatch operations
- equipment used when organising despatch operations, and the precautions and procedures that should be followed in its use
- housekeeping standards and procedures
- operational work systems, equipment, management and site operating systems for organising despatch operations
- problems that may occur and appropriate action that can be taken to resolve these problems
- regulations relevant for organising despatch operations, including the ADG Code and relevant bond, quarantine or other legislative requirements
- relevant WHS/OHS and environmental protection procedures and guidelines
- site layout and obstacles
- workplace procedures and policies for organising despatch operations.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or simulations
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in industry.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIA3019 Organise receival operations

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to organise receival operations in accordance with regulations, codes of practice and workplace requirements in the transport and logistics industry.

It includes planning and organising receival operations, storing received stock and completing all required documentation and records.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

A – Handling Cargo/Stock

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Plan and organise receival operations

1.1 Knowledge of product characteristics and workplace procedures are applied to stock analysis

- 1.2 Resources including manual handling equipment, employee competencies, storage areas and goods management equipment are identified to match product characteristics
 - 1.3 Deadlines are scheduled to enable receival of stock in storage zones
 - 1.4 Work processes are planned to meet specified deadlines
- 2 Organise the storage of stock**
- 2.1 Employees, equipment and storage areas are allocated and supervised
 - 2.2 Individuals are informed of work requirements and deadlines
 - 2.3 Work processes are monitored to ensure human resources, and equipment are maintained at productive levels in accordance with workplace procedures and work health and safety (WHS)/occupational health and safety (OHS) requirements
 - 2.4 Discrepancies in stocks are noted and reported in accordance with workplace procedures
- 3 Complete documentation**
- 3.1 Documentation and records regarding receival operations are confirmed
 - 3.2 Documentation and records are completed clearly and proofread
 - 3.3 Documentation and records are filed/despached in accordance with workplace procedures and relevant regulatory requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIA3019A Organise receipt operations.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIA3019 Organise receipt operations

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant legislation and workplace procedures
- communicating and working effectively with others
- estimating size, shape and special requirements of goods and loads
- identifying relevant stock and goods coding and labelling, including Australian Dangerous Goods (ADG) Code and International Maritime Dangerous Goods (IMDG) Code markings
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- operating and adapting to differences in equipment in accordance with operating procedures
- reading and interpreting relevant instructions, procedures and labels
- selecting and using relevant equipment and communications technology
- selecting and using required personal protective equipment conforming to industry and WHS/OHS standards.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- documentation and record requirements for receipt operations
- equipment used for organising receipt operations, and the precautions and procedures that should be followed in its use
- housekeeping standards and procedures

- operational work systems, equipment, management and site operating systems for organising receival operations
- problems that may occur and appropriate action that can be taken to resolve these problems
- regulations relevant for organising receival operations, including the ADG Code and relevant bond, quarantine or other legislative requirements
- relevant WHS/OHS and environmental protection procedures and guidelines
- site layout and obstacles
- workplace procedures and policies for organising receival operations.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in *the Standards for Registered Training Organisations* current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or simulations
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in industry.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIA3038 Control and order stock

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to control and order stock for a workplace store in accordance with relevant codes of practice, regulations and workplace procedures.

It specifically covers maintaining stock levels and records, organising and administering stocktakes, identifying stock losses, processing stock orders and following up orders.

Work is performed under general supervision, with some accountability and responsibility for self and others in achieving prescribed outcomes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

A – Handling Cargo/Stock

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Maintain stock levels

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Stock levels are monitored and maintained at levels

- and records** prescribed by workplace specifications
- 1.2 Stock security systems are monitored and adjusted as required
 - 1.3 Stock re-order cycles are maintained, monitored and adjusted as required
 - 1.4 Colleagues are informed about their individual responsibilities for recording stock
 - 1.5 Stock storage and movement records are maintained in accordance with workplace procedures
 - 1.6 Stock performance is monitored and fast/slow moving items are identified and reported in accordance with workplace procedures
- 2 Organise and administer stocktakes**
- 2.1 Stocktakes are organised at the appropriate time and responsibilities are allocated to staff
 - 2.2 Accurate reports on stocktake data are produced within designated timelines
- 3 Identify stock losses**
- 3.1 Losses are accurately identified, recorded and assessed against potential loss as forecast, on a regular basis
 - 3.2 Identified losses are reported in accordance with workplace procedures
 - 3.3 Avoidable losses are identified, reasons are established, and appropriate solutions are recommended and implemented to prevent future avoidable losses
- 4 Process stock orders**
- 4.1 Orders for stock are accurately processed in accordance with workplace procedures
 - 4.2 Stock ordering and recording systems are accurately maintained
 - 4.3 Purchase and supply agreements are correctly used and appropriate details are recorded
 - 4.4 Negotiated purchase and supply agreements are recorded accurately and filed for retrieval
- 5 Follow up orders**
- 5.1 Delivery process is monitored to meet agreed deadlines
 - 5.2 Appropriate liaison is undertaken with colleagues and suppliers to ensure continuity of supply

5.3 Routine supply problems are followed up or referred to the appropriate person in accordance with workplace policy

5.4 Stock is distributed in accordance with agreed allocations

6 Complete documentation

6.1 Required records and documentation are confirmed

6.2 Required records and documentation are completed clearly and proofread

6.3 Required records and documentation are processed in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIA3038A Control and order stock.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIA3038 Control and order stock

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- adapting to differences in stock and systems in accordance with standard operating procedures
- applying relevant legislation and workplace procedures
- communicating and working effectively with others
- monitoring stock levels
- reading and interpreting relevant instructions, procedures and labels
- reporting and/or rectifying identified problems, faults or malfunctions promptly, in accordance with regulatory requirements and workplace procedures
- selecting and using relevant communications and computing equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- contacts and sources of information and documentation needed when controlling and ordering stock
- customer service policies and procedures
- how to interpret workplace specifications and orders for supplies
- principles of stock control
- problems that may occur and appropriate action that can be taken to resolve these problems
- procedures for ordering stock
- protocols and procedures for liaising with supplier representatives, drivers and colleagues using appropriate technology
- relevant codes of practice and legislative requirements (for example dangerous goods regulations, health and hygiene regulations)

- site layout
- stock control documentation and systems used in workplace stores
- stock security systems
- systems for completing relevant records and documentation.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or simulations
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in industry.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIC0023 Operate four wheel drive vehicle

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to operate a four wheel drive vehicle.

It includes driving a four wheel drive vehicle on roads, traversing gradients, ascending and descending steep gradients, and operating in rugged terrain.

It also includes using vehicle equipment/controls and completing pre-start and post-operational checks safely in accordance with the relevant state/territory legislated roads and traffic licence requirements.

Full or provisional driver licence must be held prior to commencing this unit of competency.

Driving involves the application of four wheel drive vehicle operating principles and procedures to maintain the safety and operation of a four wheel drive vehicle across a variety of on-road and off-road contexts.

Driving is performed with limited supervision, and with duty of care responsibility for self and others in achieving the prescribed outcomes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

C – Vehicle Operation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the

Performance criteria describe the performance needed to demonstrate

essential outcomes.

achievement of the element.

1 Operate four wheel drive vehicles

- 1.1** Pre-start checks of vehicle and equipment are carried out in accordance with manufacturer specifications and roadworthy requirements
- 1.2** Job hazards are identified and required action is taken to minimise, control or eliminate identified hazards
- 1.3** Tyres are checked for pressure suitable for terrain and/or changed in accordance with manufacturer and workplace procedures
- 1.4** Vehicle fuel, water and any ancillary equipment are checked before starting vehicle journey in accordance with manufacturer and workplace procedures
- 1.5** Loads are secured in accordance with workplace and safety requirements
- 1.6** Vehicle is driven on-road and off-road in accordance with legislative and workplace requirements at appropriate operating speeds for road or track conditions and hazards
- 1.7** Vehicle equipment/controls are set and operated in accordance with manufacturer instructions for operation in surrounding terrain
- 1.8** Road conditions are constantly monitored, negotiated and appropriate operations and control techniques are used to ensure safe vehicle operation and no injury to people or damage to vehicle, tracks or loads is sustained
- 1.9** Vehicle is parked and shut down in accordance with workplace and manufacturer requirements

2 Operate vehicle on or across a gradient

- 2.1** Intended vehicle path is inspected prior to negotiating gradient
- 2.2** Loads are secured in accordance with workplace and safety requirements
- 2.3** Appropriate gear and/or range are selected, and engine revolutions are maintained to ensure constant traction
- 2.4** Vehicle is driven on-road and off-road in accordance with legislative and workplace requirements at appropriate speeds for conditions and gradient hazards
- 2.5** Vehicle equipment/controls are set and operated in

- accordance with manufacturer instructions for operation on or across a gradient
- 2.6** Gradient conditions are constantly monitored, and appropriate operations and control techniques are used to ensure safe vehicle operation and no injury to people or damage to vehicle, tracks or loads is sustained
- 3 Operate vehicle ascending a steep gradient**
- 3.1** Intended vehicle path is inspected prior to negotiating ascent
- 3.2** Appropriate gear and/or range are selected to ascend grade, and engine revolutions are maintained to ensure constant traction
- 3.3** Vehicle equipment/controls are set and operated in accordance with manufacturer instructions for operation while ascending a steep gradient
- 3.4** Stall recovery techniques are applied in accordance with manufacturer and workplace procedures
- 3.5** Ascent conditions are constantly monitored, and appropriate operations and control techniques are used to ensure safe vehicle operation and no injury to people or damage to vehicle, tracks or loads is sustained
- 4 Operate vehicle descending a steep gradient**
- 4.1** Intended vehicle path is inspected prior to negotiating gradient
- 4.2** Appropriate gear and/or range are selected to descend grade, and engine revolutions are maintained to ensure constant traction
- 4.3** Vehicle equipment/controls are set and operated in accordance with manufacturer instructions for operation while descending a steep gradient
- 4.4** Stall recovery techniques are applied in accordance with manufacturer and workplace procedures
- 4.5** Descent conditions are constantly monitored, and appropriate operations and control techniques are used to ensure safe vehicle operation and no injury to people or damage to vehicle, tracks or loads is sustained
- 5 Operate vehicle in rugged terrain**
- 5.1** Intended vehicle path is inspected prior to negotiating rugged terrain
- 5.2** Appropriate gear and range are selected to negotiate rugged terrain and engine revolutions are maintained to ensure

- constant traction
- 5.3 Vehicle equipment and controls are set and operated in accordance with manufacturer instructions for operation in surrounding terrain
 - 5.4 Vehicle chains are fitted in accordance with manufacturer instructions and environmental conditions, as required
 - 5.5 Vehicle load is inspected, positioned and secured to maximise traction for four wheel driving
 - 5.6 Rugged conditions are constantly monitored, and appropriate operations and control techniques are used to ensure safe vehicle operation and no injury to people or damage to vehicle, tracks or loads is sustained
- 6 Complete post-operations check**
- 6.1 Vehicle is parked and shut down in accordance with workplace procedures and manufacturer requirements
 - 6.2 Faults or malfunctions are recorded and/or reported in accordance with workplace procedures
 - 6.3 Vehicle and equipment are cleaned and stored after use in accordance with manufacturer and workplace procedures
 - 6.4 Documentation and journey reports are completed in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIC2025 Operate four wheel drive vehicle.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIC0023 Operate four wheel drive vehicle

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant legislation and workplace procedures
- cleaning and storing vehicles and equipment
- communicating effectively with others
- completing relevant documentation
- conducting pre-start checks
- demonstrating low-risk driving behaviours
- identifying and reporting operational faults
- identifying job hazards and taking required action
- implementing contingency plans
- interpreting and following operational instructions
- modifying activities depending on operational contingencies, risk situations and environments
- reading and interpreting relevant instructions, procedures, information and signs
- recording and reporting any identified problems, faults or malfunctions promptly in accordance with workplace procedures
- using and adjusting vehicle equipment/controls, as required:
 - brakes
 - electronic traction control
 - freewheeling hubs
 - gears/range
 - heating and cooling systems
 - jacks
 - tyres
- working with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- documentation and record keeping requirements
- effect of hard surface driving (such as transmission wind up) on a four wheel drive system
- effect of loads while negotiating a gradient
- efficient driving techniques and safe driving strategies
- environmental impact of four wheel driving
- hazards and risks associated with traversing cross gradients
- hazards that may exist when operating a four wheel drive vehicle in on-road and off-road situations, and action to minimise, control or eliminate identified hazards
- low risk driving behaviours:
 - creating and maintaining crash avoidance space
 - protecting crash avoidance space
 - road rules and directions
 - space and time management
- pre- and post-operational checks and related action
- problems that may occur when operating a four wheel drive vehicle, and action that can be taken to report or resolve the problems
- relevant land management procedures and regulations
- relevant state/territory road traffic authority road rules, regulations, permit and licence requirements
- relevant work health and safety (WHS)/occupational health and safety (OHS) and environmental procedures and regulations
- vehicle equipment/controls, instruments and indicators, and their use
- vehicle handling procedures and techniques for a range of road and track conditions
- workplace procedures for operating a four wheel drive vehicle in both on-road and off-road situations.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions in a four wheel drive vehicle typical of that which is driven in the workplace.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy

requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises and case studies
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including legislation, regulations, codes of practice, workplace procedures and operation manuals.

A simulator/online assessment is not suitable for the final assessment of this unit of competency.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLID0001 Load and unload vehicles carrying special loads

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor unit Application change to clarify terms
- PC 1.2 Minor terminology change
- Minor word changes in Performance Evidence
- Minor word changes in Knowledge Evidence.

Release 1. This is first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to load and unload vehicles carrying special loads in accordance with relevant state/territory roads and traffic authority licence and permit requirements and regulations, as well as specific codes of practice, regulatory and permit requirements.

It includes loading and unloading special loads onto and from a vehicle, securing and protecting vehicle and load, and completing all required documentation.

Special load is the collective term for those items of cargo which, due to their nature or value, will require special treatment and/or equipment during the transport activities.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

D – Load Handling

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Load and unload vehicle

2 Secure and protect vehicle and load

3 Complete documentation

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Load characteristics are identified and taken into account when determining appropriate loading and unloading procedures
- 1.2 Hazardous and specialised cargo are identified and handled in accordance with required workplace procedures, work health and safety (WHS)/occupational health and safety (OHS) requirements
- 1.3 Vehicle is loaded in consultation with relevant personnel and required documentation in accordance with vehicle loading regulations and workplace safety requirements
- 1.4 Lifting aids and appliances are selected and used to aid loading procedures in accordance with workplace procedures and safety legislation
- 1.5 Vehicle is unloaded or partially unloaded in a safe and efficient manner taking into account suitable locations, stowage, safe use of equipment and balance of remaining load
- 1.6 Ancillary equipment is operated in accordance with workplace procedures and manufacturer instructions during loading and unloading operations
- 2.1 Vehicle load is secured using correct load restraint and protection equipment for different loads, vehicles and carriage conditions
- 2.2 Load is protected in accordance with legal and workplace safety requirements
- 2.3 Load distribution is checked to ensure it is even, legal and within vehicle safe working capacity
- 2.4 Loaded vehicle is inspected and checked for security to travel
- 3.1 Documentation is completed and proofread in accordance with workplace procedures

- 3.2** All required cargo transportation documentation is completed in accordance with workplace requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLID3014 Load and unload vehicles carrying special loads.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLID0001 Load and unload vehicles carrying special loads

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor unit Application change to clarify terms
- PC 1.2 Minor terminology change
- Minor word changes in Performance Evidence
- Minor word changes in Knowledge Evidence.

Release 1. This is first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant legislation and workplace procedures
- applying techniques for load security
- communicating and working collaboratively effectively with others when loading and unloading special loads
- completing relevant documentation
- complying with dangerous goods systems and relevant regulatory requirements, as required
- estimating size, shape and special requirements of loads
- identifying and correctly using load handling equipment when loading and unloading hazardous cargo and/or specialised cargo
- interpreting and following operational instructions and prioritising work
- loading and unloading a load safely
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of relevant documentation
- operating and adapting to differences in equipment in accordance with operating procedures
- reading and interpreting relevant instructions, procedures, information and signs
- selecting and using required personal protective equipment (PPE) conforming to industry and work health safety (WHS)/occupational health and safety (OHS) standards
- using manual handling techniques safely.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- characteristics of special loads such as:
 - controlled waste
 - powders
 - raw grain product
- housekeeping standards and workplace procedures
- methods for securing special loads
- National Transport Commission (NTC) Load Restraint Guide
- relevant dangerous goods systems and dangerous goods regulation requirements, including emergency information panels, their meaning and implications for loading and unloading processes
- risks and hazards when loading and unloading special loads, and related precautions to control the risk
- site layout considerations and obstacles to unloading operations
- WHS/OHS procedures and guidelines for lifting and moving loads
- workplace procedures and policies for loading and unloading vehicles designed to carry special loads.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant materials, tools, handling equipment and PPE currently used in industry
- applicable documentation, including workplace procedures, regulations, NTC Load Restraint Guide, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLID0002 Care for livestock in transit

Modification History

Release 1. This is first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to prepare and care for livestock in transit, in accordance with relevant regulations and industry codes of practice for caring for livestock in transit.

It includes preparing to transport livestock, caring for and controlling livestock in transit, using appropriate animal husbandry techniques, and completing relevant documentation as required.

Work is performed under limited or minimum supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

D – Load Handling

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to transport livestock

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Health condition and quantity of livestock to be transported is checked prior to transport operation in accordance with client requirements and workplace procedures

- 1.2 Vehicle is checked that it is positioned correctly on loading dock, hazards are identified and required action is taken to minimise, control or eliminate identified hazards in accordance with work health and safety (WHS)/occupational health and safety (OHS)/occupational safety and health (OSH) and workplace procedures
 - 1.3 Livestock crate drainage system is inspected to ensure drainage of livestock effluent from the vehicle is in accordance with regulatory requirements and workplace procedures
 - 1.4 Livestock crate is checked for cleanliness and any hazards that could injure or damage livestock during loading, unloading and transit in accordance with regulatory requirements and workplace procedures
 - 1.5 Poor quality livestock is identified and reported to specified person/s in accordance with workplace procedures
 - 1.6 Feed provisions and other requirements including veterinary products for livestock, prior to and during transit, are identified and organised
 - 1.7 Portable stockyards are assembled as required in accordance with regulatory requirements and workplace procedures
 - 1.8 National vendor declaration is obtained and checked for accuracy in accordance with regulatory requirements
 - 1.9 Loaded livestock is visually assessed to ensure correct density of livestock within the pen and adjustments are made as required in accordance with regulatory requirements and workplace procedures
- 2 Care for and control livestock in transit**
- 2.1 Wellbeing of livestock is regularly monitored during loading, transit and unloading, and appropriate action is taken in accordance with relevant government regulations, workplace procedures, and humane and permit requirements
 - 2.2 Relevant handling equipment is used to aid handling of livestock during loading and unloading operations, in accordance with regulations and workplace procedures
 - 2.3 Action is taken for care and wellbeing of livestock in an

- accident during transit
- 2.4** Distressed livestock is identified and handled in an appropriate manner in accordance with regulatory requirements and workplace procedures
- 3 Use animal husbandry techniques**
- 3.1** Symptoms of animal diseases and parasites are identified and appropriate action is taken to control them in accordance with relevant government regulations, workplace procedures, and humane and permit requirements
- 3.2** Prescribed medication is administered to livestock in accordance with veterinary directions and workplace procedures
- 4 Completion of documentation**
- 4.1** National vendor declaration transport section is completed correctly and clearly by transport operator
- 4.2** National vendor declaration is given to the appropriate person upon reaching destination on the declaration

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLID3020 Care for livestock in transit.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLID0002 Care for livestock in transit

Modification History

Release 1. This is first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate identified hazards
- inspecting vehicle to ensure livestock crate drainage system is in place and is effective in control of livestock effluent
- checking livestock crate for cleanliness and any hazards that could injure or damage livestock during loading, unloading and transit
- loading livestock to ensure correct density of livestock within the pen
- applying relevant work health and safety (WHS)/occupational health and safety (OHS)/occupational safety and health (OSH) requirements and guidelines and workplace procedures
- communicating effectively and working collaboratively with others in the care of livestock in transit
- completing relevant documentation including relevant sections of National Vendor declaration
- identifying and correctly using required equipment
- implementing contingency plans
- interpreting and following operational instructions and prioritising work
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- operating and adapting to differences in equipment in accordance with operating procedures
- reporting and rectifying identified problems promptly, in accordance with regulatory requirements and workplace procedures
- reading and interpreting relevant instructions, procedures and information
- working systematically with required attention to detail without injury to self or others, or damage to animals or equipment.

Knowledge Evidence

- Australian animal welfare standards and guidelines for transporting livestock by land
- housekeeping standards and procedures when caring for livestock during transit

- insurance rights and requirements of clients
- methods of securing livestock during transit
- relevant regulations for caring for livestock in transit
- risks when caring for livestock in transit and related precautions to control the risk
- specialised livestock handling equipment and procedures for its use
- WHS/OHS/OSH requirements and guidelines for lifting and moving loads
- workplace procedures and policies for caring for livestock in transit.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or simulations
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in industry.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLID0020 Shift materials safely using manual handling methods

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to shift materials safely using manual handling methods.

It includes assessing the risks associated with relocating the load, planning the relocation process and carrying out the relocation in accordance with the plan. Work must be carried out in compliance with the relevant work health and safety (WHS)/occupational health and safety (OHS) regulations concerning the manual handling and movement of loads.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

D – Load Handling.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Assess risks associated with relocating load

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Products, goods or materials to be relocated are identified and assessed to determine appropriate relocation method

1.2 Storage locations are determined and potential routes to be

followed are identified

- 1.3 Effect of load relocation on original load base is predicted
- 1.4 Points of balance are estimated
- 1.5 Required clearances are compared to available space and adjustments are made to moving loads to reflect required clearance
- 1.6 Worksite hazards are identified, and corrective action is taken prior to commencing shifting products, goods or materials
- 1.7 Risks in potential routes are considered
- 1.8 Risks to self are identified arising from the required lifting, load carrying, set down or movement of products, goods or materials
- 1.9 Manual handling procedures for lifting, lowering and carrying, pushing and pulling are identified
- 1.10 Team lifting processes are considered when moving loads
- 1.11 Appropriate personal protective equipment (PPE) is identified and used
- 1.12 Size to weight ratio of items to be manually handled are identified

2 Plan load relocation

- 2.1 Relocation of the load is planned consistent with the code of practice for manual handling and in accordance with the risk assessment
- 2.2 Process for relocating load is proposed, including predicting and planning for potential difficulties
- 2.3 Proposed process is checked for compliance with codes of practice and workplace procedures

3 Relocate load

- 3.1 Actions for lifting, lowering and carrying, pulling and pushing a load are in accordance with workplace procedures and WHS/OHS requirements
- 3.2 Team lifting tasks are coordinated
- 3.3 Planned process and route are followed
- 3.4 Relocated products, goods or materials are set down without

damage to goods, personnel or equipment and are checked for stability

- 3.5 Relocation is checked to ensure it meets work requirements and variances are reported to relevant personnel

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLID1001 Shift materials safely using manual handling methods.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLID0020 Shift materials safely using manual handling methods

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- applying and following relevant work health and safety (WHS)/occupational health and safety (OHS) regulations and workplace procedures
- applying precautions and required action to minimise, control or eliminate risks that may exist when manually lifting and handling products, goods or materials
- communicating effectively with others when manually lifting and handling products, goods or materials
- interpreting manual handling risks
- modifying activities depending on operational contingencies, risk situations and environments
- operating and adapting to differences in loads and products, goods or materials in accordance with workplace procedures
- reading and interpreting instructions, procedures and information relevant to the manual lifting and handling of products, goods or materials
- selecting and using required personal protective equipment (PPE) conforming to industry and WHS/OHS standards
- using correct manual handling practices
- working collaboratively with others when manually lifting and handling products, goods or materials
- working systematically with required attention to detail without injury to self or others, or damage to products, goods, materials, or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- relevant WHS/OHS workplace procedures, codes of practice and industry guidelines concerning the manual lifting and movement of loads
- risks when manually lifting and handling products, goods or materials and related precautions to control the risk, including:
 - controlled actions on a movement during lifting
 - distance over which load is to be shifted
 - frequency of shifting operations
 - load on the spine during lifting
 - postures and positions during lifting
 - rotation and side movement of the spine during lifting
 - time allowed for shifting the load
 - type, weight and position of the load, including loose, liquid, dangerous or hazardous products, goods or materials
- site layout and obstacles
- work layout.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

A simulator/online assessment is not suitable for the final assessment of this unit of competency.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation, including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLID1001 Shift materials safely using manual handling methods

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to shift loads safely using manual handling methods. Work must be carried out in compliance with the relevant work health and safety (WHS)/occupational health and safety (OHS) regulations concerning the manual handling and movement of loads.

It includes assessing the risks associated with relocating the load, planning the relocation process and carrying out the relocation in accordance with the plan.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

D – Load Handling

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Assess risks associated with

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Products, goods or materials to be relocated are identified and assessed to determine appropriate relocation method

relocating load

- 1.2 Storage locations are determined and potential routes to be followed are identified
- 1.3 Effect of load relocation on original load base is predicted
- 1.4 Points of balance are estimated
- 1.5 Required clearances are compared to available space and adjustments are made to moving loads to reflect required clearance
- 1.6 Effects of moving contents, which may be loose, liquid, dangerous or hazardous, are considered
- 1.7 Risks in potential routes are considered
- 1.8 Risks to self are identified arising from the required lifting, load carrying, set down or movement of the goods
- 1.9 Manual handling procedures for lifting, lowering and carrying, pushing and pulling are identified
- 1.10 Team lifting processes are considered when moving loads
- 1.11 Appropriate personal protective equipment is determined
- 1.12 Size to weight ratio of items to be manually handled are identified

2 Plan load relocation

- 2.1 Relocation of the load is planned, consistent with the code of practice for manual handling and in accordance with the risk assessment
- 2.2 Process for relocating load is proposed including predicting and planning for potential difficulties
- 2.3 Proposed process is checked for compliance with code of practice and workplace procedures

3 Relocate load

- 3.1 Actions for lifting, lowering and carrying, pulling and pushing a load are in accordance with workplace procedures and WHS/OHS requirements
- 3.2 Applications appropriate for team relocation of load are identified
- 3.3 Team lifting tasks are coordinated
- 3.4 Planned process and route are followed

- 3.5 Relocated materials are set down without damage to goods, personnel or equipment and are checked for stability
- 3.6 Relocation is checked to see it meets work requirements and variance/s are reported

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLID1001A Shift materials safely using manual handling methods.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLID1001 Shift materials safely using manual handling methods

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate risks that may exist when manually lifting and handling materials and goods
- applying relevant legislation and workplace procedures
- communicating effectively with others when manually lifting and handling materials and goods
- implementing contingency plans when manually lifting and handling, materials and goods
- interpreting and following operational instructions and prioritising work
- interpreting manual handling risks
- modifying activities depending on operational contingencies, risk situations and environments
- operating and adapting to differences in loads and materials in accordance with standard operating procedures
- reading and interpreting instructions, procedures and information relevant to the manual lifting and handling of materials and goods
- selecting and using required personal protective equipment conforming to industry and work health and safety (WHS)/occupational health and safety (OHS) standards
- using correct manual handling practices
- working collaboratively with others when manually lifting and handling materials and goods
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- housekeeping standards and procedures
- relevant WHS/OHS procedures and guidelines concerning the manual lifting and movement of loads
- risks when manually lifting and handling materials and goods, and related precautions to control the risk, including:
 - controlled actions on a movement during lifting
 - distance over which load is to be shifted
 - frequency of shifting operations
 - load on the spine during lifting
 - postures and positions during lifting
 - rotation and side movement of the spine during lifting
 - time allowed for shifting the load
 - type, weight and position of the load
 - work layout
 - site layout and obstacles
- workplace procedures and policies for manual handling.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, regulations, codes of practice

and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLID2004 Load and unload goods/cargo

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to load and unload goods and cargo in accordance with relevant state/territory roads and traffic authority regulations/permit requirements.

It includes loading and unloading goods and cargo, securing and protecting a load and completing all required documentation.

Work is performed under general supervision within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

D – Load Handling

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1 Load and unload goods/cargo**
 - 1.1 Load characteristics are identified and taken into account when determining appropriate loading and unloading workplace procedures
 - 1.2 Job hazards are identified and required action is taken to minimise, control or eliminate identified hazards
 - 1.3 Dangerous or hazardous goods are identified and handled in accordance with the current Australian Dangerous Goods (ADG) Code and other relevant regulations/permit requirements
 - 1.4 Load is packed/unpacked to make safe and effective use of available spaces
 - 1.5 Goods/cargo are loaded in accordance with relevant mass and loading regulations and workplace procedures
 - 1.6 Lifting aids and appliances are selected and used to aid loading procedures in accordance with workplace procedures and safety legislation
 - 1.7 Unloading activities are conducted in a safe and efficient manner taking into account suitable locations, stowage, safe use of equipment and balance of remaining load
 - 1.8 Goods requiring special handling and/or documentation are identified and workplace procedures are followed
 - 1.9 Relocated material is restacked appropriate for transport method, safe height, weight loading, size and crushability of goods
- 2 Secure and protect load**
 - 2.1 Load distribution is checked to ensure it is even, legal and within safe working capacity
 - 2.2 Load is checked to ensure dangerous goods and hazardous substances are appropriately segregated in accordance with current ADG Code
 - 2.3 Load is secured using correct load restraint and protection equipment for different loads, carrying and storage conditions
 - 2.4 Load is protected in accordance with legal and workplace safety requirements
- 3 Complete**
 - 3.1 Load is inspected and checked for security to travel, in accordance with relevant regulations/permit requirements

documentation

and current ADG Code, as required

- 3.2 All required goods documentation is completed in accordance with workplace requirements including current ADG Code, as required

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLID2004A Load and unload goods/cargo.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLID2004 Load and unload goods/cargo

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying required action to minimise, control or eliminate identified hazards
- completing relevant documentation
- estimating load size, shape and special requirements and taking appropriate action
- identifying containers and goods coding, Australian Dangerous Goods (ADG) and International Maritime Dangerous Goods (IMDG) Code markings and emergency information panels, and taking appropriate action
- implementing contingency plans
- interpreting and following operational instructions and prioritising work
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- operating and adapting to differences in cargo and equipment in accordance with operating procedures
- reporting and/or rectifying identified problems promptly, in accordance with regulatory requirements and workplace procedures
- reading and interpreting relevant instructions, procedures, information, signs and labels
- applying relevant legislation and workplace procedures
- selecting and using required personal protective equipment conforming to industry and work health safety (WHS)/occupational health and safety (OHS) standards
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- chain of responsibility workplace procedures
- housekeeping workplace procedures
- national load restraint guidelines
- problems that may arise when loading and unloading goods and cargo and actions that should be taken to prevent or solve these problems
- relevant Australian and international regulations and codes of practice for handling and transporting dangerous goods and hazardous substances
- relevant Australian Standards and regulations including state/territory mass and loading regulations
- risks when loading and unloading goods/cargo and related precautions to control risk
- safe work methods for securing load
- security awareness requirements when loading and unloading vehicles and in particular recognising, isolating and reporting suspicious cargo and goods
- site layout and obstacles
- WHS/OHS procedures and guidelines concerning the lifting and movement of loads
- workplace procedures and policies for loading and unloading goods/cargo.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or simulations
- applicable documentation including workplace procedures, regulations, national Load Restraint Guide (LRG), codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in

industry.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLID2010 Operate a forklift

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to operate a forklift in compliance with the relevant state/territory authority licence requirements and regulations, in a variety of operational contexts.

It includes checking forklift condition, driving forklift to fulfil operational requirements, and monitoring and maintaining forklift performance and site conditions.

Assessment of this unit will usually be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory work health and safety (WHS)/occupational health and safety (OHS) authority.

Operation of a forklift is performed under some supervision, generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

D – Load Handling

Unit Sector

Not applicable.

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Check forklift condition

- 1.1 Condition of forklift is checked for compliance with WHS/OHS and workplace requirements for warning devices, manufacturer specifications and nature of load shifting task
- 1.2 Attachments are checked to ensure appropriate adjustment and operation
- 1.3 Mirrors and seats are adjusted for safe operation by driver
- 1.4 Logbooks are checked and appropriate workplace documentation is completed in accordance with workplace requirements

2 Drive forklift

- 2.1 Forklift is started, steered, manoeuvred, positioned and stopped in accordance with regulations and manufacturer instructions
- 2.2 Engine power is managed to ensure efficiency and performance and to minimise engine and gear damage
- 2.3 Operational hazards are identified and/or anticipated and avoided or controlled through defensive driving and appropriate hazard control techniques
- 2.4 Forklift is driven in reverse, maintaining visibility and achieving accurate positioning
- 2.5 Forklift is parked, shut down and secured in accordance with manufacturer specifications, regulations and workplace procedures

3 Operate forklift to handle loads

- 3.1 Lifting task to be undertaken is appropriately planned, and correct lifting truck and attachments are selected
- 3.2 Load is lifted, carried, lowered and set down in accordance with WHS/OHS legislation, manufacturer specifications and company procedures

4 Monitor site conditions

- 4.1 Hazards and traffic flow are identified when selecting the most efficient route and appropriate adjustments are made
- 4.2 Site conditions are assessed to enable safe operations and to ensure no injury to people or damage to property, equipment, loads or facilities occurs

5 Monitor and maintain forklift performance

- 5.1 Performance and efficiency of vehicle operation is monitored during use
- 5.2 Defective/irregular performance and malfunctions are reported to relevant personnel
- 5.3 Forklift records are maintained/updated in accordance with workplace procedures and legislative requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLID2010A Operate a forklift.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLID2010 Operate a forklift

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant legislation and workplace procedures
- checking and replenishing fluids, and carrying out lubrication processes
- communicating and working effectively with others
- completing relevant documentation
- ensuring forklift and its equipment are maintained in terms of service schedule and standard operating procedures
- identifying points of balance and safe lifting positions on a range of loads when operating a forklift (including accessories)
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring performance of forklift and its equipment, and taking appropriate action as required
- monitoring and prioritising work activities in terms of planned schedule
- operating and adapting to differences in equipment in accordance with standard operating procedures
- operating electronic communications equipment to required protocol
- reading, interpreting and following relevant instructions, procedures, information and signs
- reporting and/or rectifying identified problems, faults or malfunctions promptly, in accordance with regulatory requirements and workplace procedures
- selecting and using required personal protective equipment conforming to industry and WHS/OHS standards
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- efficient driving techniques
- engine power management and safe operating strategies
- forklift controls, instruments and indicators, and their use
- forklift handling procedures
- high risk work licence requirements
- operating hazards and related defensive driving and hazard control techniques
- operational emergency procedures
- pre-operational checks carried out on forklift and related action
- principles of stress management when driving a forklift
- relevant duty of care requirements for operating a forklift
- relevant WHS/OHS and environmental procedures and regulations
- site layout and obstacles
- workplace operating procedures.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLID2022 Conduct weighbridge operations

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package.

- Minor changes to unit Application
- Minor changes to Performance Criteria
- Minor changes to Performance Evidence
- Minor changes to Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to conduct weighbridge operations.

It includes setting up for weighbridge operations, weighing loaded and unloaded vehicles, finalising weighbridge operations, and completing required records and documentation in accordance with workplace procedures and regulatory requirements.

Work is performed under some supervision, generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

D – Load Handling

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the

Performance criteria describe the performance needed to

essential outcomes.

demonstrate achievement of the element.

1 Set up for weighbridge operations

- 1.1 Weighbridge systems, including equipment, computer and recording arrangements, are checked for operational status
- 1.2 Tests to confirm accuracy of weighbridge operation and related functions are conducted in accordance with workplace procedures, manufacturer instructions and relevant legislation
- 1.3 Accurate reporting of results of inspection and testing is kept in accordance with statutory requirements, workplace procedures and industry guidelines
- 1.4 Hazards are identified, risks are assessed, and control measures are implemented
- 1.5 Faults and discrepancies in weighbridge operation are identified and appropriate action is undertaken in accordance with workplace procedures

2 Weigh loaded vehicles

- 2.1 Vehicles are directed onto platform to obtain accurate weight
- 2.2 Weight of loaded stationary vehicle is registered against vehicle and load identification
- 2.3 Vehicle and load information is entered into workplace recording system and driver is issued with receipt and/or statement
- 2.4 Areas of dispute are resolved or forwarded for further action to be undertaken in accordance with workplace procedures

3 Weigh unloaded vehicles

- 3.1 Vehicles are directed onto platform to obtain accurate weight
- 3.2 Weight of unloaded stationary vehicle is registered against vehicle
- 3.3 Proposed load weight is assessed for conformance to statutory requirements
- 3.4 Loading operations are commenced in accordance with legal loading weight, customer requirements and workplace procedures, and vehicle is re-weighed to establish final load weight, as required
- 3.5 Vehicle and load information are entered into workplace recording system and invoice is issued to driver, as required
- 3.6 Weighbridge documents, invoices or receipts are obtained in

accordance with statutory and workplace requirements

3.7 Areas of dispute are resolved or forwarded for further action to be undertaken in accordance with workplace procedures

4 Complete weighbridge operations

4.1 Weighbridge systems, including equipment, computer and recording arrangements, are secured or made ready for next shift

4.2 Record of operations is maintained and filed in accordance with workplace procedures and statutory requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLID2022A Conduct weighbridge operations.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLID2022 Conduct weighbridge operations

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package.

- Minor changes to unit Application
- Minor changes to Performance Criteria
- Minor changes to Performance Evidence
- Minor changes to Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant legislation and workplace procedures
- completing relevant documentation
- identifying, selecting and efficiently and effectively using weighbridge equipment
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring performance of weighbridge equipment
- operating and adapting to differences in equipment in accordance with workplace procedures
- reading, interpreting and following relevant instructions, procedures and information
- reporting and/or rectifying identified problems, errors or malfunctions promptly in accordance with regulatory requirements and workplace procedures
- selecting and using required personal protective equipment (PPE) conforming to industry and work health safety (WHS)/occupational health and safety (OHS) standards
- setting up and maintaining weighbridge equipment
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- calculation method and approaches for metric and imperial systems
- classification procedures
- correct weighing procedures, including statutory and workplace requirements
- emergency response procedures
- equipment applications, capacities, configurations, safety hazards and control mechanisms
- problems that may occur when conducting weighbridge operations and appropriate actions that can be taken to resolve these problems
- records and documentation requirements for weighbridge operations
- relevant regulations for conducting weighbridge operations, including relevant dangerous goods systems and dangerous goods regulation requirements
- relevant WHS/OHS and environmental protection procedures and guidelines
- site layout
- weights and measures regulations
- workplace procedures for conducting weighbridge operations.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation, including legislation, regulations, National Transport Commission (NTC) Load Restraint Guide, relevant dangerous goods systems and dangerous goods regulation requirements, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIE0002 Process workplace documentation

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in Assessment Conditions.

Release 1. This is first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to process workplace documentation and gather data in accordance with workplace requirements. Processing documentation/data is carried out as an integral part of work operations in the context of the workplace concerned.

It includes planning and completing documentation and data gathering to fulfil an identified purpose, including legislative obligations.

Work may be performed in a team or autonomous working situations.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

E – Communication and Calculation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Plan documentation/data 1.1 Purpose of workplace documentation/data gathering is

gathering	identified and confirmed in accordance with legislative obligations and workplace procedures
2 Complete documentation/data gathering	<p>1.2 Information needed for completing workplace documentation/data is identified as required in accordance with legislative obligations and workplace procedures</p> <p>2.1 Data is gathered, required documentation is prepared and forms are completed, in accordance with workplace policies and procedures</p> <p>2.2 Information/data is gathered and entered into computerised system, as required, in accordance with regulatory requirements and workplace procedures</p> <p>2.3 Workplace documents and electronic applications and systems are maintained accurately and in a timely manner in accordance with regulatory requirements and workplace procedures</p>

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to TLIE2008 Process workplace documentation.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIE0002 Process workplace documentation

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in Assessment Conditions.

Release 1. This is first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) legislation and workplace procedures
- completing workplace documentation and forms
- ensuring processed information and data is checked for relevance, accuracy and completion
- operating and adapting to differences in electronic applications and systems in accordance with operating procedures
- reading, interpreting and organising information and data needed for completing and processing workplace documentation and forms
- working collaboratively with others when completing and processing workplace documentation, data and forms
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- writing and entering information and data into electronic applications and systems in a timely manner.

Knowledge Evidence

- procedures for processing workplace documentation and data using relevant workplace technology
- relevant procedures and duty of care requirements
- relevant WHS/OHS legislation, regulatory requirements and workplace responsibilities
- requirements and sources for workplace documentation, including:
 - data
 - diaries
 - forms
 - logs

- typical problems in processing workplace documentation and data and appropriate action and solutions.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, electronic applications and systems, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIE0008 Calculate mass, area and quantify dimensions

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to calculate mass, area and quantify dimensions.

It includes calculating loads to be transported or placed in storage, calculating load limits of transport and/or storage systems, and organising the loading in accordance with relevant legislation and workplace requirements.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

E – Communication and Calculation.

Unit Sector

Not applicable.

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Calculate loads for transport or storage

1.1 Order forms and work orders are read, and requirements are noted

1.2 Shape, balance characteristics, dimensions and mass of load/s are identified

1.3 Weights and volumes are totalled to calculate load

requirements of transport or storage system

- 2 Calculate load limits of transport and/or storage**
- 2.1** Allowable load limits for storage and/or transport systems are identified in accordance with legislative requirements and workplace procedures
 - 2.2** Capacity of transport and storage systems in terms of mass, area and volume is calculated
- 3 Organise loads**
- 3.1** Loads are restricted to allowable range
 - 3.2** Loads are spread to ensure safe weighting on pallets, trucks, platforms or other storage or transport systems
 - 3.3** Appropriate workplace documentation is completed

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIE3002 Estimate/calculate mass, area and quantify dimensions.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIE0008 Calculate mass, area and quantify dimensions

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant legislation and workplace procedures
- calculating volume and safely moving liquids
- identifying, selecting and using relevant calculation equipment
- interpreting and following operational instructions and prioritising work
- performing mathematical operations required when calculating mass, area and volumes of loads and transport/storage facilities
- reading and interpreting relevant instructions, procedures and information
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- documentation requirements for the workplace activities concerned
- focus of operation of work systems, equipment, management and site operating systems for transporting and/or storing goods and stock
- limitations of loads for storage and/or transport systems
- national and international codes and regulations relevant to workplace activities
- problems that may occur when estimating and/or calculating mass, area and volumes of loads and transport/storage facilities, and appropriate actions that can be taken to resolve these problems
- relevant work health and safety (WHS)/occupational health and safety (OHS) and environmental protection procedures and guidelines
- requirements for safely moving liquids
- workplace procedures and policies for estimating and/or calculating mass, area and volumes of loads, and transport and storage facilities, including the quantification of dimensions.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIE3004 Prepare workplace documents

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to prepare workplace documents and forms in accordance with workplace requirements and applicable regulations or codes, as part of work activities within the transport and logistics industry.

It includes planning and preparing simple workplace documents and gathering relevant information enabling the completion of a workplace form.

Work is performed under general supervision within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

E – Communication and Calculation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan workplace

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Purpose and audience for document are identified

document

- | | | |
|-------------------------------------|------------|--|
| | 1.2 | Appropriate format for document is established to meet workplace requirements |
| | 1.3 | Relevant information is identified and selected for inclusion in document |
| 2 Prepare workplace document | 2.1 | Document is drafted in accordance with workplace procedures and conventions for sentence construction, grammar, spelling, style, punctuation and vocabulary appropriate for reader/s |
| | 2.2 | Document is edited and presented in a final version appropriate to task |
| 3 Complete workplace forms | 3.1 | Work related form/s is interpreted to identify information required for its completion |
| | 3.2 | Required information for completion of form is gathered from relevant sources in accordance with workplace procedures |
| | 3.3 | Form/s is completed in accordance with workplace policy and procedures, and applicable regulations and codes |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to TLIE3004A Prepare workplace documents.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIE3004 Prepare workplace documents

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant legislation and workplace procedures
- communicating effectively with others
- completing documentation related to work activities
- reading and interpreting relevant instructions, procedures, information and labels
- reading, writing and comprehending simple statements in English
- working collaboratively with others
- working systematically with required attention to detail.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- conventions for sentence construction, grammar, spelling, style and punctuation
- equipment and materials required for completing documents and forms, and instructions and precautions for their use
- format and layout of various documents and forms used in workplace activities
- relevant Australian and international codes of practice and regulations relevant to documents and/or forms being prepared
- relevant work health safety (WHS)/occupational health and safety (OHS) and environmental protection procedures and guidelines
- workplace procedures and policies for completing documents/forms.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training

Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include:

- a range of relevant exercises, case studies and/or simulations
- relevant materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIF2010 Apply fatigue management strategies

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package.

- Minor changes to unit Application
- Minor changes to Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to apply fatigue management strategies within the transport and logistics industry.

It includes identifying and acting on signs of fatigue and implementing appropriate strategies to minimise fatigue during work activities, in particular when operating equipment, trains, vehicles, load shifting equipment, marine vessels and aircraft.

Work is undertaken in compliance with relevant legislation, regulations, codes and guidelines.

Work is performed under some supervision generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

F – Safety Management.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS PERFORMANCE CRITERIA

Elements describe the Performance criteria describe the performance needed to demonstrate

essential outcomes. achievement of the element.

- | | |
|---|---|
| 1 Identify and act on signs of fatigue | 1.1 Potential causes of fatigue are identified and actions taken to minimise their effects in accordance with workplace procedures |
| | 1.2 Personal warning signs of fatigue are recognised, and necessary steps are taken in accordance with workplace procedures, to ensure that effective work capability and alertness are maintained |
| 2 Implement strategies to minimise fatigue | 2.1 Workplace procedures are assessed to minimise fatigue |
| | 2.2 Factors that increase the risk of fatigue-related accidents and incidents are minimised |
| | 2.3 Fatigue management strategies are implemented in accordance with workplace policy and procedures |
| | 2.4 Lifestyle choices are made that promote the effective long-term management of fatigue |
| | 2.5 Effective practices in combating fatigue are adopted and applied |
| | 2.6 Personal fatigue management strategies are communicated to relevant people |
| | 2.7 Appropriate counter measures are planned to combat fatigue |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIF2010A Apply fatigue management strategies.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIF2010 Apply fatigue management strategies

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package.

- Minor changes to unit Application
- Minor changes to Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- adapting to changes in rosters and standard operating procedures (SOPs) as they relate to fatigue management
- adjusting lifestyle patterns to ensure effective fatigue management during work activities
- applying precautions and required actions to minimise and control the effects of fatigue when carrying out own work functions
- applying relevant legislation and workplace procedures
- communicating effectively with others when applying fatigue management strategies
- identifying and meeting own learning needs about fatigue management related matters
- modifying activities and taking appropriate initiatives to manage fatigue in the workplace depending on work contexts, risk situations and environments
- reading and interpreting instructions, procedures, regulations and signs related to fatigue management and applying them to work activities
- recognising symptoms of fatigue and taking appropriate actions in accordance with fatigue management regulations and workplace procedures
- working collaboratively with others to manage and minimise the effects of fatigue during work activities.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- causes and effects of fatigue on workers
- factors that increase fatigue-related accidents
- how fatigue affects workplace performance

- how fatigue contributes to workplace accidents
- lifestyles that promote effective long-term fatigue management
- relevant fatigue management codes, regulations, permit and licence requirements
- relevant work health and safety (WHS)/occupational health and safety (OHS) regulations as they relate to fatigue
- risks and hazards created by workplace fatigue
- sources of information on fatigue
- strategies and ways of managing fatigue
- ways of recognising fatigue
- workplace policies and procedures related to fatigue management and the control of factors that can contribute to fatigue and fatigue-related accidents.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and personal protective (PPE) equipment currently used in industry
- applicable documentation, including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIG2007 Work in a socially diverse environment

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in Knowledge Evidence
- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to apply cultural awareness, communication principles and problem-solving techniques to facilitate working in a socially diverse environment. This is done in accordance with workplace procedures, relevant anti-discrimination and equal employment opportunity (EEO) regulations.

It includes communicating with customers and colleagues from diverse backgrounds and dealing with cross-cultural misunderstandings.

Work is performed with limited or minimum supervision, with some accountability and responsibility for self and others in achieving the prescribed outcomes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

G – Teamwork

Unit Sector

Rail sector.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Communicate with customers and colleagues from diverse backgrounds

- 1.1 Customers and colleagues from all cultural groups are valued and treated with respect and sensitivity
- 1.2 Cultural differences are accommodated in verbal and non-verbal communication
- 1.3 Where language barriers exist, efforts are made to communicate through use of gestures or simple words in the other person's language
- 1.4 Assistance from colleagues, reference material or outside organisations is obtained as required

2 Deal with cross-cultural misunderstandings

- 2.1 Issues that may cause conflict or misunderstanding in the workplace are identified
- 2.2 Difficulties are addressed with the appropriate people and assistance is sought from team leader/supervisor as required
- 2.3 When difficulties or misunderstandings occur, possible cultural differences are considered
- 2.4 Efforts are made to resolve misunderstandings, taking account of cultural considerations
- 2.5 Issues and problems are referred to the appropriate team leader/supervisor for follow-up

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIG2007A Work in a socially diverse environment.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIG2007 Work in a socially diverse environment

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in Knowledge Evidence
- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- adapting appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- communicating and working effectively with others when working in a socially diverse environment
- completing documentation related to working in a socially diverse environment
- reading, interpreting and applying instructions, legislation, procedures, information and signs relevant to working in a socially diverse environment
- reporting and/or rectifying identified problems promptly, in accordance with regulatory requirements and workplace procedures.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- awareness of the culture of Australia's Indigenous and non-Indigenous peoples
- cultural awareness
- principles of equal employment opportunity (EEO) and anti-discrimination legislation as they apply to individual employees
- principles that underpin cultural awareness
- recognition of the different cultural groups in Australian society
- recognition of various international customer groups (appropriate to the sector and individual workplace)
- typical cross-cultural misunderstandings and problems, and appropriate ways of dealing with them
- typical modifications or reasonable adjustments that can occur in a workplace

- workplace policies and procedures relevant to socially diverse work environment.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation including workplace procedures, regulations and codes of practice.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIH0005 Interpret road maps and navigate pre-determined routes

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to interpret road maps and navigate pre-determined routes as part of transport operations.

It includes identifying and determining the most appropriate route and completing required route documentation in accordance with operational requirements.

It involves the application of map reading principles and procedures when interpreting street maps which includes either a road map, directory or global positioning system (GPS) device; and following pre-determined routes.

Work is performed under general or limited supervision.

Work must be carried out in accordance with relevant state or territory roads and/or traffic authority regulations.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

H – Route Planning and Navigation.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate

essential outcomes.

achievement of the element.

1 Identify and complete pre-planned route

- 1.1 Pre-determined route documentation is accessed and interpreted
- 1.2 Relevant street maps are identified and accessed for pre-planned route
- 1.3 Street map symbols for pre-planned route are recognised and interpreted
- 1.4 Points of departure and destination are identified in a directory index and information is used to locate designated places on appropriate street map
- 1.5 Pre-determined route directions are interpreted, and route is traced using street map
- 1.6 Key intersections and other landmarks along route are identified for use in following planned route
- 1.7 Alternative contingency routes are identified for emergencies or traffic delays
- 1.8 Pre-determined route is correctly followed

2 Complete necessary documentation

- 2.1 Required route documentation is completed in accordance with workplace procedures, as required
- 2.2 Required route documentation is filed in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIH2001 Interpret road maps and navigate pre-determined routes.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIH0005 Interpret road maps and navigate pre-determined routes

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant workplace procedures
- completing documentation related to route navigation, as required
- estimating route distances using map information
- interpreting and following operational instructions and prioritising work
- navigating a pre-determined route
- planning alternative contingency routes for road works, emergencies or delays
- planning own work, predicting consequences and identifying improvements
- plotting a route from one destination to another relevant to job task
- reading and interpreting relevant instructions, procedures, information and signs
- using street maps and other route documentation to complete and navigate pre-determined routes, as required, and in accordance with workplace procedures.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- current route information about accidents or emergencies that might close or restrict traffic
- height, width and mass limitations of bridges, tunnels and other critical physical structures along a possible route
- location of service stations and rest stops as required
- operational procedures for interpreting road maps, using global positioning system (GPS) devices and navigating routes
- relevant state or territory permit and licence regulations and requirements
- road conditions for various routes, including sections undergoing road works
- traffic conditions at various times of the day and night along specific routes
- typical problems that may arise concerning interpreting road maps, using GPS devices and navigating pre-determined routes, and appropriate actions that should be taken

- workplace requirements for recording and documenting route information, as required.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include:

- a range of relevant exercises, case studies and/or simulations
- relevant materials, tools, equipment and personal protective equipment (PPE) currently used in industry to navigate routes
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals.

A simulator/online assessment is not suitable for the final assessment of this unit of competency.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIH0006 Plan and navigate routes

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to plan and navigate routes.

It includes interpreting information from a street map which includes either a road map, directory or global positioning system (GPS) device; planning the most appropriate route taking into account pertinent factors; and completing required trip documentation in accordance with workplace procedures as part of transport operations, in accordance with relevant state and/or territory roads and traffic authority regulations.

This unit relates to the work of a commercial vehicle driver in the transport industry.

Work is performed under general or limited supervision.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

H – Route Planning and Navigation.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Interpret street maps

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Symbols on a street map are recognised and interpreted for navigating routes

- 2 Plan routes**
 - 1.2** Destination location is identified using a street map
 - 2.1** Given a location and a destination, the most direct and alternative routes between two points are identified using a street map
 - 2.2** Hazards are identified, risks are assessed, and control measures are implemented
 - 2.3** Information on height, width and load limits of road infrastructure and other restrictions on thoroughfares is accessed, interpreted and taken into account when planning a route for a journey, as required
 - 2.4** Suitable route is selected to ensure the most efficient, safe, secure and legal transport operation
- 3 Follow planned route**
 - 3.1** Planned route is correctly followed with aid of a street map
 - 3.2** Route documentation is completed in accordance with workplace policies and procedures, as required
 - 3.3** Parking is conducted in accordance with workplace policies and procedures, as required

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIH3002 Plan and navigate routes.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIH0006 Plan and navigate routes

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- accessing and interpreting required information and developing contingency routes, including road restrictions, traffic conditions and service stations/rest stops
- applying fatigue management techniques
- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant workplace policies and procedures
- completing relevant documentation, as required
- interpreting and following workplace instructions and prioritising work
- interpreting information to allow effective route planning
- modifying route planning activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- planning and navigating a route effectively, including:
 - alternative routes for contingencies such as road works, emergencies or delays
 - transport routes to meet workplace policies and procedures
 - planning routes in accordance with workplace policies and procedures
- reading and interpreting relevant instructions, procedures, information and signs, including:
 - estimating route distances using map information
 - identifying roads and intersections
 - identifying town and suburb locations
 - reading and interpretation of map symbols
- reporting and/or rectifying identified problems promptly in accordance with workplace procedures.
-

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- current information about accidents or emergencies that might close or restrict traffic on particular routes
- features and contents of street maps, and techniques for their use in transport navigation
- known traffic conditions at various times of the day along specific routes
- location of service stations and rest stops
- physical hazards such as height, width and mass limitations of bridges, tunnels and other critical physical structures along a possible route
- relevant state/territory permit and licence regulations and requirements
- road conditions for various routes, including sections undergoing road works
- security hazards on long routes
- workplace procedures for planning and navigating transport routes
- workplace policies and procedures for recording and documenting route information.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including legislation, regulations, codes of practice, workplace procedures and operation manuals.
- A simulator or online assessment is not suitable for the final assessment of this unit of competency.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIK2010 Use infotechnology devices in the workplace

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to use infotechnology devices in the workplace in accordance with the relevant work health and safety (WHS)/occupational health and safety (OHS) regulations and workplace procedures, within the transport and logistics industry.

It includes identifying infotechnology equipment and systems; setting up, using and shutting down computer-based equipment and systems; and inputting, storing and presenting files/data. It also involves implementing workplace procedures for managing and securing data.

Work is performed under some supervision, generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

K – Technology

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1 Identify infotechnology systems**
 - 1.1 Types of infotechnology equipment used in the work area are identified
 - 1.2 Functions of equipment, component parts and accessories are identified
 - 1.3 Applications for workplace activities of different infotechnology equipment and systems are interpreted
 - 1.4 Routine faults in operating systems, software applications and operator errors are identified
 - 1.5 Sources of information on rectifying/reporting faults with operating equipment, systems and application are identified
- 2 Access and operate computer-based equipment and systems**
 - 2.1 Work environments and equipment are adjusted to meet ergonomic requirements and workplace policies and procedures
 - 2.2 Systems are accessed and checked, as required, for viruses
 - 2.3 Equipment is set up for work requirements in accordance with workplace procedures and manufacturer guidelines
 - 2.4 Infotechnology equipment and software operating manuals and/or help screens are used to inform work practices
 - 2.5 Required application software packages and accessories are selected and accessed
 - 2.6 Required file and/or data to be accessed is identified
 - 2.7 Files/data are filed in accordance with workplace procedures
 - 2.8 Shut-down procedures for files, applications and equipment are followed
- 3 Input, store and present files/data**
 - 3.1 Data is entered using appropriate equipment, keyboard/mouse, bar code reader, touch screen or other system
 - 3.2 Accurate input is confirmed
 - 3.3 Files are accessed in accordance with workplace

- procedures
- 3.4 Data is manipulated to suit work requirements and is checked for accuracy
 - 3.5 Saved files are accessed through relevant directories
 - 3.6 Information and disk/s are stored, as required
 - 3.7 Information is presented using computerised projection facilities as required
- 4 Implement workplace procedures for managing and securing data**
- 4.1 Security procedures are followed in accordance with workplace procedures
 - 4.2 Precautions against the loss or corruption of data are followed in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIK2010A Use infotechnology devices in the workplace.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIK2010 Use infotechnology devices in the workplace

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- accessing and/or completing electronic documentation through the use of infotechnology devices in the workplace
- adapting to differences in software and hardware equipment in accordance with operating procedures
- applying precautions and required action to minimise, control or eliminate hazards that may exist when using infotechnology devices in the workplace
- applying relevant legislation and workplace procedures
- identifying and using computer equipment, software, processes and procedures required within the job context
- identifying fault-finding procedures
- implementing contingency plans when using infotechnology devices in the workplace including using security and backup software and procedures
- modifying activities depending on operational contingencies, risk situations and environments
- operating infotechnology devices used within the workplace in accordance with operational requirements
- reading and interpreting instructions, procedures, information, operational instructions and manuals relevant to using infotechnology devices in the workplace
- reporting and/or rectifying identified problems, faults or malfunctions promptly, in accordance with regulatory requirements and workplace procedures
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of

the requirements of the elements and performance criteria and include knowledge of:

- relevant work health and safety (WHS)/occupational health and safety (OHS) procedures and guidelines for using computer equipment in the workplace
- typical problems that can occur when using infotechnology devices and computer applications in the workplace and related appropriate action that can be taken to prevent or solve these problems
- WHS/OHS risks and hazards when using computer equipment for work tasks, and ways of controlling these risks/hazards
- workplace procedures for using computer equipment and application software appropriate for work role.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIL3003 Conduct induction process

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to conduct an induction process for new workers and trainees commencing employment in the workplace, in accordance with relevant regulatory requirements, operational policies and procedures for the workplace concerned.

It includes outlining the relationship between the employee and the company, establishing and explaining the requirements of the position, and completing relevant workplace documentation.

Work involves planning, coordinating and conducting an induction program to prepare workers to enter and participate in the work activities of a workplace.

Work is performed under some supervision, generally within a team environment.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

L – Resource Management

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Outline the relationship between employee and the company

- 1.1 Employee is greeted and introduced to key personnel and areas in the workplace
- 1.2 Workplace objectives, operating systems and workplace structures are explained
- 1.3 Relationship between employee's position, and the workplace structure and objectives is identified
- 1.4 Required work health and safety (WHS)/occupational health and safety (OHS), workplace procedures and employment conditions are explained
- 1.5 Sources of information and assistance for employee are identified
- 1.6 Emergency procedures are explained

2 Establish requirements of position

- 2.1 Job role, responsibilities and reporting relationships are explained
- 2.2 Immediate work colleagues are introduced
- 2.3 Workplace facilities and layout are shown to employee and flow of work/materials/goods and functions carried out in the area/s are explained
- 2.4 Initial training in relevant WHS/OHS, equipment and work systems is provided in accordance with workplace procedures
- 2.5 Employee rights and responsibilities in terms of equal employment opportunity, sexual harassment and anti-discrimination are explained
- 2.6 Training opportunities are organised to develop individual job roles
- 2.7 Workplace expectations of work functions and outputs are clarified
- 2.8 Opportunities for employee to clarify concerns and ask questions are provided

3 Complete relevant workplace documentation

- 3.1 Workplace personnel records are completed in accordance with workplace requirements
- 3.2 Tax declaration and other relevant documentation are checked for compliance with requirements

- 3.3 Employee is requested to provide any additional information needed and notes are taken of any additional actions required
- 3.4 Workplace-specific documentation is submitted to appropriate personnel as required, in accordance with workplace requirements
- 3.5 Requirements of commonwealth and state/territory legislation on equal employment opportunity, sexual harassment and anti-discrimination are fulfilled

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIL3003A Conduct induction process.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIL3003 Conduct induction process

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant legislation and workplace procedures
- communicating and working effectively with others
- identifying and correctly using relevant equipment
- interpreting and following operational instructions
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- operating electronic communications equipment to required protocol
- prioritising work
- reading interpreting and following relevant instructions, procedures, information and signs
- selecting and using required personal protective equipment conforming to industry and work health and safety (WHS)/occupational health and safety (OHS) standards
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- customer service standards and procedures
- emergency procedures and related equipment
- employee conditions of service
- instructional methods and resources required to conduct an induction program

- personal protective equipment and instructions for its use
- site or workplace layout
- WHS/OHS policies and procedures
- workplace documentation and record keeping procedures and requirements
- workplace hazards and related hazard minimisation procedures
- workplace induction procedures and documentation requirements
- workplace structures and employee roles and responsibilities.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or simulations
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in industry.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIL5019 Implement and monitor transport logistics

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to implement and monitor transport logistics in accordance with relevant regulatory requirements, standards and codes of practice, including the Australian Dangerous Goods (ADG) Code and workplace procedures.

It includes mobilising resources, coordinating multi-modal transport activities, monitoring consignment/s and implementing a contingency management strategy.

Work is under general guidance on progress and outcomes of work. It requires discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes.

The unit generally applies to those with responsibility for resource coordination and allocation, who lead individuals or teams.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

L – Resource Management

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1 Mobilise resources**
 - 1.1 Optimal resource level is acquired to meet operational schedule requirements
 - 1.2 Relevant regulatory and insurance requirements are determined and implemented
 - 1.3 Allocated resources are assessed and monitored to ensure operational effectiveness and efficiency
 - 1.4 Changes to resource allocation are undertaken where deficiencies or over-supply are apparent, in accordance with enterprise procedures
- 2 Coordinate multi-modal transport activities**
 - 2.1 Facilities, personnel and equipment are made ready to accommodate interchange functions
 - 2.2 Security arrangements are invoked as required
 - 2.3 Loading and unloading operations are conducted in accordance with operational schedule and applicable statutory requirements, codes of practice and enterprise procedures
 - 2.4 Relevant documentation is completed/updated in accordance with operational schedule and reporting requirements
- 3 Monitor consignment tracking**
 - 3.1 Consignment tracking systems are monitored against workplace quality standards
 - 3.2 Variations from workplace quality standards are identified and appropriate action is initiated to rectify identified problems or to institute required improvements
- 4 Implement contingency management strategy**
 - 4.1 Operational schedule is continually reviewed in taking into account information updates, reports and feedback
 - 4.2 Nature, extent and impact of issues or incidents are identified and assessed against contingency management strategy
 - 4.3 Relevant information is processed to establish priorities and responses for dealing with issues or incidents
 - 4.4 Operations are redirected and controlled to meet changes in transport environment and tasks, in accordance with enterprise procedures
 - 4.5 Liaison is initiated and maintained with organisations/individuals affected by changed operational schedules

4.6 Actions undertaken are clearly documented and filed

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIL5019A Implement and monitor transport logistics.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIL5019 Implement and monitor transport logistics

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- applying relevant legislation and workplace procedures
- communicating effectively with others when implementing and monitoring transport logistics
- completing documentation related to implementing and monitoring transport logistics
- implementing contingency plans
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- operating and adapting to differences in equipment in accordance with standard operating procedures
- operating electronic communication equipment to required protocol
- prioritising work and coordinating self and others in relation to transport logistics activities
- providing leadership and working collaboratively with others
- reading and interpreting transport schedules, regulatory requirements, customer instructions, workplace procedures and manuals relevant to implementing and monitoring transport logistics
- reporting and/or rectifying identified problems promptly, in accordance with regulatory requirements and workplace procedures
- selecting and applying appropriate application of technology, information systems and procedures
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- application of current competencies within functional activity
- application of relevant Australian standards and associated certification requirements
- business policies, procedures and plans including procedures for outsourcing components of operations and engaging additional resources
- code, regulatory, permit and licence requirements relevant to transport logistics
- operational transport logistics systems, resources, management and workplace operating systems
- problems that may occur when implementing and monitoring transport logistics and action that can be taken to resolve or report these problems
- relevant work health and safety (WHS)/occupational health and safety (OHS) and environmental protection procedures and regulations
- relevant regulations, codes of practice and legislative requirements including local and international regulations relevant to transport logistics
- relevant workplace documentation procedures
- resource availability including the competencies of individuals in the team/group
- risks and hazards related to implementing and monitoring transport logistics and ways of controlling the risks involved
- transport and equipment applications, capacities, configurations, safety hazards and control mechanisms
- workplace policies and procedures, including those covering issue resolution and grievance
- workplace procedures for implementing and monitoring transport logistics.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLILIC0003 Licence to operate a forklift truck

Modification History

Release 1. This is a release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit specifies the skills and knowledge required to operate a forklift truck safely in accordance with all relevant legislative requirements. Competence in this unit, does not in itself result in a HRWL licence to operate this plant.

Forklift truck means a powered industrial truck equipped with lifting media made up of a mast and an elevating load carriage to which is attached a pair of fork arms or other attachments that can be raised 900 mm or more above the ground, but does not include a pedestrian-operated truck or a pallet truck.

A person performing this work is required to hold a forklift truck High Risk Work Licence (HRWL).

This unit requires a person operating a forklift truck to:

- plan for the work/task
- prepare for the work/task
- perform work/task
- pack up

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit of competency.

This unit is based on the licensing requirements of Part 4.5 of the Model Work Health and Safety (WHS) Regulations and meets Commonwealth, State and Territory HRWL requirements.

The National Assessment Instrument (NAI) is the mandated assessment for the HRWL to operate the relevant licencing class as detailed in this unit.

Pre-requisite Unit

Not applicable

Competency Field

LIC - Licencing Units

Unit Sector

Not applicable

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Plan work/task

- 1.1 Task requirements are identified from work orders or equivalent and confirmed with relevant people and site inspection is conducted in accordance with workplace procedures
- 1.2 Work area operating surface is assessed to determine suitability for operational use of forklift truck in accordance with workplace procedures
- 1.3 Suitability of forklift truck and attachment working load limit (WLL) is determined for the load/s and work/task requirements in accordance with manufacturer requirements and workplace procedures
- 1.4 Working area is inspected and appropriate paths for operating the forklift truck and moving and placing load/s in work area are assessed and managed in accordance with workplace procedures
- 1.5 Hazard and risk control measures are identified and reported to relevant person/s in accordance with workplace procedures
- 1.6 Traffic management plan implementation is confirmed in accordance with workplace procedures
- 1.7 Appropriate communication procedures are identified with relevant people in accordance with workplace procedures
- 1.8 All work is confirmed to ensure coverage of work/task requirements for the relevant work area is in accordance with workplace procedures

- 2 Prepare for work/task**
- 2.1** Consultation with workplace person/s is maintained to ensure workplan is clear and consistent with site requirements in accordance with safe work procedures
 - 2.2** Weather and work environmental conditions are assessed to determine any impact on forklift truck operations in accordance with manufacturer requirements and safe work procedures
 - 2.3** Risk control measures for hazards identified are checked for implementation in accordance with safe work procedures
 - 2.4** Forklift truck is accessed in a safe manner in accordance with manufacturer requirements and workplace procedures
 - 2.5** Forklift truck logbook is checked in accordance with manufacturer, regulatory requirements and safe work procedures
 - 2.6** Pre-start checks are carried out and any damage and defects are reported, recorded and appropriate action is taken in accordance with safe work procedures and manufacturer requirements
 - 2.7** Forklift truck is set up correctly with any relevant attachments as per work plan in accordance with relevant manufacturer requirements including data plate and safe work procedures
 - 2.8** Operational checks are carried out and any damage and defects are reported, recorded and appropriate action is taken in accordance with manufacturer requirements and safe work procedures
 - 2.9** Hazard and risk control measures are checked for implementation and communicated to people in the work area in accordance with safe work procedures
- 3 Perform work/task**
- 3.1** Weight and positioning of load is assessed to ensure compliance with forklift truck data plate requirements and in accordance with safe work procedures

- 3.2 Forklift truck is operated safely in accordance with manufacturer requirements and safe work procedures
 - 3.3 Loads are monitored constantly when lifting, moving, lowering and placing to ensure stability of load and avoidance of hazards in accordance with safe work procedures
 - 3.4 Unplanned and unsafe situations are responded to in accordance with safe work procedures
 - 3.5 Loads are picked up, transported and placed using all forklift truck movements in accordance with safe work procedures
 - 3.6 Forklift truck is parked, switched off and isolated appropriately in accordance with manufacturer requirements and safe work procedures
- 4 Pack Up**
- 4.1 Forklift truck shutdown procedures are carried out in accordance with manufacturer requirements and safe work procedures
 - 4.2 Forklift truck is secured to prevent unauthorised access/use in accordance with safe work procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLILIC2001 Licence to operate a forklift truck

Links

Companion Volume Implementation Guide -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLILIC0003 Licence to operate a forklift truck

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- applying safe operating procedures for a forklift truck including:
 - maintaining safe operating speed
 - travelling with load lowered to an appropriate height for the terrain, operating surface and visibility in relation to direction of travel
- applying relevant forklift truck manufacturer requirements and data plate information and approved modifications to attachments fitted are in accordance with manufacturer requirements
- carrying out pre-start checks, including visual inspection which must include:
 - battery charge as required by manufacturer requirements
 - checking and interpreting data plate/s are relevant to the attachment and the forklift truck
 - checking for signs of paint separation and stressed welds indicating potential structural weakness
 - document evidence of damage
 - engine / mechanical fluid level checks including fuel as required by manufacturer requirements
 - ensuring availability of correct forklift truck logbook and updating records as required
 - ensuring forklift truck tyres or other attachment/s are securely fitted
 - ensuring seat and mirrors are adjusted appropriately and seat belt is functional
 - fluid leaks
 - lights are working effectively
 - safety equipment checks
 - signage and labels to ensure they are visible and legible
 - wheels and tyres for damage/correct inflation if applicable
- conducting and applying risk and hazard assessment strategies including:
 - insufficient lighting
 - other specific hazards including dangerous goods
 - overhead hazards and fixed structures, roof beams and doorways
 - restricted and poorly ventilated areas

- surface suitability based on forklift truck and task requirements
- the risk of collision with people, moving plant and fixed structures
- weather conditions
- complying with Commonwealth, State and Territory Work Health and Safety (WHS)/Occupational Health and Safety (OHS)/Occupational Safety and Health (OSH) legislation, regulations safe work and workplace procedures
- conducting operational checks, which must ensure:
 - all controls are located, identified and tested for functionality
 - all hydraulic functions operated to maximum extension and ensuring attachment (if fitted) movements and control functions are smooth and comply with operating requirements
 - hazard warning systems (e.g. reversing beepers, lights and horns) are functional
 - recording and maintaining accurate information relating to forklift truck operations
 - safety devices as fitted
 - start-up is in accordance with manufacturer requirements
 - steering, transmission and brake functions comply with operating requirements
 - there are no unusual noises
- confirming and following traffic management plan procedures relevant to their role in the work area
- conducting relevant procedures for refuelling and isolating fuel/power source as per manufacturer requirements using appropriate PPE
- determining relevant lifting attachment to perform work/task
- determining lift requirements including:
 - positioning of unusually balanced/shaped loads
 - centre of gravity
 - dynamic nature of load
 - tyre/attachment positioning
 - weight
- ensuring risk control measures within the work area are effective as per workplace procedures
- identifying, isolating and tagging out defective equipment and reporting to authorised person/s
- interpreting and confirming relevant documentation, workplace instructions, safety information, emergency procedures for the work task and relevant area
- interpreting workplace procedures in relation to various environmental conditions
- maintaining communication with other workplace personnel through using worksite procedures including:
 - audible and visual warning devices
 - signage
 - two-way radio
 - verbal instructions
 - written instructions
- maintaining three points of contact whilst accessing and egressing forklift truck and ensuring

- rungs / steps are free of hazards
- operating and monitoring safe forklift truck operations using minimum 250kg dynamic and non-dynamic loads that include:
 - aligning tynes/attachment to load
 - carrying out a lift to 75% of the maximum height
 - conducting trial lift to ensure forklift truck and load are stable, and load is safe to move
 - correctly using horns and mirrors in workplace
 - correctly positioning and using an observer to assist when operating with a load that may restrict vision or be placed out of vision of the operator
 - driving applicable to conditions and moving loads safely
 - driving a forklift truck safely with load in forward and reverse, while maintaining visibility through an obstacle course including:
 - an 'S' bend with a minimum 90 degrees left and right turn
 - ensuring load/s remains stable through pick up, transport and placement
 - forklift truck speed is appropriate to load and surroundings
 - lowering dynamic and non-dynamic loads to appropriate height for travel in forward and reverse
 - picking up, driving, manoeuvring and placing dynamic and non-dynamic loads safely at various heights within a compliant racking system
 - picking up, driving, manoeuvring and placing dynamic and non-dynamic loads safely into/onto an elevated, flat, stable area
 - tilting mast (or forks if applicable) to ensure balance of load
 - using gluts/dunnage appropriately and lowering load safely
 - using tilt and side shift (where fitted) safely to manoeuvre dynamic and non-dynamic loads into allocated space
 - reporting to relevant person/s on site risk control measures that are not in place or are deficient
 - setting up an exclusion zone
 - securely parking forklift truck and isolating in appropriate position including:
 - minimising possible access by unauthorised person/s
 - tynes/attachment lowered to required position in accordance with manufacturer requirements
 - park brake applied
 - switching off, isolating fuel/power source and removing key according to workplace procedures
 - shutting down a forklift truck in accordance with manufacturer requirements and workplace procedures

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- Australian and industry standards, codes of practice and guidelines to safely operate a forklift truck
- communication procedures including:
 - audible and visual warning devices
 - hand signals
 - questioning techniques
 - signage
 - traffic warning systems
 - two-way radio
 - written instructions
- forklift truck characteristics and capabilities, manufacturer requirements and instructions for any attachments
- impact of the following on the operation of the forklift truck including:
 - failure/loss of control including brakes and steering
 - failure of equipment during forklift truck operations
 - forklift truck instability causes including:
 - deterioration of ground condition
 - overloading
 - pick up and placement of load
 - irregular loads
 - operating on ramps and uneven surfaces and in restricted spaces
 - use of forklift truck data plate and attachment data plate and appropriate methodology to determine weight of a load is appropriate for forklift truck and any attachment if fitted including the estimation or determination from:
 - labels on the actual load
 - markings on the actual load
 - paperwork such as consignment notes, running sheets and weighbridge dockets
 - weighing a carton and calculating load
- manufacturer requirements, instructions and operator's manual
- problems, and appropriate response procedures to unplanned and/or unsafe environmental conditions including:
 - wind
 - lightning
 - water/ice impacted surface/ground
 - rain
 - extreme heat
 - Ultra violet (UV) exposure
- problems and equipment faults, and implementing appropriate response procedures to unplanned and/or unsafe situations including:
 - lock out and tag out procedures
- relevant procedures for refuelling and recharging forklift truck using appropriate PPE

including:

- gas bottle
- connecting battery to charger and disconnecting battery from charger and reconnecting to forklift truck
- refuelling
- procedures for recording, reporting and maintaining workplace records and information
- risk assessment process including hierarchy of control:
 - elimination
 - substitution
 - isolation
 - engineering controls
 - administrative controls
 - personal protective equipment (PPE)
- safe use and compliance of different types of attachments including:
 - bale clamps
 - carpet spike for carpet rolls
 - drum carrier
 - jib attachment
 - paper roll clamps
 - personnel work platforms
 - rotators
 - slippers/fork extensions on tynes
- suitability and lifting capability of the attachment to be used
- shut down procedures for a forklift truck in accordance with manufacturer requirements
- traffic management plan procedures and requirements
- typical routine problems encountered operating a forklift truck and associated equipment, and adjustments required for correction
- workplace procedures including work plan which may be verbal, documented/written, or electronically generated
- work area operating surface suitability including issues with:
 - backfilled ground
 - bitumen (damaged, cracked)
 - concrete (damaged, cracked)
 - hard compacted soil
 - potholes
 - railway tracks
 - rough uneven or difficult terrain including sloping surfaces, uneven surfaces, steel decks and grates
 - soft soils
 - trench covers
- Work Health and Safety (WHS)/Occupational Health and Safety (OHS)/Occupational Safety

and Health (OSH) requirements, safe work and workplace procedures

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

- Simulators must not be used in the assessment of this unit of competency.

Resources for assessment must include access to:

- a suitable forklift truck that complies with AS 2359 Powered industrial trucks and is in a safe/serviceable condition in accordance with manufacturer requirements
- associated equipment for forklift truck operations
- suitable dynamic and non-dynamic loads
- suitable compliant racking system
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including:
 - approved codes of practice and relevant guidance material
 - relevant Australian technical standards
 - manufacturer guidelines (instructions, requirements or checklists), relevant industry standards and operating procedures (where applicable)

Links

Companion Volume Implementation Guide -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLILIC0005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in unit Application
- Minor changes and re-ordering of Performance Evidence
- Minor re-ordering of Knowledge Evidence
- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit specifies the skills and knowledge required to safely operate a boom-type Elevating Work Platform (EWP) where the length of the boom is 11 metres or more in accordance with all relevant legislative requirements. Competence in this unit, does not in itself result in a Risk Work Licence (HRWL) to operate this plant.

Boom-type elevating work platform means a telescoping device, hinged device, or articulated device, or any combination of these, used to support a platform on which personnel, equipment and materials may be elevated.

A person performing this work is required to hold a boom-type elevating work platform HRWL.

This unit requires a person operating an EWP to:

- plan for the work/task
- prepare for the work/task
- perform work/task
- pack up.

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit of competency.

This unit is based on the licensing requirements of Part 4.5 of the Model Work Health and Safety (WHS) Regulations and meets Commonwealth, State and Territory HRWL requirements.

The National Assessment Instrument (NAI) is the mandated assessment for the HRWL to operate the relevant licencing class as detailed in this unit.

Pre-requisite Unit

Not applicable

Competency Field

LIC - Licencing Units

Unit Sector

Not applicable

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Plan work/task

- 1.1 Task requirements are identified from work orders or equivalent and confirmed with relevant people and a site inspection is completed in accordance with workplace procedures
- 1.2 Work area ground/operating surface is assessed to determine suitability for operational use of EWP in accordance with manufacturer requirements and workplace procedures
- 1.3 EWP capabilities are established for the load/s and work/task requirements in accordance with manufacturer requirements and workplace procedures
- 1.4 Appropriate paths for operating the EWP and moving in work area are assessed and determined in accordance with workplace procedures
- 1.5 Relevant hazard and risk control measures are applied and advised to relevant person/s in accordance with workplace procedures

- 1.6** Traffic management plan implementation is confirmed in accordance with workplace procedures
 - 1.7** Appropriate communication procedures are identified, with relevant people in accordance with workplace procedures
 - 1.8** All work is confirmed to ensure coverage of work/task requirements for the relevant work area in accordance with workplace procedures
- 2 Prepare for work/task**
- 2.1** Consultation with workplace person/s is maintained to ensure workplan is clear and consistent with site requirements in accordance with workplace procedures
 - 2.2** Risk control measures for hazards identified are checked for implementation in accordance with workplace procedures
 - 2.3** Safety equipment including Personal Protective Equipment (PPE) are inspected, fitted correctly and used in accordance with manufacturer requirements and safe work procedures
 - 2.4** EWP is accessed in a safe manner in accordance with manufacturer requirements and safe work procedures
 - 2.5** Pre-start EWP checks are carried out in accordance with manufacturers requirements and safe work procedures
 - 2.6** EWP is started and is checked for any abnormal noises in accordance safe work procedures
 - 2.7** EWP is positioned correctly as per work plan in work area in accordance with relevant manufacturer requirements and safe work procedures
 - 2.8** EWP is stabilised appropriately in accordance with the workplan, relevant manufacturer requirements and safe work procedures

- 2.9** Operational checks from base controls are carried out in accordance with relevant manufacturer requirements and safe work procedures
 - 2.10** All platform controls are located, identified and tested in accordance with manufacturer requirements and safe work procedures
 - 2.11** All damage and defects are reported and appropriate action is taken to rectify in accordance with manufacturer requirements and safe work procedures
 - 2.12** EWP logbook is inspected and is correct for the EWP, is completed and signed in accordance with manufacturer requirements and safe work procedures
 - 2.13** Weather and work environmental conditions are assessed to determine any impact on EWP operation and positioning as per workplan in accordance with manufacturer requirements and safe work procedures
- 3 Perform work/task**
- 3.1** Relevant hazard prevention/control measures identified are checked for implementation in accordance with safe work procedures
 - 3.2** EWP is safely located at point of work in work area in accordance with safe work procedures
 - 3.3** EWP platform is positioned for work tasks and stability and all operations are monitored constantly in accordance with safe work procedures
 - 3.4** Work gear and tools are stowed and secured in accordance with safe work procedures
 - 3.5** EWP is operated using all movements in accordance with safe work procedures and manufacturer requirements
 - 3.6** Unplanned and unsafe situations are responded to in accordance with safe work procedures

- 3.7 All communication signals are correctly interpreted and followed whilst EWP is operated in accordance with safe work procedures
 - 3.8 EWP platform is accessed and egressed in accordance with safe work procedures and manufacturer requirements
 - 3.9 EWP is parked, switched off and isolated appropriately in accordance with manufacturer requirements and safe work procedures
- 4 Pack up**
- 4.1 Post-operational EWP checks are carried out in accordance with manufacturer requirements and safe work procedures
 - 4.2 EWP boom is retracted, lowered, stowed and secured in accordance with manufacturer requirements and safe work procedures
 - 4.3 Safety equipment and PPE is disconnected from platform in accordance with safe work procedures
 - 4.4 Relevant motion locks and brakes are applied as required in accordance with manufacturer requirements and safe work procedures
 - 4.5 Outriggers and/or stabilisers, plates or packing if fitted are stowed and secured in accordance and with manufacturer requirements and safe work procedures
 - 4.6 EWP is shut down in accordance with manufacturer requirements and safe work procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLILIC2005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)

Links

Companion Volume Implementation Guide -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLILIC0005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in unit Application
- Minor changes and re-ordering of Performance Evidence
- Minor re-ordering of Knowledge Evidence
- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- advising relevant person/s on site in relation to any hazards and risk elimination/control strategies
- applying safe operating procedures for an Elevating Work Platform (EWP) including all functions within the safe working rated capacity including:
 - boom/s as low as possible and fully retracted whilst travelling (self propelled EWP only)
 - boom/s in line with EWP where practical whilst travelling (self propelled EWP only)
 - EWP stability
 - gently accelerating and braking to minimise boom/s swing (self propelled EWP only)
 - maintaining safe operating speed in relation to the work condition
 - travelling with work platform raised to an appropriate height for the terrain and visibility in relation to direction of travel (self propelled EWP only and in accordance with manufacturers specifications)
- applying emergency procedures
- applying traffic management plan procedures relevant to their role in the work area
- carrying out operational checks on EWP including:
 - testing of all EWP safety devices
 - all controls are located, identified and tested for functionality from the base controls and platform controls
 - hazard warning systems including travel beepers and lights are functional
 - start-up is in accordance with manufacturer requirements
 - steering, transmission and brake functions comply with operating requirements (self

- propelled EWP only)
- there are no unusual noises
- carrying out pre-start checks, including visual inspection which must include:
 - battery fluid level as required by manufacturer requirements
 - checking compliance plate is relevant to the load/s being used on the EWP
 - engine / mechanical fluid level checks as required by manufacturer requirements
 - ensuring availability of correct logbook and updating records as required
 - ensuring EWP platform and attachment/s fitted in platform are secured
 - evidence of damage
 - fluid leaks
 - lights are working effectively (where fitted)
 - safety equipment checks
 - signage and labels to ensure they are visible and legible
 - structural weaknesses including paint separation or stressed welds
 - wheels and tyres for damage/correct inflation if applicable
- checking compliance plate and load chart for reach requirements and load suitability
- clarifying workplan and checking understanding
- complying with Commonwealth, State and/or Territory work health and safety (WHS)/occupational health and safety (OHS)/occupational safety and health (OSH) legislation and regulations
- controlling and operating a boom type elevating work platform ensuring movements and control functions are safe, smooth and comply with operating requirements including:
 - any combination of the movement of the extending boom used to support a platform on which personnel, equipment and materials are elevated to perform the work task/s
 - avoidance of ground depressions
 - correctly using observer guidance of work platform, main chassis and extending boom
 - demonstrating the safe operation of an EWP in forward and reverse, while maintaining visibility (where applicable)
 - driving (where applicable) applicable to conditions and moving platform and load/s safely
 - ensuring warning devices are functioning correctly
 - interpreting directional arrows correctly on platform controls during forward, reverse, left and right
 - lowering boom to its resting position
 - monitoring platform, main chassis and extending boom movement constantly ensuring safe work procedures are followed
 - raising platform and slewing within manufacturer requirements
 - raising platform to its full extent or 75% of the maximum height capacity (whichever is greater)
 - stability of the EWP and the work platform
 - manoeuvring and positioning the platform to perform work task/s safely whilst at its full extent or a minimum height of 75% of the maximum capacity (whichever is greater)

- conducting and applying hazard identification and risk elimination or minimisation strategies including:
 - barricades and controls to prevent the risk of collision with people, moving vehicles and fixed structures
 - environmental conditions including:
 - wind
 - lightning
 - water impacted ground
 - rain
 - extreme heat
 - Ultra Violet (UV) exposure
 - ground conditions (surface and slopes) and assessing work area operating surface suitability based on machine and task requirements
 - overhead hazards including electric lines and service pipes
 - personal protective equipment (PPE)
 - restricted areas and crush points from work platform and external surroundings
 - safety related tags on electrical switches/isolators that have an impact on point of work of EWP operator
 - sufficient lighting
 - suitable area for set-up, positioning and safely operating EWP
 - suitable firm and stable operating surface
 - use of safety observer
- entering work platform correctly including:
 - lowering platform safely and stably to appropriate height to access safely
 - clipping on of fall restraint/arrest device
 - accessing platform safely
- exiting work platform correctly including:
 - lowering platform safely and stably to appropriate height to egress safely
 - unclipping of fall restraint/arrest device
 - exiting platform safely
- identifying, isolating and tagging out defective equipment and reporting to authorised person/s
- inspecting and using relevant safety equipment, including:
 - anchor point/s
 - emergency retrieval system from base controls and platform controls where fitted
 - energy absorber/s
 - lanyard/s
 - safety harness/es
- interpreting and confirming relevant documentation, workplace instructions, safety information and emergency procedures for the work task and relevant area
- interpreting workplace procedures in relation to various work environmental conditions

- maintaining communication with other workplace personnel using appropriate workplace procedures including procedures to ensure all movements are conveyed clearly and succinctly including:
 - 2-way radio
 - audible and visual warning devices
 - making and interpreting hand signals
 - questioning to confirm understanding
 - signage
 - written instructions
- recording and maintaining accurate information relating to EWP operations
- reporting to relevant person/s on site risk control measures that are not in place or deficient
- stabilising procedures for an EWP including:
 - checking levels
 - removing obstacles and obstructions
 - deploying and retracting outriggers (if fitted)
 - establishing correct size plates for packing (if required)
- shutting down a boom type EWP in accordance with manufacturer requirements and workplace procedures
- using and interpreting EWP manufacturer requirements and data, including compliance plate and load chart, to enable correct EWP selection for task including:
 - boom
 - platform
 - weight including outrigger load or wheel load.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- Australian and industry standards, codes of practice and guidelines to safely operate an EWP (boom length 11 metres or more) including:
 - nominal reach, measured horizontally from centre point of rotation to outer edge of platform in its most extended position
 - vertical distance from floor of platform to surface supporting elevating work platform with platform at its maximum height
- appropriate mathematical calculations to estimate loads ensuring EWP is not overloaded
- appropriate workplace communication procedures including:
 - 2-way radio
 - audible and visual warning devices
 - questioning techniques
 - signage
 - hand signals

- traffic warning systems
- written instructions
- compliance with permit condition requirements including:
 - from electrical supply authority
 - if operating on roads or footpaths
- EWP characteristics and capabilities, manufacturer requirements and instructions
- hazards including:
 - all ground and /or operating surface hazards
 - traffic including pedestrians, vehicles, other mobile plant and building structures
 - overhead hazards including electric lines, service pipes, doorways, roof beams, and lights
 - obstacles or obstructions
 - insufficient lighting
 - other relevant hazards
- identification and avoidance of person/s potential crush or entrapment points
- identification and avoidance of potential contact with overhead electrical conductor's
- identification and avoidance of potential contact with structures near work platform/boom or chassis
- impact of the following on the operation of the EWP including:
 - failure/loss of control including brakes and steering
 - failure of equipment including hydraulic system
 - EWP and platform instability due to:
 - deterioration of ground/operating surface condition
 - gradient of operating surface
 - overloading
 - poor load placement
 - irregular loads
 - emergency procedures and safety equipment, including the use of:
 - safety harness/es
 - energy absorbers
 - lanyard/s
 - anchor point/s
 - emergency retrieval systems
- lock out and tag out procedures
- problems, and appropriate response procedures to unplanned and/or unsafe environmental conditions
- procedures for recording, reporting and maintaining workplace records and information
- relevant manufacturer requirements and instructions
- relevant procedures for refuelling/recharging EWP using appropriate PPE
- risk assessment process including hierarchy of control:
 - elimination

- substitution
- isolation
- engineering controls
- administrative controls
- personal protective equipment (PPE)
- problems and equipment faults, and implementing appropriate response procedures to unplanned and/or unsafe situations
- procedures for shutting down a boom type EWP in accordance with manufacturer requirements
- relevant documentation requirements
- suitability and lifting capability of the EWP to be used
- traffic management plan procedures and requirements
- typical routine problems encountered operating a EWP and adjustments required for correction
- wind speed factors that affect stability of EWP as per manufacturer requirements
- work area operating surface suitability including issues with:
 - backfilled ground
 - bitumen (damaged, cracked)
 - concrete (damaged, cracked)
 - hard compacted soil
 - potholes
 - railway tracks
 - rough uneven or difficult terrain including sloping surfaces, uneven surfaces, steel decks and grates
 - soft soils
 - trench covers
- work health and safety (WHS)/occupational health and safety (OHS)/occupational safety and health (OSH) and codes of practice requirements for boom type elevating work platforms
- work plan which may be verbal, documented/written, or electronically generated

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace

conditions.

- Simulators must not be used in the assessment of this unit of competency

Resources for assessment must include access to:

- appropriate boom-type elevating work platform (boom length 11 metres or more) in a safe/serviceable condition in accordance with manufacturer requirements
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including:
 - approved codes of practice and relevant guidance material
 - relevant Australian technical standards
 - manufacturer guidelines (instructions, requirements or checklists), relevant industry standards and operating procedures (where applicable).

Links

Companion Volume Implementation Guide -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLILIC2001 Licence to operate a forklift truck

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit specifies the skills and knowledge required to operate a forklift truck safely.

Forklift truck means a powered industrial truck equipped with lifting media made up of a mast and an elevating load carriage to which is attached a pair of fork arms or other arms that can be raised 900 mm or more above the ground, but does not include a pedestrian-operated truck or a pallet truck.

A person performing this work is required to hold a forklift truck high risk work (HRW) licence.

This unit requires a person operating a forklift truck to plan the work, conduct routine checks on a forklift truck, shift loads in a safe manner, and safely shut down and secure equipment after completing operations.

Licensing/Regulatory Information

This unit is based on the licensing requirements of Part 4.5 of the Model Work Health and Safety (WHS) Regulations, HRW and meets Commonwealth, state and territory HRW licensing requirements.

Any alteration to this unit would result in a unit that would not be acceptable to work health and safety (WHS)/occupational health and safety (OHS) regulators for the purpose of licensing.

Pre-requisite Unit

Not applicable.

Competency Field

LIC – Licensing

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Plan work

- 1.1 Potential workplace hazards are identified
- 1.2 Risk control measures are identified consistent with regulatory requirements and the hierarchy of control
- 1.3 Appropriate forklift truck is selected in accordance with load and workplace conditions
- 1.4 Working area is inspected to determine appropriate paths for moving loads and forklift truck in accordance with workplace conditions
- 1.5 Methods for communicating are identified and confirmed in accordance with workplace procedures

2 Conduct routine checks

- 2.1 Prior to operation, forklift truck is visually checked for any damage or defects
- 2.2 All signage and labels are checked to ensure they are visible and legible, in accordance with the appropriate standard
- 2.3 All controls are located, identified and confirmed
- 2.4 Pre-start operational checks are carried out in accordance with manufacturer specifications and workplace procedures
- 2.5 Forklift truck is started in accordance with manufacturer specifications and workplace procedures, and is checked for any abnormal noise
- 2.6 Post-start operational checks are carried out in accordance with manufacturer specifications and workplace procedures

- 2.7 All forklift truck functions and safety devices are tested to their maximum in accordance with manufacturer specifications and workplace procedures
- 2.8 Issues, defects and damage identified during routine checks are reported and recorded in accordance with workplace procedures, and appropriate action is taken

3 Shift load

- 3.1 Weight of load is assessed to ensure compliance with forklift truck data plate specifications
- 3.2 Appropriate hazard prevention/control measures are implemented and communicated to personnel in the work area
- 3.3 Forklift truck is operated at a safe speed in accordance with manufacturer specifications and workplace procedures
- 3.4 Loads are moved and placed to ensure stability of material and avoidance of hazards
- 3.5 Load movement is monitored constantly to ensure safety of personnel and load, and structural stability
- 3.6 Unplanned and/or unsafe situations are responded to in accordance with workplace procedures and emergency plans

4 Shut down and secure forklift truck

- 4.1 Forklift truck is parked to avoid hazards
- 4.2 Forklift truck is shut down in accordance with manufacturer specifications and workplace procedures
- 4.3 Routine post-operational forklift truck checks are carried out in accordance with manufacturer specifications and workplace procedures
- 4.4 Forklift truck is secured to prevent unauthorised access/use
- 4.5 All defects and damage are reported and recorded in accordance with manufacturer specifications and workplace procedures, and appropriate action is taken

Foundation Skills

The language, literacy, numeracy and employment skills that are essential to performance that are not explicit in the unit are listed below.

Skill	Performance feature
Employment skills to:	<ul style="list-style-type: none"> • operate a forklift truck in different types of workplaces transferring key principles of safe operation to different contexts • improve own performance in safely and efficiently operating a forklift truck by incorporating learnings from different workplaces and different conditions into current performance
Numeracy skills to:	<ul style="list-style-type: none"> • interpret numerical information including: <ul style="list-style-type: none"> • selecting appropriate forklift in accordance with load and workplace conditions • load weight assessment, to ensure compliance with forklift truck data plate specifications • controlling and monitoring instrument readings
Language skills to:	<ul style="list-style-type: none"> • use and interpret vocabulary specific to forklift truck operations and workplace procedures to communicate with other workplace personnel • use non-verbal feedback to support effective communication • use relevant communications conventions
Literacy (reading) skills to:	<ul style="list-style-type: none"> • interpret documentation that includes technical specificity including: <ul style="list-style-type: none"> • forklift truck data plate • plant operation manuals and manufacturer specifications • workplace procedures, including emergency plan • workplace signage and labels
Literacy (writing) skills to:	<ul style="list-style-type: none"> • accurately record and maintain information relating to operating a forklift truck, including: <ul style="list-style-type: none"> • incident reports • vehicle checking and maintenance records
Self-management skills	<ul style="list-style-type: none"> • implement risk control measures • initiate emergency management strategies

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit is equivalent to TLILIC2001A Licence to operate a forklift truck

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLILIC2001 Licence to operate a forklift truck

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

A person who demonstrates competency in this unit must provide evidence of safely operating a forklift truck and satisfy all of the unit elements, performance criteria and foundations skills requirements on at least one occasion including:

- applying risk assessment and hazard control strategies, including hierarchy of control as applied to safely operating a forklift truck
- carrying out post-start operational checks, which must ensure:
 - attachment movements and control functions are smooth and comply with operating requirements
 - hazard warning systems (e.g. lights and horns) are functional
 - safety devices are checked, including
 - deadman's switch
 - emergency descent device (hydraulic)
 - reversing beepers
 - start-up is in accordance with procedures
 - steering, transmission and brake functions comply with operating requirements
- carrying out pre-start operational checks, which must include:
 - battery charge checks, as required
 - ensuring availability of logbook, records, handbook and/or operating manuals
 - fitting and interpreting forklift truck data plate
 - fluid checks
 - forklift truck attachment security checks
 - identifying approved modifications and/or attachments fitted, to manufacturer specifications in accordance with forklift truck or attachment data plate
 - locating, identifying and confirming all controls
 - safety equipment checks
 - signage and label visibility and legibility checks
 - updating records as required
- communicating with other workplace personnel through
 - using appropriate worksite protocols

- listening
- making and interpreting hand signals
- questioning to confirm understanding
- signage
- verbal and non-verbal language
- written instructions
- complying with Commonwealth, state and territory work health and safety (WHS)/occupational health and safety (OHS) legislation and regulations
- conducting and monitoring safe forklift truck operations that include moving loads safely, driving and manoeuvring, picking up and placing loads at various stack heights and carrying out all functions to the maximum height and load capacity
- driving a forklift truck with load in forward and reverse, while maintaining visibility
- planning and preparing for forklift truck operations including:
 - conducting a workplace risk assessment
 - identifying hazards associated with operating a forklift truck, which must include
 - forklift truck instability (e.g. due to overloading, poor load placement, irregular loads)
 - ground conditions (e.g. condition of pavement, slopes)
 - insufficient lighting
 - overhead hazards (e.g. electric lines, service pipes)
 - traffic (e.g. pedestrians, vehicles, other plant) and the risk of collision with people, moving plant and fixed structures
 - weather conditions (e.g. wind, lightning, rain)
 - selecting hazard prevention strategies in accordance with the hierarchy of control
 - putting in place effective controls for identified hazards
 - visually checking a forklift truck for any damage or defects prior to operation including
 - evidence of damage
 - leaks
 - structural weaknesses (including paint separation or stressed welds)
- receiving and interpreting workplace instructions, safety information and emergency procedures
- shutting down a forklift truck in accordance with manufacturer specifications and workplace procedures including
 - parking in a suitable location away from dangerous areas
 - correctly positioning fork arms (tips down, tilted forward, lowered to ground)
 - selecting appropriate transmission/gear for parking (relevant to transmission type)
 - applying hand/parking brake
 - turning off engine power
 - removing ignition key as required
 - shutting off LPG gas cylinder valve as required

- securing equipment in accordance with manufacturer specifications and against unauthorised operation
- securing site
- ensuring access ways are clear
- identifying and segregating defective equipment and reporting to authorised personnel
- connecting batteries to charger as required
- verifying problems and equipment faults, and implementing appropriate response procedures to unplanned and/or unsafe situations including
 - environmental conditions (e.g. wind, lightning, storms)
 - failure/loss of control (e.g. brakes and steering)
 - failure of equipment (e.g. hydraulic system)
 - forklift truck instability (e.g. due to deterioration of ground condition, overloading, poor load placement, irregular loads).

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- Australian and industry standards relevant to operating a forklift truck
- Commonwealth, state or territory WHS/OHS legislation and approved codes of practice in relation to one's own responsibilities
- forklift truck characteristics and capabilities (including use of load data plates)
- forklift truck operations and safe operating techniques
- hierarchy of control:
 - elimination
 - substitution
 - isolation
 - engineering controls
 - administrative controls
 - personal protective equipment (PPE)
- methodology to determine weight of a load including the estimation or determination from labels, markings or load paperwork such as:
 - control labels
 - forklift data plates/labels
 - forklift warning decals
- organisational and workplace standards, requirements, policies and procedures for operating a forklift truck
- procedures for recording, reporting and maintaining workplace records and information
- relevant Australian and industry standards, codes of practice and guidelines to safely

- operate a forklift truck
- risk control measures including:
 - barricades and traffic control (e.g. traffic management plan)
 - compliance with permit condition requirements from electrical supply authority, including
 - adequate illumination
 - disconnected power
 - excavation safeguards
 - insulated electric lines
 - maintaining safety observer zone
 - movement of obstructions
 - observing limits of approach
 - pedestrian control (barricades, signs, etc.)
 - power disconnection or compliance with electrical supply authority requirements
 - safety tags on electrical switches/isolators
 - using safety observer inside exclusion zone
 - using personal protective equipment
 - selecting forklift truck to suit load and workplace conditions
 - typical routine problems encountered operating a forklift truck and equipment, and adjustments required for correction.

Assessment Conditions

Assessments must be conducted by an assessor accredited for this high risk work (HRW) licence class in the Commonwealth/state/territory where the licence will be obtained (i.e. an assessor authorised by a Commonwealth/state/territory WHS/OHS regulator).

As a minimum, assessors must satisfy applicable regulatory requirements, which may include requirements in the Standards for *Registered Training Organisations* current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and all assessment must be conducted in the English language.

Assessment of performance must be undertaken in the workplace and/or under realistic workplace conditions which typically reflect:

- performing tasks/activities within timelines that would be expected in a workplace
- standard and authorised work practices, safety requirements and environmental constraints
- using full-scale equipment

Forklift truck operation assessment must be conducted in a working zone in accordance with state/territory arrangements.

If the working zone is located at a 'live' site, assessment should continue in all weather conditions unless the safety of the candidate or others could be compromised.

Simulators must **not** be used in the assessment of this unit of competency.

Accredited assessors are responsible for ensuring that candidates have access to:

- a suitable forklift truck that complies with AS 2359 Powered industrial trucks and is in a safe condition
- associated equipment appropriate to forklift truck operations
- suitable loads
- required personal protective equipment (PPE) for the purpose of Performance Assessment
- relevant workplace procedures and standards for operating a forklift truck, including:
 - approved codes of practice and guidance
 - relevant Australian and international technical standards
 - manufacturer guidelines (instructions, specifications or checklists) for the purpose of Performance Assessment
 - relevant industry standards and operating procedures (where applicable)
 - safe work method statements (SWMS), as required.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIO5017 Manage security of storage facilities

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to manage security of storage facilities as part of work undertaken in various contexts within the transport and logistics industry.

It includes assessing security risks, specifying security requirements and implementing, monitoring and reviewing storage security plan performance.

The unit generally applies to those who lead individuals or teams.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

O - Security

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Assess security risks

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | |
|-----|--|
| 1.1 | Records of security breaches, thefts and damage are reviewed to identify past security storage incidents |
| 1.2 | Potential risks to the security of stock, personnel, facilities, information and equipment are identified, considering |

- internal and external factors
- 1.3 Discrepancies between identified risk and current storage security situations are noted
- 2 Specify security requirements**
- 2.1 Decisions and adjustments to storage security equipment and procedures are made based on risk assessment
- 2.2 Questions and feedback from stakeholders are sought and responded to promptly
- 2.3 Finalised storage security plan offering optimal security of storage facility is devised taking into account all feedback and assessments of security risks
- 3 Implement storage security plan**
- 3.1 Storage security plan is implemented and appropriate workplace personnel are informed
- 3.2 Staff competency requirements to implement security plan are addressed with required training
- 3.3 Equipment and needs for improvements are allocated and/or obtained
- 3.4 Storage security plan, policies and procedures are trialled in conjunction with a system for feedback to identify and suggest further improvements
- 4 Monitor and review storage security plan performance**
- 4.1 Security reports are collated and categorised
- 4.2 Reports are compared to identify trends in breaches
- 4.3 Security procedures are modified to rectify identified gaps

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIO5017A Manage security of storage facilities.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIO5017 Manage security of storage facilities

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant legislation and workplace procedures
- assessing, implementing, monitoring and reviewing security plan
- communicating effectively with others when completing work activities to ensure security approaches are understood and implemented
- completing documentation related to work activities including documentation of loss, damage or other security issues
- monitoring performance of equipment or technology designed to enhance security
- monitoring work activities in terms of planned schedule
- working collaboratively with others to enhance security awareness.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- business policies for security provision, including out-sourcing components of operations and engaging additional resources
- focus of operation of security systems, resources, management and workplace operating systems
- licence and permit requirements relevant to security procedures
- problems that may occur when planning and managing security procedures and action that can be taken to resolve these problems
- regulations, codes of practice and legislative requirements relevant to planning and managing workplace security procedures
- relevant Australian standards and certification requirements
- resource availability including the competencies of individuals in the team/group

- risks and hazards related to planning and managing security procedures and ways of controlling these risks
- workplace procedures for planning and managing security procedures.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.
-

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIR0004 Negotiate a contract

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to negotiate a contract.

It includes negotiating contract specifics with contractors, completing contract negotiations and completing enterprise contract requirements.

The unit generally applies to those with procurement responsibilities.

Work is under general guidance on progress and outcomes. It requires discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

R – Contract Procurement.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Negotiate contract specifics with

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Preferred suppliers are verified prior to contract negotiations through a prequalification process

- | | |
|--|---|
| contractor | <ul style="list-style-type: none"> 1.2 Requirements of the contract are clearly documented and agreed to by the relevant parties 1.3 Areas of ambiguity or concern are clarified and resolved 1.4 Contract negotiations are conducted in accordance with relevant legislation and workplace policies and procedures 1.5 Conditions for service and/or supply of goods/services are agreed between the enterprise and the contractor, including the determination of key performance indicators (KPIs) |
| 2 Complete contract negotiations | <ul style="list-style-type: none"> 2.1 Contract documentation is drafted in accordance with relevant legislation, workplace policies and procedures and negotiated conditions of service and supply 2.2 Technical and legal support in drafting contracts is accessed, as required 2.3 Contract documentation is signed and exchanged between relevant parties |
| 3 Complete enterprise contract requirements | <ul style="list-style-type: none"> 3.1 Documentation systems are established to ensure that the contractual terms and KPIs are met 3.2 Quality assurance procedures for supplied goods/services are initiated 3.3 Workplace systems that require interaction with contractors are identified and actioned 3.4 Contract and ancillary documentation are completed and stored, as required, in accordance with workplace policies, procedures and regulatory requirements |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIR4003 Negotiate a contract.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIR0004 Negotiate a contract

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant legislation and workplace policies and procedures
- communicating and working collaboratively and effectively with others when negotiating a contract
- completing documentation related to negotiating a contract
- modifying a contract to cater for variations in service and/or supply of goods/services
- monitoring compliance with agreed key performance indicators (KPIs)
- reading and interpreting procedures and regulatory requirements relevant to negotiating a contract.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- key principles of contracts, including:
 - key legal requirements for the acquisition of service and/or supply of goods/services
 - workplace policies, procedures and relevant documentation for contract negotiation
- key provisions of relevant legislation, codes of practice and national standards that affect contracts for the service and/or supply of goods/services
- knowledge of the service and/or supply of goods/services being supplied
- prequalification processes, including work health and safety (WHS)/occupational health and safety (OHS) and chain of responsibility compliance
- techniques for negotiation.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the

time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIR4002 Source goods/services and evaluate contractors

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes to PC 2.2, 2.4 and 2.7
- Minor statement changes from Performance Evidence
- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to source goods/services and to evaluate contractors in accordance with workplace policy and procedures.

The unit generally applies to those with responsibility for resource coordination and allocation and who lead individuals or teams.

It includes analysing supply requirements as well as evaluating and selecting appropriate potential contractors.

This unit involves discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes.

Work is performed under general guidance on progress and work outcomes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

R – Contract Procurement

Unit Sector

Rail sector.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Analyse supply requirements

2 Evaluate potential contractors

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Purpose and specifications of required goods/services are identified

1.2 Criteria to evaluate potential or existing contractor performance is established

1.3 Quantities of required goods/services are determined

1.4 Frequency of ordering/requesting of goods/services is identified

2.1 Contractors of requested goods/materials/services are identified

2.2 Comparative costings for goods/materials/services are obtained in accordance with regulatory and organisational policies and procedures

2.3 Contractor ability to provide a consistent level of performance on repeat jobs is assessed

2.4 Contractors are evaluated in relation to established criteria and in accordance with regulatory and organisational policies and procedures

2.5 Prioritised contractor shortlist is established based on contractor capacity to provide a cost competitive quality service

2.6 Contractor selection process outcomes are documented including recommendations for actioning agreements/contracts with selected contractors

2.7 Information and data generated during selection process is filed and maintained in accordance with organisational policies and procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIR4002A Source goods/services and evaluate contractors.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIR4002 Source goods/services and evaluate contractors

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes to PC 2.2, 2.4 and 2.7
- Minor statement changes from Performance Evidence
- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant legislation and workplace policies and procedures
- communicating and negotiating effectively with others
- completing relevant documentation
- determining supply requirements
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring and prioritising work activities in terms of planned schedule
- reading, interpreting and following relevant instructions, procedures and signs
- selecting and appropriately applying technology, information systems and procedures to workplace tasks
- sourcing appropriate personnel to supply goods/services in accordance with workplace requirements
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- operational recording, reporting and statistical analysis systems and resources
- relevant chain of responsibility legislation, regulation and codes of practice requirements
- resource availability including processing capacity of equipment and software systems for data statistical analysis
- typical problems that can occur when sourcing goods and services and evaluating contractors,

and related appropriate action that can be taken

- workplace business policies and plans as they relate to supply contracts, including procedures for maintaining confidentiality
- workplace grievance and disputation handling policies and procedures
- workplace policies, procedures and protocols for sourcing and supplying goods/services and evaluating potential supply contractors.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIR4003 Negotiate a contract

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to contract transport and logistics services in compliance with relevant regulations, standards, legal requirements, codes of practice and workplace procedures.

It includes negotiating the contract, finalising the contract negotiations, as well as completing all contract requirements with a contractor.

The unit generally applies to those with responsibility for resource coordination and allocation, and who lead individuals or teams.

Work is under general guidance on progress and outcomes. It requires discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

R – Contract Procurement

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to

essential outcomes.

demonstrate achievement of the element.

1 Negotiate contract specifics with contractor

1.1 Requirements of the contract are clearly documented and agreed to by the relevant parties

1.2 Areas of ambiguity or concern are clarified and resolved

1.3 Negotiations are undertaken with selected contractor for the contracting of required goods/services on a 'without prejudice' basis

1.4 Conditions for service and/or supply of goods/services are agreed between the enterprise and the contractor including the determination of key performance indicators

1.5 Alternative contractors are negotiated with if agreement is unable to be reached with preferred contractor

1.6 Contract negotiations are conducted in accordance with established workplace requirements and relevant legislation

2 Complete contract negotiations

2.1 Contract documentation is drafted in accordance with relevant legislation, workplace procedures and negotiated conditions of service and supply

2.2 Technical support in drafting contracts is accessed as required

2.3 Contract documentation is signed and exchanged between relevant parties

3 Complete enterprise contract requirements

3.1 Documentation systems are established to ensure traceability of orders and financial transactions

3.2 Workplace systems that require interaction with contractors are identified and actioned

3.3 Quality assurance procedures for supplied goods/services are initiated

3.4 Contract and ancillary documentation is completed and stored as required, in accordance with workplace procedures and regulatory requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIR4003A Negotiate a contract.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIR4003 Negotiate a contract

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate risks that may exist when negotiating a contract
- applying relevant legislation and workplace procedures
- communicating and working effectively with others when negotiating a contract
- completing documentation related to negotiating a contract
- modifying activities to cater for variations in workplace contexts and environment
- operating electronic communications equipment to required protocol
- planning and monitoring work activities in terms of schedule
- prioritising work and coordinating self and others in relation to workplace activities
- providing leadership and working collaboratively with others when negotiating a contract
- reading, interpreting and following instructions, procedures and regulatory requirements relevant to negotiating a contract
- selecting and applying appropriate technology and information systems.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and the range of conditions on at least one occasion and include:

- applying precautions and required action to minimise, control or eliminate risks that may exist when negotiating a contract
- applying relevant legislation and workplace procedures
- communicating and working effectively with others when negotiating a contract
- completing documentation related to negotiating a contract
- modifying activities to cater for variations in workplace contexts and environment
- operating electronic communications equipment to required protocol
- planning and monitoring work activities in terms of schedule
- prioritising work and coordinating self and others in relation to workplace activities
- providing leadership and working collaboratively with others when negotiating a contract
- reading, interpreting and following instructions, procedures and regulatory requirements relevant to negotiating a contract
- selecting and applying appropriate technology and information systems.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations, current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.
-

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIX0004X Administer inventory systems

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit of competency describes the skills and knowledge required to administer inventory systems. It includes identifying inventory systems, tracking inventory, planning and administering inventory systems and completing inventory audits and reports.

Inventory is defined as the quantity of goods owned and stored by an organisation that is intended either for resale or is raw materials and components used in producing goods that are then sold.

Inventory systems provide visibility and integration in the supply chain and they are used to record transactions associated with receiving, reducing or writing inventory off. An inventory system can include desktop software, barcode scanners, barcode labels, mobile devices and applications.

The unit is applicable to those with responsibilities for inventory systems within a supply chain. No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

X - Logistics

Unit Sector

Cross sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1 Identify inventory systems**
 - 1.1 Software, applications and devices used in the inventory system are identified
 - 1.2 Third party inventory control operations are verified
 - 1.3 Demand forecasting methods and tools are determined
 - 1.4 Inventory system policies, procedures and processes are confirmed
- 2 Plan and administer inventory**
 - 2.1 Inventory characteristics are ascertained
 - 2.2 Stock specifications, locations, labels and reference numbers are validated using the inventory system
 - 2.3 Receipt and despatch stock is securely stored in designated locations and the inventory system is updated, as required
 - 2.4 Stock is monitored and reordered to meet optimum replenishment requirements, in accordance with organisational inventory procedures
 - 2.5 Stock is requisitioned and documentation is updated on the inventory system, as required
 - 2.6 Stock sorting, recycling and disposal is undertaken, in accordance with organisational inventory procedures
 - 2.7 Stock damage and losses against forecasts are assessed and investigations are completed into unacceptable cases
 - 2.8 Stock security is maintained, in accordance with organisational inventory procedures
- 3 Track inventory**
 - 3.1 Inventory is monitored and tracked using the inventory system
 - 3.2 Buyers are kept informed of stock levels, in accordance with organisational inventory procedures
 - 3.3 Inventory transactions are monitored, in accordance with organisational inventory procedures
 - 3.4 Reorder cycles are adjusted to maintain consistent

supply, as required

- 3.5 Discrepancies, out of specification and redirection opportunities are managed and reported using the inventory system
 - 3.6 Inventory reports are analysed and corrective action is taken, as required
 - 3.7 Vendor Managed Inventory (VMI) systems are used to manage inventory, as required
- 4 Complete inventory audits and reports**
- 4.1 Inventory audits and cycle counts are performed, in accordance with organisational inventory procedures
 - 4.2 Report on inventory system management is produced, in accordance with organisational inventory procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is not equivalent to TLIA3016 Use inventory systems to organise stock control.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIX0004X Administer inventory systems

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- assessing and managing stock quality including analysing discrepancies, out of specification and redirection opportunities
- categorising and labelling stock
- checking inventory specifications
- ensuring handling, sorting, disposal and recycling of stock is performed
- following organisational inventory policies and procedures
- identifying inventory characteristics
- maintaining and managing optimum stock levels
- meeting inventory system documentation requirements
- monitoring stock security
- reading and interpreting information and data related to inventory systems
- recording and maintaining inventory information
- undertaking quality control
- using the inventory system including inventory software and applications
- utilising Vendor Managed Inventory (VMI) systems
- validating third party inventory control operations.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- features of inventory systems
- financial implications of inventory management
- inventory documentation and reporting requirements including those for discrepancies, out of specification and redirection opportunities
- inventory loss and damage control
- inventory policies and procedures
- inventory tracking and security
- layout of inventory storage areas

- maintenance and monitoring of stock quality and levels
- methods for categorising and labelling inventory
- principles of inventory management
- principles of quality control
- reorder cycles
- storage conditions for the maintenance of inventory including product life cycles, maximising use, rotation and replenishment requirements
- third party inventory control operations
- types of inventory systems
- valuation methods for different inventory items
- Vendor Managed Inventory (VMI) systems.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so. Where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to a range of

- exercises, case studies or other simulations
- materials, tools and equipment used in industry including:
 - inventory systems and stock control equipment and tools
- documentation including organisational policies and procedures, industry standards, regulations, codes of practice, operational manuals and equipment specifications.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

TLIX0013X Maintain stock control and receivals

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit of competency describes the skills and knowledge required to maintain stock control and receivals. It includes establishing supply arrangements, monitoring and maintaining stock, processing receivals and storing stock, determining stock wastage and discrepancies and performing stock audits and reporting.

Stock control involves the monitoring and managing of an organisation's stock. It applies to all stock at every stage of the production process from purchasing and delivery to using and reordering stock.

Receivals is the function of checking items delivered as new stock or supplies. It requires the inspection of goods and materials for quality, condition and quantity and the allocating of space in the storage facility or warehouse.

The unit is applicable to those with responsibilities for stock control and/or receivals within a supply chain.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

X - Logistics

Unit Sector

Cross sector

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Establish supply arrangements

- 1.1** Approved business data, forecasting methods and measures to calculate stock levels for standard business periods, peak seasons and special events are established
- 1.2** Optimum supply arrangements are sourced and negotiated using approved purchasing specifications
- 1.3** Stock quantities and cost effective terms of purchase are established
- 1.4** Agreements are recorded, in accordance with stock control and receipt procedures

2 Monitor and maintain stock

- 2.1** Stock control systems and equipment to administer and monitor ordering processes and procedures, including real time tracking information from stock handling and data collection technologies, are used
- 2.2** Stock levels and reorder cycles are monitored and maintained using approved forecasting methods and tools
- 2.3** Evaluation of stock against specifications, including adjusting sources of supply, is undertaken, as required
- 2.4** Optimal safety stock placement and service level optimisation is monitored, in accordance with the continuity plan and stock control and receipt procedures
- 2.5** Stock levels are recorded and reported, in accordance with stock control and receipt procedures

3 Process receivals and store stock

- 3.1** Orders for stock are processed and documented, including checking and recording receivals, against purchase and supply agreements
- 3.2** Stock is distributed, transported and stored in an approved storage area using safe manual handling techniques
- 3.3** Stock is inspected for quality, use by dates and damage
- 3.4** Stock is labelled and any excess is reported, in accordance with stock control and receipt

procedures

- | | | |
|--|------------|--|
| 4 Determine stock wastage and discrepancies | 4.1 | Control system and procedures for stock with high wastage or loss is implemented |
| | 4.2 | Stock is rotated for maximum use and minimum wastage, as required |
| | 4.3 | Excess or spoilt stock, including hazardous substances, is disposed of safely, in accordance with stock control and receipt procedures |
| | 4.4 | Stock losses and discrepancies are recorded, in accordance with stock control and receipt procedures, and security measures are reviewed |
| 5 Perform stock audits and report | 5.1 | Stock audits are performed and reports are produced within designated timeframes |
| | 5.2 | Audit findings and discrepancies in stock and receipts are reported to approved personnel |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces but is not equivalent to TLIA3038 Control and order stock and TLIA3039 Receive and store stock.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIX0013X Maintain stock control and receivals

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes

- assessing stock loss, wastage, excesses and discrepancies
- completing stock orders and receivals within established timelines
- disposing of stock safely including hazardous substances
- forecasting stock and receivals using approved methods and tools
- identifying supply sources for different types of products
- identifying third party inventory control operations
- implementing cost effective stock purchasing and control systems
- maintaining stock and receival data and records
- monitoring optimal safety stock placement and service level optimisation
- monitoring stock control systems, stock quality and cost effectiveness of supplies
- performing stock audits
- producing stock control reports
- receiving, storing, monitoring and maintaining stock levels over life cycle periods
- undertaking supplier and customer relationship management
- utilising stock handling, receivals and data collection technologies
- working with continuity plan and stock control and receival policies and procedures.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of

- continuity plans
- contractual and preferred supplier arrangements
- disposal methods for stock and waste including hazardous substances
- stock control and receivals policies and procedures
- principles of stock control including:
 - approaches to calculating stock levels and replenishment requirements
 - factors that may influence purchase specifications

- forecasting methods for calculating inventory consumption
- methods and tools for calculating cost effective stock quantities including
 - methods of stock control including FIFO (First In, First Out) and LIFO (Last In, First Out)
 - standard measures and formulas for yield testing
 - stock control systems including bin card system, imprest system, integrated point of sale system and ledger systems
- product life and storage requirements for specific stock
- real time information using stock data technologies
- report requirements on stock loss, wastage, excesses and discrepancies
- safe manual handling techniques
- safe stock placement and service level optimisation
- security measures for stock including storage and tracking
- stock control audits
- stock ordering and delivery processes
- stock quality control
- stock reorder cycles for standard business periods, peak seasons and special events
- supplier and customer relationship management
- supply sources for different types of products
- types of computerised stock control systems, their functions and features.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so. Where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to a range of

- exercises, case studies or other simulations
- materials, tools and equipment used in industry including:
 - access to suppliers with whom the learner can interact, commercial purchase specifications, stock control procedures and reports and costs and contractual documentation used for the purchase of stock
 - stock control software systems and applications
- documentation including organisational policies and procedures, industry standards, regulations, codes of practice, operational manuals and equipment specifications.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to apply work health and safety (WHS)/occupational health and safety (OHS) regulations and codes of practices in the electrotechnology workplace.

It includes applying safe working practices, following workplace procedures for hazard identification and risk control. It also includes electrotechnology worker responsibilities and application for health and safety, risk management and adherence to safety practices as part of electrotechnology work functions when preparing to enter a work area.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable

Competency Field

Cross Discipline

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to enter an electrotechnology workplace

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Work area access permits are obtained from appropriate person/s in accordance with workplace procedures

risk control

- 3.2** Hazards in the work area are identified and reported to relevant person/s in accordance with workplace procedures
- 3.3** WHS/OHS documentation and incident records are completed in accordance with regulatory requirements and workplace procedures
- 3.4** Workplace instructions are followed in accordance with regulatory requirements and workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace.

Links

Companion Volume implementation guides are found in VETNet - -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) regulations, legislation, codes of practices and procedures in the workplace, including:
 - identifying typical hazards associated with work environments and assessing risk/s in an electrotechnology workplace
 - applying and reviewing risk control measures to minimise, control or eliminate identified hazards
 - reporting hazards to relevant person/s
 - applying safe working practices/methods
 - contributing to WHS/OHS consultative processes
- following relevant workplace emergency management procedures and instructions relating to WHS/OHS and emergency incidents
- selecting and using appropriate personal protective equipment (PPE)
- applying correct manual handling techniques
- confirming (safe) isolation of an electrical supply and isolation of potential electrical and non-electrical hazards has been completed by an authorised person
- demonstrating safe methods of removing an electric shock victim from a live electrical situation
- selecting an appropriate ladder for a given situation and performing a safety check before use
- completing relevant WHS/OHS documentation.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- effective verbal and written communication techniques
- electrotechnology work environment, including:
 - appropriate fire extinguisher for a given type of fire
 - commonly used workplace safety signs

- relevant industry standard for safe workplace procedures
- risk assessment documentation
- typical hazards associated with a range of work environments
- use of fire extinguishers
- housekeeping and potential hazards in relation to improper housekeeping
- workplace procedures used to control the risks associated with workplace hazards
- legal requirements relevant to WHS/OHS in the workplace, including:
 - appropriate personal protective equipment (PPE)
 - asbestos awareness and reporting hazardous gases, including supervisory requirements and duty of care
 - difference between hazards and risks
 - duty holder responsibilities, as specified in WHS/OHS Acts, regulations and codes of practice
 - employer and employee responsibilities, rights and obligations
 - general aims and objectives of the relevant state or territory legislation relating to WHS/OHS
 - hazards that may be present in the electrotechnology workplace, the harm they can cause and how this harm occurs
 - housekeeping and potential hazards in relation to improper housekeeping
 - major functions of safety committees and representatives
 - powers of health and safety inspectors
 - relevant WHS/OHS regulations, codes and practices
 - underlying principles of WHS
- life support - cardiopulmonary resuscitation (CPR) in the workplace, including:
 - first aid
 - responsibilities of the first aider
 - priorities of first aid management for any accident or injury
 - procedures required at an accident scene
 - legal and ethical issues, which may impact on the management of care
 - 'duty of care'
 - examination of a casualty for injuries
 - effect of cardiopulmonary arrest on the body
 - managing simulated conditions of airway obstruction, respiratory arrest and cardiopulmonary arrest
 - single and two-person CPR
 - signs and symptoms of an altered level of consciousness
 - management of simulation of a casualty with an altered level of consciousness
 - signs and symptoms of shock
 - management of simulation of a casualty in shock
- relevant safe work method statements (SWMS)/job safety analysis (JSA) or risk mitigation processes, including:

- emergency management plan
- hierarchy of WHS/OHS hazard risk control measures
- principles of risk assessment/management and required documentation
- typical hazards associated with electrotechnology work environments and their control, including:
 - asbestos, including:
 - common types of asbestos containing building materials
 - warning signs used to identify the presence of asbestos
 - effects of asbestos on the human body
 - requirements for reporting the presence of asbestos
 - silica, including:
 - types of materials that contain crystalline silica (silica dust)
 - methods of releasing silica dust
 - recommended levels of exposure to crystalline silica
 - effects of crystalline silica on the human body
 - hazardous gases
 - chemicals in the workplace, including:
 - hazardous substances and dangerous goods and their classifications
 - labelling and storage requirements for chemicals
 - purpose and interpretation of safety data sheets (SDS)/material safety data sheets (MSDS)
 - confined spaces, including:
 - control measures for working in a designated confined space
 - hazards associated with working in a confined space
 - workplace situations that could be classified as a confined space
 - physical and psychological hazards, including excessive noise, vibration, thermal stress, radiation, lasers, occupational overuse syndrome, stress, drugs and alcohol
 - safe manual handling principles, including:
 - procedures and methods for manual handling
 - situations that may cause manual handling injuries
 - types of manual handling injuries and their effect
 - working at heights, including:
 - hazards and precautions associated with working on ladders, elevated work platforms (EWP) and scaffolds
 - identification of work area as a height risk and use appropriate safety equipment to prevent a fall
 - working safely with electricity, including:
 - effects of electric shock on the human body
 - protection offered by a residual current device (RCD)
 - need for ensuring the (safe) isolation of an electrical supply

- appropriate method of removing an electric shock victim from a live electrical situation
- precautions that can minimise the chance of electric shock (earthing, extra-low voltage (ELV), fuses, circuit breakers and RCDs)
- common causes of electrical accidents.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, emergency management plan, equipment specifications, regulations, codes of practice and operation manuals
- relevant WHS/OHS legislation, regulations and codes of practice related to hazards management in the electrotechnology industry and workplace.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

UEERL0001 Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to attach flexible cord and plug to electrical equipment for connection to a single phase supplies up to 230 volts (V) alternating current (a.c.) supply.

It includes planning and attaching flexible cord and plug, using test equipment for inspection and safety testing. It also includes locating, inspecting, testing and repairing faults in flexible cords and plugs.

This unit does not cover the knowledge and skills necessary for work associated with high current faults on complex electrical apparatus, circuits and electrical work; in hazardous areas or on electrical equipment that is part of an explosion-protection technique; nor, work associated with fixed wiring.

The skills and knowledge described in this unit require a licence or permit to practice in the workplace where work is carried out on electrical installations which are designed to operate at voltages greater than 50 V a.c. or 120 V direct current (d.c.).

Competency development activities in this unit are subject to regulations directly related to licensing. Where a licence or permit to practice is not held, a relevant contract of training, such as an Australian Apprenticeship, is required.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

Competency Field

Restricted Licensing

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan electrical equipment connection

2 Attach flexible cord and plugs

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Work is planned, sequenced and prepared in accordance with WHS/OHS requirements and workplace procedures
- 1.2 Condition and ratings of cord and plugs are in accordance with workplace procedures and work instruction from appropriate person/s
- 1.3 Flexible cords and plugs are selected in accordance with relevant industry standards and workplace procedures for condition and rating
- 1.4 Materials necessary to complete work are obtained and checked in accordance with workplace procedures and work instructions
- 1.5 Tools, equipment and testing devices needed to carry out work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 1.6 Flexible cord and plugs are prepared without damage to insulation and conductors and in accordance with relevant industry standards
- 2.1 WHS/OHS workplace policies and procedures are followed
- 2.2 Single insulated metal framed equipment is earthed in accordance with relevant industry standards and workplace procedures
- 2.3 Double insulated equipment is inspected and maintained in accordance with relevant industry standards and workplace procedures
- 2.4 Conductors are connected to terminals ensuring required polarity is in accordance with relevant industry standards

- | | | |
|--|------------|--|
| 3 Inspect and test equipment for operation and safety | 3.1 | Electrical installation and operation of cord and plug/s connected to electrical equipment are inspected and tested in accordance with relevant industry standards, work instructions and workplace procedures |
| | 3.2 | Quality checks of work are undertaken in accordance with workplace procedures |
| 4 Locate and repair fault in flexible cord and plug/s | 4.1 | Electrical equipment and attached flexible cord and plug/s are isolated in accordance with WHS/OHS requirements and workplace procedures |
| | 4.2 | WHS/OHS workplace policies and procedures are followed |
| | 4.3 | Quality checks of the attached flexible cord and plug/s are undertaken in accordance with workplace procedures to detect any abnormal, damage or fault |
| | 4.4 | Faults in attached flexible cord and plug/s are determined and details of components to be replaced are recorded in accordance with workplace procedures |
| | 4.5 | Faults in attached flexible cord and plug/s are repaired, as required, in accordance with workplace procedures |
| | 4.6 | Repairs are inspected and tested for compliance with industry standards |
| | 4.7 | Unplanned events are referred to supervisor for direction in accordance with workplace procedures |
| | 4.8 | Status report/s is completed and supervisor notified in accordance with workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Attaching cords and plugs to electrical equipment must include:

- any cord, cable and plug connected to equipment and cord extension leads intended for single phase supplies up to 230 V

Safe working procedures within in the scope of this unit must:

- be in accordance with AS/NZS 4836 Safe working on low-voltage electrical installations

Unit Mapping Information

This unit replaces and is equivalent to UEENEEP024A Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEERL0001 Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant industry standards
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- applying quality to workplace procedures and instructions
- attaching flexible cord/s and plug/s and without damage
- inspecting flexible cords and plugs for damage, faults or abnormalities
- dealing with unplanned events in accordance with problem-solving techniques and workplace procedures
- determining the current rating of a range of commonly used flexible cords
- drawing of a basic electrical circuit using correct symbols
- testing flexible cords, plugs and connected equipment for operation and safety up to 230 volts (V) alternating current (a.c.), including polarity and continuity testing
- finding and repairing faults in attached flexible cords and plugs in accordance with established procedures
- preparing to attach flexible cord and plug supplies up to 230 V a.c. supply
- providing status report/s
- using testing equipment
- selecting appropriate flexible cords for a range of single phase appliances relating to application, load and service duty
- identifying correct plug and socket polarities for the range of commonly used 230 V plug socket combinations
- selecting the correct plug and socket combinations for a range of applications, including use in damp areas
- fitting a range of various plugs and sockets with attention to requirements, colour code, polarity and correct termination of conductors with the sheath well into the body, and the cord grip anchored
- terminating cords to several appliances utilising the appropriate cord type and rating.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- electrical safety requirements, including the requirements of AS/NZS 4836 Safe working on low-voltage electrical installations
- basic electrical circuits, including:
 - simple electric circuit (supply, control device and load)
 - industry standard symbols, units of measurement and the abbreviation for electromotive force, potential difference, current and resistance
 - using multiples and sub-multiples for voltage, current and resistance values
 - a.c and direct current (d.c.) supplies
 - single phase electrical loads
 - electrical circuit protection devices
- relationships in an electrical circuit, including:
 - relationship between voltage, current and resistance (Ohm's Law)
 - changes in circuit parameters for altered values of voltage, current and resistance
 - electrical power in relationship to d.c. or resistive a.c. circuits
- test equipment - resistance measurement, including:
 - types of electrical test equipment used for resistance measurement (analogue and digital multimeters, insulation resistance testers and continuity testers)
 - selection of appropriate electrical test instrument for continuity and insulation resistance measurement
 - using analogue and digital multimeters for resistance measurement (ensuring zero setting, correct scale selection, avoidance of parallax error and estimation of between division readings for analogue multimeters)
 - continuity tests and using a continuity tester to check the polarity of a three-core extension cord
 - insulation resistance tests and minimum values for insulation resistance for low voltage (LV) equipment
 - reasons for insulation resistance testing is conducted at higher than supply voltage to relevant industry standards
 - using insulation resistance handheld tester
 - care and storage of electrical instruments
 - regulatory requirements relating to the maintenance and testing of test instrumentation for resistance measurement
- selection of flexible cords and plugs to suit given applications, including:
 - types, structures and applications of common cores, including:
 - parallel two core unsheathed ('figure 8')
 - cords, light duty sheathed
 - ordinary duty sheathed

- heavy duty sheathed
- textile braided
- service duty
- purpose of colour coding and the recommended single phase colour code
- conventional code used in the most common alternative colours
- factors affecting the choice of plugs and sockets, including ingress protection (IP) rating
- connecting flexible cords and plugs to appliances, including:
 - design features of plugs and sockets which protect the conductor terminations from undue force when disconnecting a cord - tortuous path
 - cord preparation - not to mark/damage the inner core when stripping the sheath for termination, double the end of the conductor to be terminated
 - purpose of earthing
 - structure of double insulated appliances, symbol, reasons they should not be earthed, and maintenance of the integrity of the double insulation
 - preparation of the surfaces at an earthing connection before and after completion of the termination, including terminations exposed to corrosion, and those for which no specific earthing terminal is provided
 - techniques for fitting plugs and sockets
 - techniques for terminating cords and conductors including consequences of poor electrical terminations
- testing, including:
 - importance of conducting both visual and electrical tests to ensure leads are safe and appropriate for connection to supply in regard to physical condition
 - checking the polarity of plug, and for any abnormal or obvious damage or fault
 - minimum acceptable value of insulation resistance between active neutral and earth
 - conducting insulation resistance and continuity tests prior to, and after, connecting cords and plugs to appliances
 - visually checking that the cord/plug assembly has a suitable IP rating for the operating environment
 - visual checks to ensure that arrangements for protection against dangers of mechanical movement as relevant are undamaged and in place
 - techniques for fault finding attached cords and plugs, and cord extension leads
- producing documentation and reports, including:
 - nature and content of, and the need to produce, status reports and documents
- relevant WHS/OHS legislated requirements including inspection and testing of electrical equipment
- relevant industry standards
- relevant manufacturer specifications and operating instruction for tools, equipment and testing devices
- relevant safe job safety assessments or risk mitigation processes
- relevant workplace policies, procedures and instructions, including relevant workplace quality procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated suitable workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, relevant industry standards, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

UETDRRF002 Perform EWP rescue

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 2.0.

Application

This unit covers the performance of rescue procedures from an elevated work platform (EWP) in the workplace. It specifies the mandatory requirements of rescue from a raised EWP by a work party member on the ground and how they apply in the context of transmission, distribution or rail work functions. It encompasses responsibilities for health, safety and risk management processes at all operative levels and adherence to safety practices as part of the normal way of doing work.

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace subject to regulations for undertaking of electrical work.

Other conditions may apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

HLTAID009 Provide cardiopulmonary resuscitation

Competency Field

Refresher Training

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to perform EWP

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Instruction in hazards and risk control measures for specific work areas and work activities are identified and

rescue procedures	obtained
	1.2 Tools and emergency equipment are checked for safety, functionality and placed in an accessible location to facilitate response and rescue according to established procedures
2 Carry out EWP rescue procedures	2.1 Workplace procedures and work instructions for controlling risk are followed
	2.2 Workplace procedures for removing the victim, where necessary, from contact with or in vicinity of live apparatus and lowering the EWP to the ground are followed
	2.3 Workplace procedures for removing the victim from the EWP are followed
	2.4 Workplace procedures for carrying out cardiopulmonary resuscitation (CPR), if required at the site, and treatment, where necessary, by medical professionals are followed
	2.5 The worksite is secured and entry controlled until appropriate authorities inspect and release the site
3 Complete the EWP rescue procedure	3.1 Processes for reporting accidents and/or incidents to authorised personnel are confirmed in accordance with established procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UET Transmission, Distribution and Rail Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETDTRRF03 Perform EWP rescue.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

Assessment Requirements for UETDRRF002 Perform EWP rescue

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 2.0.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on one occasion and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- identifying operational instructions and confirming the function of emergency equipment to facilitate rescue from an incident on an elevated work platform (EWP)
- accessing controls and lowering the EWP in accordance with mobile equipment instructions/workplace procedures
- removing the victim from the EWP to the ground in accordance with workplace procedures.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- emergency procedures for the EWP rescue of a victim encompassing:
 - inspection of rescue equipment
 - assessing hazards to rescuer, victim and others
 - isolation procedures, where appropriate
 - safe approach distances (SAD) appropriate to EWP rescue
 - involvement of external emergency services
 - emergency retrieval systems
- emergency procedures required to undertake EWP rescue of a victim encompassing:
 - placement of rescue equipment
 - controlling hazards to rescuer, victim and others
 - maintaining SAD appropriate to EWP rescue
 - practical steps in rescuing a person
 - removing victim to safe location/place of safety.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated conditions involving realistic and authentic activities that replicate operational workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry for performing EWP rescue
- applicable documentation, including workplace procedures, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

UETTDREL14 Working safely near live electrical apparatus as a non-electrical worker

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package.

Application

This unit covers compliance with working safely up to the defined safe approach distance (SAD) near energised electrical apparatus, including electrical powerlines, for non-electrical workers.

It includes work functions that may be performed, such as vegetation control, scaffolding, rigging, painting and/or any other activity that requires working safely and complying with requirements and/or established procedures near live electrical apparatus by a non-electrical worker. Also included is the preparation of risk assessment control measures that encompass job safety assessment. It does not include any work that is or may be performed by other competent operatives within the defined safe working zone. The defined safe working zone is that so defined by relevant state or territory regulatory agencies/bodies, local government legislation, industry bi-partite bodies, guidelines/codes of practices or other related requirements for safe work and access near live electrical and mechanical apparatus.

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace subject to regulations for undertaking of electrical work.

Other conditions may apply under state and territory legislative and regulatory licencing requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

There are no prerequisite competencies to this unit.

Competency Field

Entry Level Cross Discipline

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare to work safely near live electrical apparatus as non-electrical worker

- 1.1** Instructions related to the work to be performed safely near live electrical apparatus as non-electrical worker are received and confirmed
- 1.2** Relevant requirements and established procedures to be followed and relevant personnel to be communicated with for the work to be performed are identified
- 1.3** Work health and safety (WHS)/occupational health and safety (OHS) policies and procedures to be followed for the work to be performed are received and confirmed
- 1.4** Suggestions to assist in meeting the safety requirements for working near live electrical apparatus as a non-electrical worker are made to others involved in the work
- 1.5** Hazards are identified, WHS/OHS risks assessed and control measures prioritised, implemented and monitored, including emergency exits kept clear, according to established procedures
- 1.6** Scope of responsibility and process of relevant work permit(s) issue are identified, received and confirmed according to requirements and established procedures
- 1.7** Relevant responsibility associated with first aid, safety observers and/or other related work safety procedures at the worksite are identified in accordance with requirements and established procedures to ensure safety measures are followed in the instance of an incident
- 1.8** Processes for identifying and reporting client issues to appropriate personnel are identified in accordance with industry/community standards
- 1.9** Site and the work schedule to be prepared are confirmed according to given instructions for a quality outcome and to minimise risk and damage to property, commerce, stock and individuals in accordance and established procedures

- 3.5 Works completion records and report forms/data sheets are completed accurately in accordance with given instructions and established procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETTDREL14A Working safely near live electrical apparatus as a non-electrical worker.

Links

UET Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

Assessment Requirements for UETTDREL14 Working safely near live electrical apparatus as a non-electrical worker

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- applying sustainable energy principles and practices
- completing all of the following:
 - confirming the safe working zone for safe work and access near live electrical apparatus
 - identifying relevant technical standards, acts, regulations and codes/guidelines
 - identifying established (enterprise) procedures
- completing all of the following:
 - confirming the principles of electricity, the three phase power system, electric shock and resuscitation, and power system
 - recognising aerial voltage systems
 - identifying low voltage (LV) aerial circuits
 - identifying high voltage (HV)
- identifying all of the following:
 - procedures in the event of an incident
 - events constituting an incident
 - procedures for responding to incidents
 - hazard and risk assessment procedure
 - conduct worksite hazard assessment
 - confirmation of essential components of hazard assessment checks
 - applying hazard identification in electrical work
 - confirmation of the basic safety principles for work on electrical works
 - hazard identification and risk assessment
 - hazard control
 - risk assessment and management (job safety analysis (JSA)) control
 - the hierarchy of controls, including evaluation, worksite hazard and risk assessment checklist, pre-job hazard assessment check (HAC) items, planned inspection and

- pre-work hazard risk assessment form
- identifying all of the following:
 - use of work permits and/or authorisation permits
 - sustainable energy principles and practices
 - possible effects of weather conditions on working near electrical apparatus as a non-electrical worker
- dealing with unplanned events on at least one (1) occasion.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- basic electrical principles encompassing:
 - fundamental units - basic measurement of units
 - electrical characteristics of material - characteristics of solid materials; insulators; and terms electrical charge, electrical current and electromagnetic forces
 - nature of electrical current and change - basic rules of electrical current flow
 - sources of electricity - basic fundamentals of alternating current (a.c.), direct current (d.c.) and single electromagnetic field source (induction)
 - simple circuits - circuit protection devices used on the network; effects of an open circuit, a closed circuit and a short circuit and earthing – using the ground as a form of conductor to return current back to a source
 - resistance - relationship between voltage and current and resistance (Ohms Law)
 - effects of current - physiological effects and protection for physiological effects; basic principle by which electrical current can result in the production of heat, light and electromagnetic fields and typical effects of current
 - three phase and single-phase power systems - star delta configurations, three phase star connections, relationship between line and phase voltages, three phase 4 wire systems - purpose of the neutral
 - consequences of short circuits - arc flash, electricity supply industry (ESI) protection schemes
 - magnetism - magnetic field patterns, concepts of electromagnetism, effects of electromagnetism and magnetic fields around straight conductors
 - hazards encountered in an ESI environment - touch and step potentials, electric shock, fire, chemicals, falls and safe use of tools and equipment
- transmission, distribution and rail power systems encompassing:
 - relationship between the transmission, distribution and rail/tram system within an overall power system - different organisations responsible for generation, transmission, distribution and rail/tram; how they correlate and their functions
 - characteristics of a transmission, distribution and rail system - principal components; typical voltage levels and methods of transmission and distribution, including grid type transmission systems, radial, parallel and ring main feeders
 - relationship between an overhead and underground supply systems within an overall

- power system - advantages/disadvantages and applications
- single line drawings and layouts - drawings and layouts of transmission and distribution systems, including radial, parallel and ring main feeders and the HV equipment associated with substations
- fundamentals for working safely near live electrical apparatus for non-electrical worker encompassing:
 - standards, guidelines/codes of practice, Commonwealth/state/territory/local government legislation, supply authority regulations and/or enterprise requirements, including relevant certification and licensing applicable to working safely up to the defined safe working zone near energised electrical apparatus, including electrical powerlines, for non-electrical worker
 - definitions of terminologies - 'safe working zone', 'risk assessment', 'safe approach distances (SAD) zones', 'safe working distances', 'work permits', 'access authorisation permits', 'technical standards', 'isolation procedures' and 'compliance requirements'
 - WHS/OHS policies and procedures for working safely - duties of a safety observer, permit to work systems and isolation procedures, safe application of different types of tools and equipment and operation of mobile plant and machinery (e.g. elevated work platform (EWP)) near live electrical apparatus
 - techniques and precautions in undertaking different work functions and working safely up to the defined safe working zone near energised electrical apparatus (including electrical powerlines) for non-electrical worker (work functions that may be performed include vegetation control, scaffolding, rigging, painting and/or any other activity that requires working safely near live electrical apparatus by a non-electrical worker).

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated conditions involving realistic and authentic activities that replicate operational workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

UET Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

UETIDRRF08 Perform EWP controlled descent escape

Modification History

Release 2. Amendment to the Performance Evidence.

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package.

Application

This unit covers the performance of elevated work platform (EWP) controlled descent escape procedures in the workplace. It specifies the mandatory requirements for self-rescue from a raised EWP and how they apply in the context of transmission, distribution or rail work functions. It encompasses responsibilities for health, safety and risk management processes at all operative levels and adherence to safety practices as part of the normal way of doing work.

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace subject to regulations for undertaking of electrical work.

Other conditions may apply under state and territory legislative and regulatory licencing requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

There are no prerequisite competencies to this unit.

Competency Field

Refresher Training

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare to perform EWP **1.1** Instruction in hazards and risk control measures for

controlled descent escape	specific work areas and work activities are identified and obtained
	1.2 Tools and emergency descent equipment are checked for safety and function to ensure accessibility according to established procedures
2 Carry out EWP controlled descent escape	2.1 Workplace procedures and work instructions for controlling risk are followed
	2.2 Workplace procedures for evacuating an EWP basket employing emergency descent equipment are followed
	2.3 The worksite is secured and entry controlled until appropriate authorities inspect and release the site
3 Complete the EWP controlled descent escape procedure	3.1 Processes for reporting accidents and/or incidents to authorised personnel are confirmed in accordance with established procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETTDRRF08B Perform EWP controlled descent escape.

Links

UET Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

Assessment Requirements for UETTDRRF08 Perform EWP controlled descent escape

Modification History

Release 2. Amendment to the Performance Evidence.

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on one occasion and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- accessing, inspecting, securing and attaching emergency descent equipment to self in accordance with workplace procedures
- evacuating the elevated work platform (EWP) and descending to the ground in accordance with workplace procedures.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- procedures for EWP controlled descent escape encompassing:
 - inspection of rescue equipment
 - assessing hazards to self and others
 - involvement of external emergency services as appropriate
 - safe approach distances (SAD) appropriate to EWP controlled descent escape
- procedures required for EWP controlled descent escape encompassing:
 - fitting of rescue equipment
 - controlling hazards to self and others
 - maintaining SAD for an EWP controlled descent escape
 - removing self to safe location/place of safety

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory

requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated conditions involving realistic and authentic activities that replicate operational workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry for performing EWP controlled descent escapes
- applicable documentation, including workplace procedures, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

UET Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

AHC Agriculture, Horticulture and Conservation and Land Management Training Package

Modification History

Version	Release Date	Comments
1.0	22 June 2016	Initial release Includes 97 qualifications, 878 units of competency and assessment requirements and 46 Skill Sets.

Credit Arrangements

Qualification	Credit Arrangements
AHC10115 Certificate I in Conservation and Land Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC10216 Certificate I in AgriFood Operations	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC10316 Certificate I in Horticulture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC10416 Certificate I in Permaculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC20116 Certificate II in Agriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC20316 Certificate II in Production Horticulture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC20416 Certificate II in Horticulture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC20510 Certificate II in Arboriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC20616 Certificate II in Parks and Gardens	At the time of endorsement of this Training Package no national credit arrangements exist.

AHC20716 Certificate II in Production Nursery	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC20816 Certificate II in Retail Nursery	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC20916 Certificate II in Sports Turf Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC21016 Certificate II in Conservation and Land Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC21116 Certificate II in Irrigation	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC21216 Certificate II in Rural Operations	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC21316 Certificate II in Shearing	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC21416 Certificate II in Wool Handling	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC21516 Certificate II in Floriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC21616 Certificate II in Landscaping	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC21716 Certificate II in Permaculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC30116 Certificate III in Agriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC30216 Certificate III in Agriculture (Dairy Production)	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC30416 Certificate III in Pork Production	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC30516 Certificate III in Poultry Production	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC30616 Certificate III in Production Horticulture	At the time of endorsement of this Training Package no national credit arrangements exist.

AHC30716 Certificate III in Horticulture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC30716 Certificate III in Landscape Construction	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC30816 Certificate III in Arboriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC31016 Certificate III in Parks and Gardens	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC31116 Certificate III in Production Nursery	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC31216 Certificate III in Retail Nursery	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC31316 Certificate III in Sports Turf Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC31416 Certificate III in Conservation and Land Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC31516 Certificate III in Indigenous Land Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC31616 Certificate III in Lands, Parks and Wildlife	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC31716 Certificate III in Natural Area Restoration	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC32116 Certificate III in Commercial Seed Processing	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC32216 Certificate III in Commercial Composting	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC32316 Certificate III in Conservation Earthworks	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC32416 Certificate III in Irrigation	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC32516 Certificate III in Aboriginal Sites Work	At the time of endorsement of this Training Package no national credit arrangements exist.

AHC32616 Certificate III in Rural Machinery Operations	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC32716 Certificate III in Rural Merchandising	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC32816 Certificate III in Rural Operations	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC32916 Certificate III in Shearing	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC33016 Certificate III in Wool Clip Preparation	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC33116 Certificate III in Advanced Wool Handling	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC33216 Certificate III in Floriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC33316 Certificate III in Feedlot Operations	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC33416 Certificate III in Seed Production	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC33516 Certificate III in Seed Testing	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC33616 Certificate III in Pest Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC33816 Certificate III in Permaculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC33916 Certificate III in Beekeeping	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC40116 Certificate IV in Agriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC40316 Certificate IV in Production Horticulture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC40416 Certificate IV in Horticulture	At the time of endorsement of this Training Package no national credit arrangements exist.

AHC40516 Certificate IV in Parks and Gardens	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC40616 Certificate IV in Production Nursery	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC40716 Certificate IV in Retail Nursery	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC40816 Certificate IV in Sports Turf Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC40916 Certificate IV in Conservation and Land Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC41016 Certificate IV in Agribusiness	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC41116 Certificate IV in Irrigation	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC41316 Certificate IV in Wool Classing	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC41416 Certificate IV in Seed Production	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC41516 Certificate IV in Seed Testing	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC41616 Certificate IV in Organic Farming	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC41716 Certificate IV in Pest Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC41916 Certificate IV in Arboriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC42016 Certificate IV in Landscape	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC42116 Certificate IV in Permaculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC42216 Certificate IV in Shearing Contracting	At the time of endorsement of this Training Package no national credit arrangements exist.

AHC50116 Diploma of Agriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC50216 Diploma of Pork Production	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC50316 Diploma of Production Horticulture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC50416 Diploma of Horticulture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC50510 Diploma of Arboriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC50616 Diploma of Landscape Design	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC50716 Diploma of Parks and Gardens Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC50816 Diploma of Production Nursery Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC50916 Diploma of Retail Nursery Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC51016 Diploma of Sports Turf Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC51116 Diploma of Conservation and Land Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC51216 Diploma of Community Coordination and Facilitation	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC51316 Diploma of Pest Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC51416 Diploma of Agribusiness Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC51516 Diploma of Viticulture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC51616 Diploma of Irrigation Management	At the time of endorsement of this Training Package no national credit arrangements exist.

AHC51816 Diploma of Organic Farming	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC52016 Diploma of Landscape Project Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC52116 Diploma of Permaculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC60210 Advanced Diploma of Horticulture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC60316 Advanced Diploma of Agribusiness Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC60416 Advanced Diploma of Conservation and Land Management	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC60516 Advanced Diploma of Arboriculture	At the time of endorsement of this Training Package no national credit arrangements exist.
AHC80116 Graduate Diploma of Arboriculture	At the time of endorsement of this Training Package no national credit arrangements exist.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

AHCSS00029 Cotton Industry Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0. Skill set updated to replace superseded first aid unit, as approved by the AISC in consultation with ASQA.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Description

Not applicable.

Pathways Information

These units provide credit towards AHC20116 Certificate II in Agriculture.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCBAC202 Assist agricultural crop maintenance
- AHCMOM202 Operate tractors
- AHCMOM304 Operate machinery and equipment
- AHCWHS201 Participate in work health and safety processes
- AHCWRK202 Observe environmental work practices
- AHCWRK204 Work effectively in the industry
- HLTAID010 Provide basic emergency life support

Target Group

Those working as farm hands in the cotton production industry.

Suggested words for Statement of Attainment

These competencies meet the minimum industry requirements for cotton industry work.

AHCSS00030 Farm Business Management Skill Set

Modification History

Release	Comments
Release 3	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0. Qualifications and unit codes and titles updated.
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.1.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Description

This skill set covers the skills and knowledge to plan and manage a farm business and the associated risks.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC40116 Certificate IV in Agriculture
- AHC41019 Certificate IV in Agribusiness
- AHC51419 Diploma of Agribusiness Management

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCBUS512 Develop and implement family business structures and relationships
- AHCBUS516 Develop and review a business plan
- AHCBUS517 Monitor and review business performance
- BSBRSK501 Manage risk

Target Group

This skill set is for individuals who plan and manage a farm business and the associated risks.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* and the *BSB Business Services Training Package* meet the requirements for those responsible for farm business planning and management, including risk management.

AHCSS00032 Identify Plants for Indigenous Land Management Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards AHC31516 Certificate III in Indigenous Land Management.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 3 units of competency.

Unit Code	Unit Title
AHCILM302	Provide appropriate information on cultural knowledge
AHCPCM201	Recognise plants
AHCPCM303	Identify plant specimens

Target Group

Workers in a range of industries who are working on Country or with Indigenous Communities.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for an introduction to recognising and working with plants that are significant to Indigenous Communities.

AHCSS00042 Organic Crop Management Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0. Updated elective code.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

Description

This skill set is designed to meet industry requirements for workers who manage organic crop production.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC41616 Certificate IV in Organic Farming
- AHC51816 Diploma of Organic Farming.
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Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCAGB501 Develop climate risk management strategies
- AHCBAC408 Manage agricultural crop production
- AHCBAC509 Plan and manage long-term weed, pest or disease control in crops
- AHCORG403 Manage organic soil improvement

Target Group

This skill set is for individuals responsible for planning, implementing and managing organic crop production.

Suggested words for Statement of Attainment

These competencies from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package meet industry requirements for managing organic crop production.

AHCSS00044 Organic Horticulture Management Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards AHC41616 Certificate IV in Organic Farming and AHC51816 Diploma of Organic Farming.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 5 units of competency.

Unit Code	Unit Title
AHCAGB501	Develop climate risk management strategies
AHCORG403	Manage organic soil improvement
AHCPHT402	Develop a crop regulation program
AHCPHT404	Implement and monitor a horticultural crop harvesting program
AHCPMG410	Implement the pest monitoring and evaluation plan

Target Group

Individuals responsible for planning, implementing organic horticultural production.

Suggested words for Statement of Attainment

These competencies meet the minimum industry requirements for managing organic horticultural production.

AHCSS00045 Spray Operator Skill Set

Modification History

Release	TP Version	Comment
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards Certificate II in Conservation and Land Management.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 5 units of competency.

Unit Code	Unit Title
AHCPMG203	Work effectively in a pest management environment
AHCPMG301	Control weeds
AHCPMG302	Control plant pests, diseases and disorders
AHCCHM303	Prepare and apply chemicals
AHCCHM304	Transport and store chemicals

Target Group

Individuals who plan and prepare for a specific weed management program.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for those who work with team members to carry out a specific weed management program.

AHCSS00046 Organic Livestock Management Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards AHC41616 Certificate IV in Organic Farming and AHC51816 Diploma of Organic Farming.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 4 units of competency.

Unit Code	Unit Title
AHCORG402	Manage organic livestock production
AHCORG403	Manage organic soil improvement
AHCLSK505	Develop production plans for livestock
AHCAGB501	Develop climate risk management strategies

Target Group

Individuals responsible for managing organic livestock production systems.

Suggested words for Statement of Attainment

These competencies meet industry requirements for managing organic livestock production systems.

AHCSS00047 Report on Aboriginal Cultural Sites Skill Set

Modification History

Release	TP Version	Comment
Version 1	1.0	Initial release

Description

Pathways Information

These units provide credit towards Diploma of Conservation and Land Management.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 5 units of competency.

Unit Code	Unit Title
AHCASW307	Support the documentation of Aboriginal cultural landscapes* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW309	Interpret Aboriginal cultural landscape* <i>AHCASW302 Relate Aboriginal culture to sites work*</i> <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW501	Survey and report on Aboriginal cultural sites* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCILM508	Propose a negotiated outcome for a given area of Country
LGALAND504A	Undertake effective consultation with Indigenous people on matters of cultural heritage

Target Group

Experienced Aboriginal sites workers who are managers or supervisors with responsibility for writing sites survey reports.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for Aboriginal sites survey reporting.

AHCSS00048 Permaculture Demonstrator Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards a Certificate III in Permaculture.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 4 units of competency.

Unit Code	Unit Title
AHCPER301	Research and communicate information on permaculture principles and practices
AHCPER303	Maintain integrated plant and animal systems
AHCPER316	Select plant and animal species in a permaculture system
AHCPER321	Demonstrate permaculture practices to small groups of learners

Target Group

School teachers and permaculture demonstrators.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for those providing practical instruction to small groups of learners.

AHCSS00049 Pig Health Supervisor Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. Unit codes updated.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Description

Pathways Information

These units provide credit towards the following Certificates:

- AHC30416 Certificate III in Pork Production
- AHC40116 Certificate IV in Agriculture.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCHM304 Transport and store chemicals
- AHCECR302 Collect and preserve biological samples
- AHCLSK304 Carry out post-mortem examination of livestock
- AHCLSK307 Euthanase Livestock
- AHCLSK404 Implement and monitor animal welfare programs
- AHCLSK409 Supervise animal health programs

Target Group

This skill set is for individuals who are working as pig health supervisors in the pork production industry.

Suggested words for Statement of Attainment

These competencies meet the industry welfare and quality assurance requirements for stockperson supervisors working in the pork industry.

AHCSS00050 Pork Industry Euthanasia Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards the following Certificates:

- AHC30116 Certificate III in Agriculture
- AHC30416 Certificate III in Pork Production

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 2 units of competency.

Unit Code	Unit Title
AHCLSK307	Euthanase livestock
AHCLSK331	Comply with industry animal welfare requirements

Target Group

Individuals who are working as animal attendants in the pork production industry.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for stockpersons working in the pork industry.

AHCSS00053 Poultry Egg Industry Pullet Rearing Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards AHC30516 Certificate III in Poultry Production.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 6 units of competency.

Unit Code	Unit Title
AHCPLY206	Catch and load poultry
AHCPLY302	Brood poultry
AHCPLY306	Clean, disinfect, or fumigate intensive production sheds
AHCPLY307	Implement, monitor, and review biosecurity measures in poultry production
AHCLSK310	Implement feeding plans for intensive production
AHCLSK313	Monitor livestock production growing environments

Target Group

Individuals who are working as poultry stockpersons rearing pullets in the poultry egg industry.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for poultry egg industry pullet rearing.

AHCSS00054 Poultry Egg Industry Stockpersons Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards AHC30516 Certificate III in Poultry Production.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 9 units of competency.

Unit Code	Unit Title
AHCPLY307	Implement and monitor biosecurity measures in poultry production
AHCLSK301	Administer medication to livestock
AHCLSK307	Euthanase livestock
AHCLSK331	Comply with industry animal welfare requirements
AHCWHS301	Contribute to work health and safety processes
AHCWRK204	Work effectively in the industry
AHCWRK205	Participate in workplace communications
AHCWRK306	Comply with industry quality assurance requirements

FDFFS1001A	Follow work procedures to maintain food safety
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Target Group

Individuals who are working as poultry stockpersons in the poultry egg industry.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for poultry egg industry stockpersons.

AHCSS00055 Poultry Health Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards AHC30516 Certificate III in Poultry Production.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 6 units of competency.

Unit Code	Unit Title
AHCLSK301	Administer medication to livestock
AHCLSK304	Carry out post-mortem examination of livestock
AHCLSK307	Euthanase livestock
AHCLSK309	Implement animal health control programs
AHCLSK331	Comply with industry animal welfare requirements
AHCPLY307	Implement and monitor biosecurity measures in poultry production

Target Group

Individuals who are working as poultry hands in the poultry industry.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for poultry health.

AHCSS00056 Poultry Husbandry Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards AHC30516 Certificate III in Poultry Production.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 5 units of competency.

Unit Code	Unit Title
AHCPLY307	Implement, monitor, and review biosecurity measures in poultry production
AHCLSK306	Coordinate and monitor production performance
AHCLSK310	Implement feeding plans for intensive production
AHCLSK313	Monitor livestock production growing environments
AHCLSK331	Comply with industry animal welfare requirements

Target Group

Individuals who are working as poultry hands in the poultry industry.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for poultry husbandry.

AHCSS00058 Poultry Industry Egg Collection and Packing on Farm Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards AHC30516 Certificate III in Poultry Production.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 4 units of competency.

Unit Code	Unit Title
AHCBIO202	Follow site quarantine procedures
AHCPLY204	Collect and pack eggs for human consumption
AHCPMG308	Implement pest management strategies
FDFFS1001A	Follow work procedures to maintain food safety

Target Group

Individuals who are working as poultry hands in the poultry industry.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for poultry industry egg collection and packing on farms.

AHCSS00059 Poultry Industry Egg Grading and Packing at Grading Floor Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. Unit codes updated.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Description

Pathways Information

These units provide credit towards AHC30516 Certificate III in Poultry Production.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHC BIO204 Follow site quarantine procedures
- AHC PLY205 Grade and pack eggs for human consumption
- AHC PMG308 Implement pest management strategies
- FB PFSY1001 Follow work procedures to maintain food safety

Target Group

This skill set is for individuals who are working as poultry hands in the poultry industry.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for poultry industry egg grading and packing at grading floor.

AHCSS00060 Poultry Meat Industry Stockpersons Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards AHC30516 Certificate III in Poultry Production.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 10 units of competency.

Unit Code	Unit Title
AHCLSK304	Carry out post-mortem examination of livestock
AHCLSK307	Euthanase livestock
AHCLSK309	Implement animal health control programs
AHCLSK313	Monitor livestock production growing environments
AHCLSK331	Comply with industry animal welfare requirements
AHCPLY203	Set up shed for placement of day-old chicks
AHCPLY302	Brood poultry
AHCPLY307	Implement, monitor, and review biosecurity measures in poultry production

AHCWHS301	Contribute to work health and safety processes
AHCWRK306	Comply with industry quality assurance requirements

Target Group

Individuals who are working as poultry stockpersons in the poultry industry.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for poultry meat industry stockpersons.

AHCSS00061 Prepare For and Manage Organic Farm Certification Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards AHC41616 Certificate IV in Organic Farming and AHC51815 Diploma of Organic Farming.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 3 units of competency.

Unit Code	Unit Title
AHCORG406	Oversee compliance with an organic certification scheme
AHCORG501	Develop an organic management plan
AHCORG502	Prepare the enterprise for organic certification

Target Group

Individuals responsible for preparing enterprises for organic farm certification.

Suggested words for Statement of Attainment

These competencies meet industry requirements to prepare enterprises for organic farm certification.

AHCSS00063 Production Horticulture Administration Officer Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards a Certificate III in Production Horticulture.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 4 units of competency.

Unit Code	Unit Title
BSBFIA302	Process payroll
BSBITU304	Produce spreadsheets
BSBWHS302	Apply knowledge of WHS legislation in the workplace
SIRRINV001	Receive and handle retail stock

Target Group

Individuals working as administration officers in the production horticulture sector

Suggested words for Statement of Attainment

These competencies meet the industry requirements for administration officers working in the production horticulture sector.

AHCSS00064 Production Horticulture Administration Supervisor Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. Version created to correct typographical errors and update unit codes and titles.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Description

This skill set provides the skills and knowledge required to supervise administration officers in the production horticulture industry.

Pathways Information

These units of competency provide credit towards *AHC40320 Certificate IV in Production Horticulture*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- BSBESB402 Establish legal and risk management requirements of new business ventures
- BSBHRM416 Process payroll
- BSBLDR414 Lead team effectiveness
- BSBOPS401 Coordinate business resources

Target Group

This skill set is for individuals responsible for supervising administration officers working in the production horticulture industry.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet the industry requirements for supervisors of administration officers working in the production horticulture industry.

AHCSS00068 Production Horticulture Technology Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. Version created to correct typographical errors and update BSB code and title.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Description

This skill set provides the skills and knowledge required to use technology in the production horticulture industry.

Pathways Information

These units provide credit towards *AHC30620 Certificate III in Production Horticulture*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCBUS301 Use hand held e-business tools
- AHCMOM305 Operate specialised machinery and equipment
- AHCMOM311 Operate precision control technology
- BSBTEC201 Use business software applications

Target Group

This skill set is for individuals responsible for using technology in the production horticulture industry.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet the industry requirements for using technology in the production horticulture industry.

AHCSS00069 Recognise Aboriginal Cultural Sites Skill Set

Modification History

Release	TP Version	Comments
1	1.0	Initial release

Description

Pathways Information

These units provide credit towards Certificate III in Aboriginal Sites Work.

Licensing/Regulatory Information

Not applicable.

Skill Set Requirements

Complete 4 units of competency.

Unit Code	Unit Title
AHCASW302	Relate Aboriginal culture to sites work* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCASW303	Identify and record Aboriginal-sites, artefacts and cultural landscapes* <i>AHCILM306 Follow Aboriginal cultural protocols</i>
AHCILM306	Follow Aboriginal cultural protocols
BSBWHS302	Apply knowledge of WHS legislation in the workplace

Target Group

Aboriginal-sites workers responsible for sites work activity under supervision.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for introductory Aboriginal-sites work.

AHCSS00070 Recognise Native and Feral Fauna Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. Updated unit code.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Description

Pathways Information

These units provide credit towards AHC31420 Certificate III in Conservation and Ecosystem Management.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCFAU202 Recognise fauna
- AHCWHS301 Contribute to workplace health and safety processes
- AHCWRK303 Respond to emergencies

Target Group

This skill set is for workers working in bushland who may come into contact with native fauna.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for identifying and responding to encounters with native and feral fauna.

AHCSS00071 Recognise Native Fauna in Indigenous Land Management Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. Updated unit code.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

Description

Pathways Information

These units provide credit towards Certificate III in Indigenous Land Management.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCFAU201 Recognise fauna
- AHCILM302 Provide appropriate information on cultural knowledge
- LGAREGS305A Undertake animal or reptile control duties

Target Group

This skill set is for workers in a range of industries working on Country or with Indigenous Communities.

Suggested words for Statement of Attainment

These competencies meet the industry requirements for working on Country around fauna that is significant to Indigenous Communities.

AHCSS00072 Pest Management Planning Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0. Supersedes and is equivalent to <i>AHCSS00043 Vertebrate Pest Management Planning Skill Set</i> . Minor edits, title changed, and units of competency updated to current versions.

Description

This skill set prepares individuals working in the rural and land management sector who are required to consult with stakeholders and design and develop pest management plans.

Pathways Information

These units of competency provide credit towards *AHC30318 Certificate III in Rural and Environmental Pest Management* and *AHC41716 Certificate IV in Pest Management*.

Licensing/Regulatory Information

No occupational licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCPMG306 Determine pest control techniques
- AHCPMG409 Implement a pest management plan
- AHCPMG412 Develop a pest management plan
- AHCPMG413 Define the pest problem
- BSBPMG418 Apply project stakeholder engagement techniques

Target Group

This skill set is for individuals who are:

- Authorised Control Officers in NSW and the ACT
- Agency biosecurity officers
- Local government officers

- Land owners
- Land managers.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meets the industry standards for applying a strategic planning approach to the principles of integrated pest management.

AHCSS00073 Advanced Chemical Spray Application Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0. Supersedes and is equivalent to <i>AHCSS00026 Advanced Chemical Spray Application Skill Set</i> . Unit codes and titles amended.

Description

This skill set provides the skills and knowledge required to interpret weather conditions, plan and develop procedures, transport, handle and store chemicals and implement chemicals and monitor the safe application of chemicals using machinery and equipment.

Pathways Information

These units of competency provide credit towards a large number of qualifications in the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package*, including but not limited to *AHC40116 Certificate IV in Agriculture* and *AHC40316 Certificate IV in Production Horticulture*.

Licensing/Regulatory Information

No occupational licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCHM304 Transport and store chemicals
- AHCCHM307 Prepare and apply chemicals to control pest, weeds and diseases
- AHCCHM404 Develop procedures to minimise risks in the use of chemicals
- AHCCHM405 Plan and implement a chemical use program
- AHCMOM315 Operate chemical application machinery and equipment
- AHCWRK302 Monitor weather conditions

Target Group

This skill set is for individuals responsible for planning, risk management and application tasks associated with the spray application of chemicals used in primary production.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for those responsible for planning and risk management associated with the spray application of chemicals in primary production.

AHCSS00074 Agricultural Chemical Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 3.0. Supersedes and is equivalent to <i>AHCSS00027 Agricultural Chemical Skill Set</i> . Minor editing changes.

Description

This skill set describes the skills and knowledge required to transport, handle, store, prepare and apply chemicals.

Pathways Information

These units of competency provide credit towards qualifications in Certificate II, Certificate III and Certificate IV in various sectors of the horticulture and agriculture industry including the following broad industries:

- Production Agriculture
- Production Horticulture
- Amenity Horticulture (Arboriculture, Parks and Gardens, Landscaping)
- Nursery Production and Retail
- Turf Management
- Animal Breeding and Racing
- Beekeeping
- Pest Management (Vertebrate, Weeds and Invertebrate)
- Conservation and Land Management (Lands, Parks and Wildlife, Natural Area Restoration)
- Irrigation
- Indigenous Land Management.

Licensing/Regulatory Information

No occupational licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCHM304 Transport and store chemicals
- AHCCHM307 Prepare and apply chemicals to control pest, weeds and diseases

Target Group

This skill set is for individuals responsible for applying agricultural chemicals.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet state/territory licensing requirements for the application of agricultural chemicals.

AHCSS00075 Basic Beekeeping Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC, Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0. Supersedes and is equivalent to <i>AHCSS00028 Basic Introduction to Beekeeping Skill Set</i> . Minor edits.

Description

This skill set describes the basic skills and knowledge required to operate a beehive or small apiary.

Pathways Information

These units of competency provide credit toward the *AHC31818 Certificate III in Beekeeping*.

Licensing/Regulatory Information

Legislation, regulations and by-laws relating to beehive ownership and biosecurity codes of practice apply in some states and territories.

Skill Set Requirements

- AHCBEK203 Open and reassemble a beehive
- AHCBEK205 Prepare and use a bee smoker
- AHCBEK206 Assemble and maintain beekeeping components
- AHCBEK302 Manipulate honey bee brood
- AHCBEK304 Remove a honey crop from a hive
- AHCBEK313 Manage pests and disease within a honey bee colony

Target Group

This skill set is for entry level workers in the beekeeping industry and for hobbyist beekeepers.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet the basic requirements for the maintenance and monitoring of beehives.

AHCSS00076 Australian Native Stingless Bees Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC, Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Description

This skill set describes the basic skills and knowledge required to identify, procure, establish and maintain a hive of Australian native stingless bees.

Pathways Information

This unit of competency provides credit toward a range of qualifications from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package*.

Licensing/Regulatory Information

No occupational licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

AHCNRM301 Establish an Australian native stingless bee colony

Target Group

This skill set is for individuals seeking to expand their skills and knowledge in bee husbandry to include Australian native stingless bees.

Suggested words for Statement of Attainment

This unit of competency from *the AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meets the basic requirement for the maintenance and monitoring of Australian native stingless bees.

AHCSS00077 Pollination Services Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC, Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Description

This skill set describes the advanced skills and knowledge required to conduct a commercial business in pollination services within the beekeeping industry.

Pathways Information

These units of competency provide credit toward the *AHC31818 Certificate III in Beekeeping*, *BSB42615 Certificate IV in New Small Business* and *BSB42515 Certificate IV in Small Business Management*.

Licensing/Regulatory Information

Legislation, regulations and by-laws relating to beehive ownership and biosecurity codes of practice apply in some states and territories.

Skill Set Requirements

- AHCBEK405 Select and establish an apiary site
- AHCBEK408 Provide bee pollination services
- BSBSMB403 Market a small business
- BSBSMB406 Manage small business finances

Target Group

This skill set is for experienced beekeepers seeking to develop specialist beekeeping and business skills.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* and the *BSB Business Services Training Package* meet the basic requirements for conducting a contracting pollination service.

AHCSS00078 Queen Bee Breeding Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC, Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Description

This skill set describes the advanced skills and knowledge required to commercially breed queen bees for the beekeeping industry.

Pathways Information

These units of competency may provide credit toward the *AHC31818 Certificate III in Beekeeping*.

Licensing/Regulatory Information

Legislation, regulations and by-laws relating to beehive ownership and biosecurity codes of practice apply in some states and territories.

Skill Set Requirements

- AHCBEK402 Perform queen bee artificial insemination
- AHCBEK409 Rear queen bees

Target Group

This skill set is for experienced beekeepers seeking to expand into specialist queen bee breeding.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet the basic requirements for queen bee breeding.

AHCSS00079 Carbon Farming Services Advisor (CFSA) Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set covers the skills and knowledge required of consultants and advisors who provide guidance and advice on the establishment of a carbon farming project to generate carbon credits. It also applies to carbon farming project managers.

Note the term 'advice' referred to in this skill set does not relate to financial advice which requires an Australian Financial Services License (AFSL). This skill set does not address the skills or the generic knowledge requirements in 'ASIC Regulatory Guide 146: Training of financial product advisors'.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC50116 Diploma of Agriculture
- AHC51216 Diploma of Community Coordination and Facilitation
- AHC51419 Diploma of Agribusiness Management
- AHC60319 Advanced Diploma of Agribusiness Management

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCFP402 Prepare to comply with measuring and modelling requirements of carbon farming methods
- AHCCFP403 Identify opportunities and risks in carbon farming projects
- AHCCFP404 Plan a land-based carbon farming project
- AHCCFP501 Advise on carbon farming project planning and implementation
- FNSFMK512 Apply knowledge of emissions markets
- LGALAND503A Develop agreements with native title holders/traditional owners

Target Group

This skill set is for agribusiness consultants and advisors who provide guidance and advice on the establishment of a carbon farming projects to generate carbon credits.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package, Financial Services Training Package and the Local Government Training Package* meet the requirements for individuals who provide advice on carbon farming projects to generate carbon credits.

AHCSS00080 Introduction to Carbon Farming Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set covers an introduction to carbon farming for individuals who participate in various carbon farming or land management projects, under supervision.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC30116 Certificate III in Agriculture
- AHC31416 Certificate III in Conservation and Land Management

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCFP301 Identify the effects of climate change as a factor in land management
- AHCWRK204 Work effectively in the industry
- AHCWRK205 Participate in workplace communications
- AHCWRK209 Participate in environmentally sustainable work practices

Target Group

This skill set is for individuals who participate in carbon farming projects, under supervision.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the requirements for workers participating in carbon farming projects.

AHCSS00081 Introduction to Carbon Farming Savanna Burning Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. Updated unit code.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Description

This skill set covers an introduction to carbon farming for individuals who participate in savanna burning carbon farming projects, under supervision, including projects carried out on Aboriginal land.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC30116 Certificate III in Agriculture
- AHC31420 Certificate III in Conservation and Ecosystem Management.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCFP301 Identify the effects of climate change as a factor in land management
- AHCFIR202 Assist with prescribed burning
- AHCILM306 Follow Aboriginal cultural protocols
- AHCILM307 Implement Aboriginal cultural burning practices

Target Group

This skill set is for individuals who participate in savannah burning carbon farming projects, under supervision.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the requirements for workers participating in savanna burning carbon farming projects, including projects carried out on Aboriginal land.

AHCSS00082 Carbon Farming Aerial Savanna Burning Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. Unit codes updated.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set covers the skills and knowledge required by individuals to work on carbon farming aerial savanna burning projects that are carried out on grazing land, or national or state/territory parks or on Aboriginal land.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC30116 Certificate III in Agriculture
- AHC31420 Certificate III in Conservation and Ecosystem Management

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCFP301 Identify the effects of climate change as a factor in land management
- AHCFIR202 Assist with prescribed burning
- AHCILM306 Follow Aboriginal cultural protocols
- AHCILM307 Implement Aboriginal cultural burning practices
- PUAFIR209 Work safely around aircraft
- PUAFIR312 Operate aerial ignition equipment in an aircraft

Target Group

This skill set is for individuals who work on carbon farming aerial savanna burning projects, including projects carried out on Aboriginal land.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* and the *PUA12 Public Safety Training Package* meet the requirements for individuals who work on carbon farming aerial savanna burning projects.

AHCSS00083 Carbon Farming Savanna Burning Operations Leader Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set covers the skills and knowledge required of individuals who lead and take responsibility of all aspects of the direct operations of work on savanna burning carbon farming projects, carried out on grazing land, national or state/territory parks or on Aboriginal land.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC30116 Certificate III in Agriculture
- AHC31416 Certificate III in Conservation and Land Management
- AHC40116 Certificate IV in Agriculture
- AHC40916 Certificate IV in Conservation and Land Management

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCFP301 Identify the effects of climate change as a factor in land management
- AHCCFP402 Prepare to comply with measuring and modelling requirements of carbon farming methods
- AHCCFP403 Identify opportunities and risks in carbon farming projects
- AHCILM306 Follow Aboriginal cultural protocols
- AHCILM307 Implement Aboriginal cultural burning practices
- PUAFIR303 Suppress wildfire
- PUAFIR402 Conduct simple prescribed burns
- PUAFIR406 Develop simple prescribed burn plans

- PUAFIR506 Conduct complex prescribed burns
- PUAFIR515 Develop complex prescribed burn plans

Target Group

This skill set is for individuals who lead and take responsibility of all aspects of the direct operations of work on savanna burning carbon farming projects, including projects carried out on Aboriginal land.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* and the *PUA12 Public Safety Training Package* meet the requirements for workers who lead and take responsibility of all aspects of the direct operations of work on savanna burning carbon farming projects.

AHCSS00084 Carbon Farming Vegetation Method Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set covers planning a carbon farming project for individuals who are considering the establishment of a land-based, carbon farming project to generate carbon credits, utilising a vegetation method.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC40116 Certificate IV in Agriculture
- AHC40916 Certificate IV in Conservation and Land Management
- AHC41019 Certificate IV in Agribusiness

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCFP402 Prepare to comply with measuring and modelling requirements of a carbon farming methods
- AHCCFP403 Identify opportunities and risks in carbon farming projects
- AHCCFP404 Plan a land-based carbon farming project
- AHCCFP405 Increase carbon using vegetation and/or agricultural approaches
- FWPFGM5219 Undertake carbon stock sampling of forests and plantations

Target Group

This skill set is for individuals who are considering the establishment of a land-based carbon farming project to generate credits, utilising a vegetation method.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* and the *FWP Forest and Wood Products Training Package* meet the requirements for individuals to plan a land-based, carbon farming project to generate carbon credits, utilising a vegetation method.

AHCSS00085 Carbon Farming Soil-based Method Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set covers planning a carbon farming project for land owners, land holders or land managers, who are considering the establishment of a soil-based, carbon farming project to generate carbon credits

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC40116 Certificate IV in Agriculture
- AHC40916 Certificate IV in Conservation and Land Management
- AHC41019 Certificate IV in Agribusiness

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCFP401 Increase soil organic carbon using land management practices
- AHCCFP402 Prepare to comply with measuring and modelling requirements of carbon farming methods
- AHCCFP403 Identify opportunities and risks in carbon farming projects
- AHCCFP404 Plan a land-based carbon farming project

Target Group

This skill set is for land owners, land holders or land managers, who may undertake work on a land-based carbon farming project.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the requirements for land owners, land holders or land managers, who may undertake work on a land-based carbon farming project.

AHCSS00086 Carbon Farming Agricultural Method Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set covers planning a carbon farming project for individuals who are considering the establishment of a land-based, carbon farming project to generate carbon credits, utilising an agricultural method.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC40116 Certificate IV in Agriculture
- AHC40916 Certificate IV in Conservation and Land Management
- AHC41019 Certificate IV in Agribusiness

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCCFP402 Prepare to comply with measuring and modelling requirements of carbon farming methods
- AHCCFP403 Identify opportunities and risks in carbon farming projects
- AHCCFP404 Plan a land-based carbon farming project
- AHCCFP405 Increase carbon using vegetation and/or agricultural approaches

Target Group

This skill set is for individuals who are considering the establishment of a land-based carbon farming project to generate credits, utilising an agricultural method.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the requirements for individuals to plan a land-based, carbon farming project to generate carbon credits, utilising an agricultural method.

AHCSS00087 Farm Business Finances Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set covers the skills and knowledge to plan and manage farm business finances.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC40116 Certificate IV in Agriculture
- AHC41019 Certificate IV in Agribusiness
- AHC51419 Diploma of Agribusiness Management

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCBUS406 Administer finance, insurance and legal requirements
- AHCBUS408 Operate within a budget framework
- AHCBUS515 Prepare estimates, quotes and tenders
- BSBSMB421 Manage small business finance

Target Group

This skill set is for individuals who plan and manage farm business finances.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* and the *BSB Business Services Training Package* meet the requirements for those responsible for farm business finances.

AHCSS00088 Farm Business Workforce Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set covers the skills and knowledge to manage the staff employed or contracted to a farm business.

Pathways Information

These units of competency provide credit towards a number of qualifications in the AHC Agriculture, Horticulture, Conservation and Land Management Training Package, including:

- AHC40116 Certificate IV in Agriculture
- AHC41019 Certificate IV in Agribusiness
- AHC51419 Diploma of Agribusiness Management

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCBUS511 Manage enterprise staff requirements
- AHCWRK403 Supervise work routines and staff performance
- BSBHRM405 Support the recruitment, selection and induction of staff
- TAEDL301 Provide work skill instruction

Target Group

This skill set is for individuals who manage the staff employed or contracted to a farm business.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package*, the *BSB Business Services Training Package* and the *TAE Training and Education Training Package* meet the requirements for those responsible for staff employed or contracted to a farm business.

AHCSS00089 Business Skills For Sports Turf Management Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Land Management Training Package Version 4.0.

Description

This skill set provides a range of business management skills required for management functions in the sports turf industry.

Pathways Information

These units of competency provide a pathway and credit towards AHC51019 Diploma Sports Turf Management.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCBUS511 Manage enterprise staff requirements
- AHCBUS518 Prepare and monitor budgets and financial reports
- AHCWHS401 Maintain work health and safety processes
- CHCMGT007 Work effectively with the Board of an organisation

Target Group

This skill set is for individuals who currently work in the sports turf industry and want to develop business management skills.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Land Management Training Package* and *CHC Community Services Training Package* provide some of the business skills required in the management of a sports turf facility.

AHCSS00090 Introduction To Sports Turf Maintenance Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Land Management Training Package Version 4.0.

Description

This skill set provides a range of basic skills appropriate for volunteer and casual workers engaged in the sports turf industry.

Pathways Information

These units of competency provide a pathway and credit towards AHC20919 Certificate II Sports Turf Management.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCMOM203 Operate basic machinery and equipment
- AHCTRF205 Assist in the preparation of turf surfaces for play
- AHCTRF207 Renovate grassed areas

Target Group

This skill set is for individuals who assist in sports turf maintenance activities for sporting clubs as a volunteer or casual worker.

Suggested words for Statement of Attainment

These competencies are from the *AHC Agriculture, Horticulture and Land Management Training Package* and meet the industry requirements for supporting the setup and basic maintenance of a sports turf surfaces.

AHCSS00091 Technical Skills For Sports Turf Management Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Land Management Training Package Version 4.0.

Description

This skill set provides a range of technical skills for managing irrigation, soils, plant nutrition and sports turf renovation programs.

Pathways Information

These units of competency provide a pathway and credit towards AHC51019 Diploma of Sports Turf Management.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCIRG507 Audit irrigation systems
- AHCPCM402 Develop a soil health and plant nutrition program
- AHCSOL401 Sample soils and interpret results
- AHCTRF506 Manage sports turf renovation programs

Target Group

This skill set is for individuals who currently work in a trade role in the Sports Turf industry and want to increase their technical skills in sports turf management.

Suggested words for Statement of Attainment

These competencies are from the *AHC Agriculture, Horticulture and Land Management Training Package* and meet the industry requirements for technical skills for supporting the setup and management of sports turf surfaces.

AHCSS00092 Irrigation Retailer Skill Set

Modification History

Release	Comments
Release 1	<p>This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.</p> <p>Supersedes and is not equivalent to <i>AHCSS00037 Irrigation Retailer Skill Set</i>. Skill set requirements amended, new and additional units required for completion of skill set.</p>

Description

This skill set provides the skills and knowledge required to recommend irrigation products and services, provide irrigation sales and service, design domestic urban irrigation systems, coordinate visual merchandising, build customer relationships and loyalty and advise on products and services within an irrigation retail operations environment.

Pathways Information

These units of competency provide credit towards *AHC32419 Certificate III in Irrigation Technology* and *AHC41119 Certificate IV in Irrigation Management*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCMER303 Sell products and services
- AHCMER304 Recommend irrigation products and services
- ICTWOR304 Manage spare parts
- MEM12024 Perform computations
- SIRRINV001 Receive and handle stock
- SIRRINV002 Control stock
- SIRRMER003 Coordinate visual merchandising

Target Group

This skill set is for individuals responsible for irrigation retail operations.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for irrigation retail operations within the irrigation industry.

AHCSS00093 Gravity Fed Irrigation Operator Skill Set

Modification History

Release	Comments
Release 1	<p>This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.</p> <p>Supersedes and is not equivalent to <i>AHCSS00031 Gravity Fed Irrigation Operator Skill Set</i>.</p> <p>Skill set requirements amended and new units required for completion of skill set.</p>

Description

This skill set provides the skills and knowledge required to operate gravity fed irrigation systems within the irrigation industry.

Pathways Information

These units of competency provide credit towards *AHC32419 Certificate III in Irrigation Technology* and *AHC41119 Certificate IV in Irrigation Management*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCIRG301 Install gravity fed irrigation systems
- AHCIRG336 Operate and maintain gravity fed irrigation systems
- AHCIRG337 Measure irrigation delivery system performance
- AHCIRG338 Troubleshoot irrigation systems
- AHCIRG339 Monitor soils under irrigation
- AHCIRG347 Maintain pressurised irrigation systems
- AHCWRK405 Implement and monitor environmentally sustainable work practices

Target Group

This skill set is for individuals responsible for operating gravity fed irrigation systems.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for Irrigation Australia Ltd certified gravity fed irrigation operator.

AHCSS00094 Irrigation Agronomist Skill Set

Modification History

Release	Comments
Release 1	<p>This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.</p> <p>Supersedes and is not equivalent to <i>AHCSS00033 Irrigation Agronomist Skill Set</i>.</p> <p>Skill set requirements amended and new units required for completion of skill set.</p>

Description

This skill set provides the skills and knowledge required to provide irrigation agronomist advice to irrigation end-users on system types, purchase and use.

Pathways Information

These units of competency provide credit towards *AHC41119 Certificate IV in Irrigation Management* and *AHC51619 Diploma of Irrigation Design*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCIRG435 Determine hydraulic parameters for an irrigation system
- AHCIRG436 Implement an irrigation-related environmental protection program
- AHCIRG437 Schedule irrigations
- AHCIRG507 Audit irrigation systems
- AHCIRG509 Develop an irrigation and drainage management plan
- AHCSOL401 Sample soils and interpret results
- AHCWRK509 Provide specialist advice to clients

Target Group

This skill set is for individuals responsible for irrigation agronomy.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for Irrigation Australia Ltd certified irrigation agronomist.

AHCSS00095 Irrigation Contractor Skill Set

Modification History

Release	Comments
Release 1	<p>This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.</p> <p>Supersedes and is not equivalent to <i>AHCSS00034 Irrigation Contractor Skill Set</i>.</p> <p>Skill set requirements amended, new and additional units required for completion of skill set.</p>

Description

This skill set provides the skills and knowledge required to work in an irrigation contracting business, managing the irrigation installation post-design process.

Pathways Information

These units of competency provide credit towards *AHC41119 Certificate IV in Irrigation Management*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCIRG435 Determine hydraulic parameters for an irrigation system
- AHCIRG439 Interpret and apply irrigation designs
- AHCIRG442 Supervise irrigation system installation
- AHCSOL401 Sample soils and interpret results
- AHCWRK405 Implement and monitor environmentally sustainable work practices

Target Group

This skill set is for individuals responsible for managing irrigation installation post-design process in an irrigation contracting business.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for Irrigation Australia Ltd certified irrigation contractor.

AHCSS00096 Irrigation Installer Skill Set

Modification History

Release	Comments
Release 1	<p>This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.</p> <p>Supersedes and is not equivalent to <i>AHCSS00035 Irrigation Installer Skill Set</i>.</p> <p>Skill set requirements amended and new units required for completion of skill set.</p>

Description

This skill set provides the skills and knowledge required to install irrigation within the irrigation industry.

Pathways Information

These units of competency provide credit towards *AHC32419 Certificate III in Irrigation Technology* and *AHC41119 Certificate IV in Irrigation Management*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCIRG337 Measure irrigation delivery system performance
- AHCIRG338 Troubleshoot irrigation systems
- AHCIRG339 Monitor soils under irrigation
- AHCIRG342 Interpret irrigation plans and drawings
- AHCIRG345 Install pressurised irrigation systems
- AHCWRK405 Implement and monitor environmentally sustainable work practices

Target Group

This skill set is for individuals responsible for installing irrigation.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for Irrigation Australia Ltd certified irrigation installer.

AHCSS00097 Irrigation Manager Skill Set

Modification History

Release	Comments
Release 1	<p>This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.</p> <p>Supersedes and is not equivalent to <i>AHCSS00036 Irrigation Manager Skill Set</i>.</p> <p>Skill set requirements amended, new and additional units required for completion of skill set.</p>

Description

This skill set provides the skills and knowledge required to manage irrigation systems.

Pathways Information

These units of competency provide credit towards *AHC41119 Certificate IV in Irrigation Management*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCIRG435 Determine hydraulic parameters for an irrigation system
- AHCIRG436 Implement an irrigation-related environmental protection program
- AHCIRG437 Schedule irrigations
- AHCIRG444 Manage irrigation systems
- AHCSOL401 Sample soils and interpret results

Target Group

This skill set is for individuals responsible for managing irrigation systems.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for Irrigation Australia Ltd certified irrigation manager.

AHCSS00098 Pressurised Irrigation System Operator Skill Set

Modification History

Release	Comments
Release 1	<p>This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.</p> <p>Supersedes and is not equivalent to <i>AHCSS00062 Pressurised Irrigation System Operator Skill Set</i>.</p> <p>Skill set requirements amended and new units required for completion of skill set.</p>

Description

This skill set provides the skills and knowledge required to operate pressurised irrigation systems within the irrigation industry.

Pathways Information

These units of competency provide credit towards *AHC32419 Certificate III in Irrigation Technology* and *AHC41119 Certificate IV in Irrigation Management*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCIRG337 Measure irrigation delivery system performance
- AHCIRG338 Troubleshoot irrigation systems
- AHCIRG339 Monitor soils under irrigation
- AHCIRG346 Operate pressurised irrigation systems
- AHCIRG347 Maintain pressurised irrigation systems
- AHCWRK405 Implement and monitor environmentally sustainable work practices

Target Group

This skill set is for individuals responsible for operating pressurised irrigation systems.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for Irrigation Australia Ltd certified pressurised irrigation operator.

AHCSS00099 Irrigation Systems Auditor Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. Unit codes updated.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Description

This skill set provides the skills and knowledge required to assess irrigation systems and site operations, collect and manage data, analyse and present research information, and prepare irrigation systems audit reports within the irrigation industry.

Pathways Information

These units of competency provide credit towards *AHC41119 Certificate IV in Irrigation Management* and *AHC51619 Diploma of Irrigation Design*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCIRG435 Determine hydraulic parameters for an irrigation system
- AHCIRG438 Select and manage pumping systems for irrigation
- AHCIRG507 Audit irrigation systems
- AHCWRK502 Collect and manage data
- AHCWRK510 Audit site operations
- AHCWRK513 Write and present reports
- BSBINS401 Analyse and present research information

Target Group

This skill set is for individuals responsible for auditing irrigation systems.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for irrigation systems auditors within the irrigation industry.

AHCSS00100 Irrigation Systems Efficiency Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set provides the skills and knowledge required to operate pressurised irrigation systems, troubleshoot irrigation systems and measure irrigation delivery system performance within the irrigation industry.

Pathways Information

These units of competency provide credit towards *AHC31119 Certificate III in Irrigation Technology*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCIRG337 Measure irrigation delivery system performance
- AHCIRG338 Troubleshoot irrigation systems
- AHCIRG346 Operate pressurised irrigation systems

Target Group

This skill set is for individuals responsible for maintaining irrigation systems efficiency.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for maintaining irrigation systems efficiency within the irrigation industry.

AHCSS00101 Irrigation Retail Sales Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set provides the skills and knowledge required to recommend irrigation products and services, design domestic urban irrigation systems, estimate and cost a job, manage spare parts, recommend and sell irrigation products and services, provide customer service and process customer complaints within an irrigation retail sales environment.

Pathways Information

These units of competency provide credit towards *AHC31119 Certificate III in Irrigation Technology*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCMER301 Process customer complaints
- AHCMER401 Coordinate customer service and networking activities
- AHCMER407 Provide irrigation sales and service
- MEM12024 Perform computations
- MSTGN3003 Estimate and cost job
- SIRXCEG003 Build customer relationships and loyalty
- SIRXPDK001 Advise on products and services
- SITXCCS006 Provide service to customers

Target Group

This skill set is for individuals responsible for irrigation product and service retail sales.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for product and service retail sales within the irrigation industry.

AHCSS00102 Irrigation Meter Installation and Validation Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Description

This skill set provides the skills and knowledge required to install and validate irrigation meters within the irrigation industry.

Pathways Information

These units of competency provide credit towards *AHC21119 Certificate II in Irrigation and AHC32419 Certificate III in Irrigation Technology*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCWHS301 Contribute to work health and safety processes
- AHCWRK309 Apply environmentally sustainable work practices
- NWPIRR014 Install meters for rural water supplies
- NWPIRR022 Maintain meters for rural water supplies
- NWPNET002 Prepare and restore work site
- NWPNET011 Locate, identify and protect utilities

Target Group

This skill set is for individuals responsible for installing and validating irrigation meters.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for Irrigation Australia Ltd certified meter installer and validator.

AHCSS00103 Basic Tree Worker Skill Set

Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0. Skill set updated to replace superseded first aid unit, as approved by the AISC in consultation with ASQA.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0.

Description

This skill set provides the basic knowledge and skills required to operate chainsaws to cut and trim felled trees, remove tree materials and control traffic in support of a ground based arboricultural work team.

Pathways Information

These units of competency provide pathways into the Certificate II in Arboriculture and Certificate III in Arboriculture.

Licensing/Regulatory Information

Licensing, legislative, regulatory, or certification requirements apply to the following units in some states and territories and may differ according to jurisdiction:

- FWPCOT2239 Trim and cut felled trees
- RIIWHS205E Control traffic with stop-slow bat

Skill Set Requirements

- FWPCOT2237 Maintain chainsaws
- FWPCOT2239 Trim and cut felled trees
- FWPHAR2206 Operate a mobile chipper/mulcher
- HLTAID011 Provide First Aid
- RIIWHS205E Control traffic with stop-slow bat

Target Group

This skill set is for individuals wanting to enter the arboriculture industry with basic mechanical skills required to support ground based arboricultural work.

Suggested words for Statement of Attainment

These competencies from the *FWP Forest and Wood Products*, *HLT Health and RII Resources and Infrastructure Training Packages* meet the minimum standards for supporting ground based arboriculture work.

AHCSS00104 Introduction to Arboriculture Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0.

Description

This skill set provides arborist skills and knowledge to identify, prune and maintain trees.

Pathways Information

These units of competency provide a pathway and credit towards AHC30820 Certificate III in Arboriculture and meet the entry requirements for AHC50520 Diploma of Arboriculture.

Licensing/Regulatory Information

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some States and Territories.

Skill Set Requirements

- AHCARB314 Implement a tree maintenance program
- AHCARB316 Perform pruning operations
- AHCARB323 Identify trees

Target Group

This skill set is for individuals with an existing horticultural or agricultural qualification and/or experience without a current Certificate III in Arboriculture and who want to meet the entry requirements for AHC50520 Diploma of Arboriculture. It is also for individuals that are seeking entry level work in Arboriculture or a pathway into AHC30820 Certificate III in Arboriculture.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* provides arborist skills and knowledge to identify, prune and maintain trees.

AHCSS00105 Arborist Works Coordinator Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0.

Description

This skill set provides qualified arborists with the practical skills and knowledge required to function as an Arborist Works Coordinator on an arboricultural work site.

Pathways Information

These units of competency provide direct credit towards the Certificate III in Arboriculture (Arborist Works Coordinator) specialisation. The unit *AHCARB408 Perform a ground-based tree defect evaluation* provides direct credit towards *AHC50520 Diploma of Arboriculture*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCARB316 Perform pruning operations
- AHCARB406 Verify pruning specifications
- AHCARB407 Supervise and audit tree operations
- AHCARB408 Perform a ground-based tree defect evaluation
- AHCARB409 Conduct a safety audit

Target Group

This skill set is for individuals with an existing trade level arborist qualification and experience who want to develop skills to function as an Arborist Works Coordinator on an arboricultural work site.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the minimum standards required to meet the needs of an Arborist Works Coordinator.

AHCSS00106 Digital Agronomy Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 6.0.

Description

This skill set provides the skills and knowledge required to provide digital agronomic advice on system types, purchase and use.

Pathways Information

These units of competency provide credit towards *AHC51920 Diploma of Applied Agronomy* from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* and provide specialist skills in digital agronomy.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCAGB516 Select and implement a GIS for sustainable agricultural systems
- AHCAGB523 Interpret and use agricultural data

Target Group

This skill set is for agricultural professionals who require specialist skills in digital agronomy.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package* meet the industry requirements for agricultural professionals in providing digital agronomic advice and expertise.

AHCSS00107 Production Horticulture Machinery Skill Set

Modification History

Release	Comments
Release 1	<p>This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.</p> <p>Supersedes and is equivalent to <i>AHCSS00065 Production Horticulture Machinery Skill Set</i>.</p> <p>Minor edits and unit of competency updated to current version.</p>

Description

This skill set provides the skills and knowledge required to operate machinery in the production horticulture industry.

Pathways Information

These units provide credit towards *AHC30620 Certificate III in Production Horticulture*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCMOM302 Perform machinery maintenance
- AHCMOM304 Operate machinery and equipment
- AHCWHS301 Contribute to work health and safety processes
- TLILIC0003 Licence to operate a forklift truck

Target Group

This skill set is for machinery operators working in the production horticulture industry.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet the industry requirements for machinery operators working in the production horticulture industry.

AHCSS00108 Production Horticulture Manager Skill Set

Modification History

Release	Comments
Release 1	<p>This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.</p> <p>Supersedes and is equivalent to <i>AHCSS00066 Production Horticulture Manager Skill Set</i>.</p> <p>Minor edits and units of competency updated to current version.</p>

Description

This skill set provides the skills and knowledge required to manage workers in the production horticulture industry.

Pathways Information

These units provide credit towards *AHC50320 Diploma of Production Horticulture*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCBUS511 Manage enterprise staff requirements
- AHCBUS514 Negotiate and monitor contracts
- AHCWHS502 Manage work health and safety processes
- BSBESB407 Manage finances for new business ventures

Target Group

This skill set is for production horticulture managers working in the production horticulture industry.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet the industry requirements for managers working in the production horticulture industry.

AHCSS00109 Production Horticulture Supervisor Skill Set

Modification History

Release	Comments
Release 1	<p>This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.</p> <p>Supersedes and is equivalent to <i>AHCSS00067 Production Horticulture Supervisor Skill Set</i>.</p> <p>Minor edits and unit of competency updated to current version.</p>

Description

This skill set provides the skills and knowledge required to supervise workers in the production horticulture industry.

Pathways Information

These units provide credit towards *AHC40320 Certificate IV in Production Horticulture*.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCWHS401 Maintain work health and safety processes
- AHCWRK401 Implement and monitor quality assurance procedures
- AHCWRK403 Supervise work routines and staff performance
- TLILIC0003 Licence to operate a forklift truck

Target Group

This skill set is for production horticulture supervisors working in the production horticulture industry.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet the industry requirements for supervisors working in the production horticulture industry.

AHCSS00110 Basic Biosecurity Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set provides the basic knowledge and skills required to support biosecurity activity and compliance for a property, farm or land management situation for animal husbandry, plant production or land and aquatic environment management, including businesses, volunteer groups and government and non-government agencies and organisations.

Pathways Information

These units of competency provide pathways into a range of Certificate II and Certificate III qualifications in the AHC Agriculture, Horticulture and Conservation and Land Management Training Package.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHC BIO203 Inspect and clean machinery, tools and equipment to preserve biosecurity
- AHC BIO204 Follow site biosecurity procedures
- AHC BIO301 Identify and report signs of unusual disease or pest
- AHC BIO303 Apply biosecurity measures

Target Group

This skill set is for individuals, new employees or existing workers who work in a horticulture, agriculture or conservation and land management environment where biosecurity is an important part of the job role for the prevention of diseases and pests.

Suggested words for Statement of Attainment

These competencies from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package meet the basic industry requirements for complying with biosecurity procedures in the workplace.

AHCSS00111 Medicinal Cannabis Manager Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set provides the skills and knowledge to implement and monitor regulatory and quality requirements in the medicinal cannabis industry.

Pathways Information

These units of competency provide credit towards a range of qualifications from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package, including AHC42320 Certificate IV in Medicinal Cannabis Cultivation and Production.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCMDC401 Apply security measures for medicinal cannabis
- AHCMDC402 Monitor medicinal cannabis production for compliance and quality

Target Group

This skill set is for of individuals who work in the medicinal cannabis industry at the supervisory or managerial level.

Suggested words for Statement of Attainment

These competencies from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package meet industry requirements for implementing and monitoring regulatory and quality requirements in the medicinal cannabis industry.

AHCSS00112 Site Manager for Biosecurity Emergency Response Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set provides the knowledge and skills required for farm managers or site managers to understand the link between on-farm biosecurity implementation and management, and their role within a biosecurity emergency response agency.

Pathways Information

These units of competency provide pathways into a range of qualifications in the AHC Agriculture, Horticulture and Conservation and Land Management Training Package.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCBER302 Work effectively in a biosecurity emergency response
- AHCBER503 Manage active operational emergency disease or pest sites
- AHC BIO204 Follow site quarantine procedures
- AHC BIO401 Plan and implement a biosecurity program

Target Group

This skill set is for individuals employed as farm or property managers where there is a potential for a biosecurity threat and the need to work with government agencies during a biosecurity emergency response.

Suggested words for Statement of Attainment

These competencies from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package meet the industry requirements for working with biosecurity emergency response agency staff during a biosecurity emergency response.

AHCSS00113 Firearms Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set provides the knowledge and skills required for workers in land management and/or biosecurity who hold a valid firearms license and encounter pest animals, animals in distress or animals subject to a biosecurity order and who are required to use firearms to ethically and humanly euthanise them in the field.

Pathways Information

These units of competency provide pathways into a range of Certificate II and Certificate III qualifications in the AHC Agriculture, Horticulture and Conservation and Land Management Training Package.

Licensing/Regulatory Information

State or territory licensing, legislative or certification requirements apply to firearms use in all Australian jurisdictions and must be adhered to. Destruction of pest animals must comply with state or territory animal cruelty legislation.

Skill Set Requirements

- AHCLSK331 Comply with industry animal welfare requirements
- AHCPMG304 Use firearms to humanely destroy animals
- AHCWHS301 Contribute to work health and safety processes

Target Group

This skill set is for individuals who are licensed to use firearms and are employed in land management, biosecurity or pest management roles.

Suggested words for Statement of Attainment

These competencies from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package meet industry requirements for ethically euthanising animals in the field using a firearm.

AHCSS00114 Design Roof Gardens, Vertical Gardens and Green Facades Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set is designed to cover the knowledge and skills required to design roof gardens, vertical gardens and green facades for commercial and or residential projects, in consultation with building, landscape and horticultural professionals. It includes applying knowledge of the functions, benefits and characteristics of roof gardens, vertical gardens and green walls, national, state, territory and local authorities' policy, procedure and permit requirements, building regulations and horticultural requirements to designs, as well as the selection of growing media and plants, planning for maintenance requirements and producing project plans.

Pathways Information

These units of competency provide credit towards a range of qualifications in the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package*, including:

- AHC42020 Certificate IV in Landscape
- AHC50416 Diploma of Horticulture
- AHC50616 Diploma of Landscape Design.

These units of competency also build on skills and knowledge attained in AHC Certificates III and IV in Landscape Construction, Landscape and Horticulture from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* to provide specialist skills in roof garden, vertical garden and green facade infrastructure.

Licensing/Regulatory Information

Licensing, legislative or certification requirements may apply to the work undertaken in this skill set in some jurisdictions. Users are advised to check with the relevant regulatory authorities.

Skill Set Requirements

- AHCGRI501 Design roof gardens
- AHCGRI502 Design vertical gardens and green facades
- AHCPCM512 Design specialised landscape

Target Group

This skill set is for experienced horticultural, landscaping, landscape design and/or construction workers, builders or developers who design roof gardens, vertical gardens and green facades in association with specialists and building professionals.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet industry requirements for planning and designing roof gardens, vertical gardens and green facades.

AHCSS00115 Construct Roof Gardens, Vertical Gardens and Green Facades Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set is designed to cover the knowledge and skills required to safely construct roof gardens, vertical gardens and green facades for commercial and or residential projects. It includes applying knowledge and skills in reading and interpreting plans and specifications, setting out sites and applying knowledge of vertical gardens and facades and roof garden construction requirements including irrigation and drainage, growing media and plant types.

Pathways Information

These units of competency provide credit towards a range of qualifications in the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package*, including:

- AHC40416 Certificate IV in Horticulture
- AHC42020 Certificate IV in Landscape
- AHC50416 Diploma of Horticulture
- AHC50616 Diploma of Landscape Design.

Licensing/Regulatory Information

Licensing, legislative or certification requirements may apply to this skill set in some jurisdictions depending on the location of the work and/or plant and equipment used. Users are advised to check with the relevant regulatory authorities.

Skill Set Requirements

- AHCGRI401 Construct roof gardens
- AHCGRI402 Construct vertical gardens and green facades
- AHCLSC301 Set out site for construction works
- AHCPGD402 Plan a plant establishment program
- AHCSOL305 Prepare growing media

- AHCWHS301 Contribute to work health and safety processes
- CPCCOM2001 Read and interpret plans and specifications
- RIIWHS204E Work safely at heights

Target Group

This skill set is for experienced horticultural, landscaping and/or construction workers and/or builders who construct roof gardens, vertical gardens and green facades in new and or existing buildings.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package*, the *CPC Construction, Plumbing and Services Training Package* and the *RII Resources and Infrastructure Training Package* meet industry requirements for constructing or installing roof gardens, vertical gardens and green facades.

AHCSS00116 Maintain Roof Gardens, Vertical Gardens and Green Facades Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set is designed to cover the knowledge and skills required to maintain green infrastructure specific to commercial and or residential roof gardens, vertical gardens and green facades.

Pathways Information

These units of competency provide credit towards a range of qualifications in the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package*, including:

- AHC20416 Certificate II in Horticulture
- AHC30116 Certificate III in Agriculture
- AHC30716 Certificate III in Horticulture
- AHC30916 Certificate III in Landscape Construction
- AHC31016 Certificate III in Parks and Gardens
- AHC40416 Certificate IV in Horticulture
- AHC42020 Certificate IV in Landscape.

These units of competency also build on skills and knowledge attained in AHC30917 Certificate III in Landscape Construction from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* to provide specialist skills in roof garden, green wall and green facade infrastructure.

Licensing/Regulatory Information

Licensing, legislative or certification requirements may apply to this unit in some jurisdictions, depending on the location of work and/or plant and equipment used. Users are advised to check with the relevant regulatory authorities.

Skill Set Requirements

- AHCGRI301 Maintain roof gardens, vertical gardens and green facades
- AHCPGD304 Implement a landscape maintenance program
- AHCPMG301 Control weeds
- AHCPMG302 Control plant pests, diseases and disorders
- RIIWHS204E Work safely at heights

Target Group

This skill set is for horticulture workers responsible for maintaining roof gardens, vertical gardens and green facades.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* and the *RII Resources and Infrastructure Training Package* meet industry requirements for maintaining roof gardens, vertical gardens and green facades.

AHCSS00117 Introduction to Conservation and Ecosystem Management Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set provides basic skills and knowledge for individuals to recognise common plants and animals in natural landscapes and to undertake basic conservation and ecosystem works in the conservation and ecosystem management industry.

Pathways Information

These units of competency provide pathways into a range of Certificate II and Certificate III qualifications in the AHC Agriculture, Horticulture and Conservation and Land Management Training Package.

Licensing/Regulatory Information

No licensing or regulatory requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCECR203 Perform basic ecological restoration works
- AHCFAU202 Recognise fauna
- AHCPCM204 Recognise plants

Target Group

This skill set is for individuals who wish to develop basic skills as means to enter the conservation and ecosystem management industry, or develop basic skills in identifying common native plants and animals and support conservation works.

Suggested words for Statement of Attainment

These competencies from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package meet industry requirements for performing basic conservation and ecosystem works.

AHCSS00118 Seed Processing Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set provides basic skills and knowledge for individuals to identify seeds, collect and extract the seeds and perform seed germination tests for a range of native plants found in the natural landscape to assist in revegetation, restoration and rehabilitation works in the conservation and ecosystem management industry.

Pathways Information

These units of competency provide pathways into a range of Certificate II and Certificate III qualifications in the AHC Agriculture, Horticulture and Conservation and Land Management Training Package.

Licensing/Regulatory Information

Federal, state or territories and local government licensing or regulatory requirements apply to this skill set for the collection and removal of plant materials, including seed, from natural landscapes, parks and reserves.

Skill Set Requirements

- AHCECR305 Collect native seed
- AHCSDT302 Identify seeds
- AHCSDT306 Perform a seed germination test
- FWPFGM3202 Extract seed

Target Group

This skill set is for individuals who are employed or who support the conservation and ecosystem management industry, or who are employed in a production nursery industry and require skills in the processing and testing of native seeds.

Suggested words for Statement of Attainment

These competencies from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package and Forest and Wood Products Training Package meet industry requirements for identifying, collecting, extracting and testing native plant seed.

AHCSS00119 Induction to Work in the Medicinal Cannabis Industry Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set provides the skills and knowledge to apply regulatory and quality requirements to work in the medicinal cannabis industry.

Pathways Information

These units of competency provide credit towards the AHC33920 Certificate III in Medicinal Cannabis Cultivation and Production.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCMDC301 Apply security regulatory requirements to work in the medicinal cannabis industry
- AHCMDC302 Apply regulatory and quality requirements to the production of medicinal cannabis

Target Group

This skill set is for individuals entering the medicinal cannabis industry, including those with or without previous experience in agriculture or horticulture.

Suggested words for Statement of Attainment

These competencies from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package meet industry requirements for induction to work in the medicinal cannabis industry.

AHCSS00120 Medicinal Cannabis Cultivation and Production Assistant Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set provides the skills and knowledge to assist in cultivation and production operations in the medicinal cannabis industry.

Pathways Information

These units of competency provide credit towards a range of qualifications from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package, including AHC33920 Certificate III in Medicinal Cannabis Cultivation and Production.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCMDC201 Assist with propagation of medicinal cannabis
- AHCMDC202 Assist with care and maintenance of medicinal cannabis
- AHCMDC203 Assist with harvest and pre-processing of medicinal cannabis
- AHCMDC301 Apply security regulatory requirements to work in the medicinal cannabis industry

Target Group

This skill set is for individuals entering the medicinal cannabis industry, including those with or without previous experience in agriculture or horticulture.

Suggested words for Statement of Attainment

These competencies from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package meet industry requirements for cultivation assistants in in the medicinal cannabis industry.

AHCSS00121 Medicinal Cannabis Cultivation and Production Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Description

This skill set provides the skills and knowledge to undertake skilled work in cultivation and production operations in the medicinal cannabis industry.

Pathways Information

These units of competency provide credit towards the AHC33920 Certificate III in Medicinal Cannabis Cultivation and Production.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCMDC301 Apply security regulatory requirements to work in the medicinal cannabis industry
- AHCMDC302 Apply regulatory and quality requirements to the production of medicinal cannabis
- AHCMDC303 Undertake propagation of medicinal cannabis
- AHCMDC304 Undertake care and maintenance of medicinal cannabis
- AHCMDC305 Undertake harvest and pre-processing of medicinal cannabis

Target Group

This skill set is for individuals entering the medicinal cannabis industry, including those with or without previous experience in agriculture or horticulture.

Suggested words for Statement of Attainment

These competencies from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package meet industry requirements for undertaking skilled work in cultivation and production operations in the medicinal cannabis industry.

AHCSS00122 Pork Industry Stockperson Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0. Supersedes and is not equivalent to <i>AHCSS00052 Pork Industry Stockperson Skill Set</i> . <i>Skill set requirements amended and a new unit required for completion of skill set.</i>

Description

This skill set provides the skills and knowledge required to administer medication to livestock, implement animal health control programs, apply pork production industry biosecurity, work health and safety, animal welfare and enterprise quality assurance requirements, and care for the health and welfare of pigs, and move and handle pigs within the pork production industry.

Pathways Information

These units of competency provide credit towards *AHC30116 Certificate III in Agriculture and AHC30416 Certificate III in Pork Production*, with the exception of the units *AHCPRK201 Care for health and welfare of pigs*, *AHCPRK203 Move and handle pigs* and *AHCWRK206 Observe enterprise quality assurance procedures*.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHC BIO303 Apply biosecurity measures
- AHCLSK301 Administer medication to livestock
- AHCLSK309 Implement animal health control programs
- AHCLSK331 Comply with industry animal welfare requirements
- AHCPRK201 Care for health and welfare of pigs
- AHCPRK203 Move and handle pigs
- AHCWHS301 Contribute to work health and safety processes

- AHCWRK206 Observe enterprise quality assurance procedures

Target Group

This skill set is for individuals working as animal attendants in the pork production industry.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet the industry welfare and quality assurance requirements for stockpersons working in the pork industry.

AHCSS00123 Administrator in Mined Land Rehabilitation Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Description

This skill set provides basic skills and knowledge for administrative support on mined land rehabilitation projects in the conservation and ecosystem management industry.

Pathways Information

These units of competency provide pathways into a range of Certificate III and Certificate IV qualifications in the AHC Agriculture, Horticulture and Conservation and Land Management Training Package including:

- AHC31421 Certificate III in Conservation and Ecosystem Management.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCBUS408 Operate within a budget framework
- AHCILM306 Follow Aboriginal cultural protocols
- AHCWRK305 Coordinate work site activities
- BSBPMG427 Apply project procurement procedures
- BSBTEC301 Design and produce business documents

Target Group

This skill set is for individuals who provide administrative support for projects in mined land rehabilitation. They are administrators who require skills in a rural or remote setting and generally work on site or in an office environment off site.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management* and *BSB Business Services Training Packages* meet industry requirements for administrative support workers on mined land rehabilitation sites.

AHCSS00124 Mined Land Rehabilitation Field Worker Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Description

This skill set provides basic skills and knowledge for working onsite on mined land rehabilitation projects in the conservation and ecosystem management industry.

Pathways Information

These units of competency provide pathways into a range of Certificate II and Certificate III qualifications in the AHC Agriculture, Horticulture and Conservation and Land Management Training Package including:

- AHC31421 Certificate III in Conservation and Ecosystem Management.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCECR304 Undertake direct seeding
- AHCFAU302 Identify fauna in the field
- AHCILM306 Follow Aboriginal cultural protocols
- AHCPM303 Identify plant specimens
- AHCSAW304 Implement erosion and sediment control measures

Target Group

This skill set is for individuals who are field workers and support projects in mined land rehabilitation and require skills in a rural or remote setting.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet industry requirements for field workers on mined land rehabilitation sites.

AHCSS00125 Mined Land Rehabilitation Machine Operator Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Description

This skill set provides basic skills and knowledge for individuals to operate machinery to assist with rehabilitation works on mined land in the conservation and ecosystem management industry.

Pathways Information

These units of competency provide pathways into a range of Certificate II and Certificate III qualifications in the AHC Agriculture, Horticulture and Conservation and Land Management Training Package including:

- AHC31421 Certificate III in Conservation and Ecosystem Management.

Licensing/Regulatory Information

Federal, state or territories and local government licensing or regulatory requirements apply to this skill set for the operation of machinery.

Skill Set Requirements

- AHCILM306 Follow Aboriginal cultural protocols
- AHCMOM304 Operate machinery and equipment
- AHCSAW202 Recognise landforms and soil types
- AHCSAW303 Construct conservation earthworks
- AHCSAW304 Implement erosion and sediment control measures
- FWPCOT3314 Comply with soil and water protection

Target Group

This skill set is for individuals who are machine operators supporting mined land rehabilitation projects and require skills in the operation of associated machinery.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management* and *FWP Forest and Wood Products Training Packages* meet industry requirements for machine operators in mined land rehabilitation.

AHCSS00126 Mined Land Rehabilitation Project Coordinator Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Description

This skill set provides basic skills and knowledge for undertaking project coordination tasks in the rehabilitation of mined land in the conservation and ecosystem management industry.

Pathways Information

These units of competency provide pathways into a range of Certificate IV qualifications in the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* including:

- AHC40920 Certificate IV in Conservation and Ecosystem Management.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCECR301 Maintain native ecosystem areas
- AHCECR308 Conduct a site inspection for ecological restoration
- AHCECR311 Implement ecosystem reconstruction works
- AHCILM306 Follow Aboriginal cultural protocols
- AHCNRM605 Develop a monitoring, evaluation and reporting program
- AHCWHS401 Maintain work health and safety processes
- AHCWRK305 Coordinate work site activities
- RIICAR302D Rehabilitate small mine site

Target Group

This skill set is for individuals who are employed in or who support, mined land rehabilitation projects and require skills in the coordination of these projects. They provide support to project managers and project team members.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management and RII Resources and Infrastructure Industry Training Package* meet industry requirements for coordinating projects in mined land rehabilitation.

AHCSS00127 Milking Equipment Maintenance Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Description

This skill set describes the skills and knowledge required to identify faults of milking equipment that do not require the services of qualified trades people, carry out routine adjustments and maintenance of equipment to rectify poor performance and ensure compliance with food safety standards and requirements.

Pathways Information

These units of competency provide credit towards the AHC30221 Certificate III in Dairy Production and a number of AHC Certificate IV qualifications.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHCAGB405 Analyse and interpret production data
- AHCDRY304 Carry out routine service of milking equipment
- AHCDRY305 Conduct mechanical tests on milking machines

Target Group

This skill set is for individuals who undertake routine servicing, maintenance and troubleshooting of milking equipment for the dairy production industry.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet the industry requirements for undertaking routine servicing and maintenance of milking equipment.

AHCSS00128 Design Brief for Therapeutic Horticulture Garden Skill Set

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Description

This skill set provides the skills and knowledge required to develop a design brief for a therapeutic horticulture garden.

Pathways Information

These units of competency provide credit towards *AHC40416 Certificate IV in Horticulture and AHC42421 Certificate IV in Landscape Design*.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this skill set at the time of publication.

Skill Set Requirements

- AHPCM404 Recommend plants and cultural practices
- AHCTHH401 Develop a therapeutic horticulture design brief

Target Group

This skill set is for experienced horticulture or landscaping design contractors responsible for providing professional design services for therapeutic horticulture garden design in the capacity of a sole trader or small business.

Suggested words for Statement of Attainment

These competencies from the *AHC Agriculture, Horticulture and Conservation and Land Management Training Package* meet the industry requirements for developing a therapeutic horticulture design brief as a horticulture or landscape design contractor.

